



Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems

Release: A

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PREFACE

1 The technical requirements contained in cdma2000 form a compatibility standard for Code
2 Division Multiple Access (CDMA) systems. They ensure that mobile stations
3 manufactured in accordance with this standard can obtain service from a system
4 manufactured in accordance with this standard. These requirements do not address the
5 quality or reliability of that service, nor do they cover equipment performance or
6 measurement procedures.

7 To ensure compatibility (see Note 1), both radio-system parameters and call-processing
8 procedures must be specified. The sequence of call-processing steps that the mobile
9 stations and base stations execute to establish calls has been specified along with the
10 digital control messages and analog signals that are exchanged between the two stations.

11 The base station is subject to fewer compatibility requirements than the dual-mode mobile
12 station. Radiated power levels, both desired and undesired, are fully specified for dual-
13 mode mobile stations to control the RF interference that one mobile station can cause
14 another. Base stations are fixed in location and their interference is controlled by proper
15 layout and operation of the system in which the station operates. Detailed call-processing
16 procedures are specified for mobile stations to ensure a uniform response to all base
17 stations. Base station call procedures are not specified in detail because they are a part of
18 the overall design of the individual system. However, the base station call-processing
19 procedures must be compatible with those specified for the mobile station. This approach
20 to writing the compatibility specification provides the system designer with sufficient
21 flexibility to respond to local service needs and to account for local topography and
22 propagation conditions.

23 This specification includes provisions for future service additions and expansion of system
24 capabilities.

25 This standard is divided into multiple parts. This part details the Layer 3 call processing
26 and procedures.

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FOREWORD

1 **1. General.** This section defines the terms and numeric indications used in this
2 document. This section also describes the time reference used in the CDMA system and
3 the tolerances used throughout the document.

4 **2. Requirements for Mobile Station CDMA Operation.** This section describes the
5 requirements for CDMA-analog dual-mode mobile stations operating in the CDMA mode. A
6 mobile station complying with these requirements will be able to operate with CDMA base
7 stations complying with this document.

8 **3. Requirements for Base Station CDMA Operation.** This section describes the
9 requirements for CDMA base stations. A base station complying with these requirements
10 will be able to operate in the CDMA mode with mobile stations complying with this
11 document.

12 **Annex A. Reserved.**

13 **Annex B. CDMA Call Flow Examples.** This informative annex provides examples of
14 simple call flows in the CDMA system.

15 **Annex C. Reserved.**

16 **Annex D. CDMA Constants.** This normative annex contains tables that give specific
17 values for the constant identifiers found in Section 2 and Section 3.

18 **Annex E. CDMA Retrievable and Settable Parameters.** This normative annex describes
19 the mobile station parameters that the base station can set and retrieve.

20 **Annex F. Mobile Station Database.** This informative annex describes a database model
21 that can be used for dual-mode mobile stations complying with this document.

NOTES

1. Compatibility, as used in connection with cdma2000, is understood to mean: any cdma2000 mobile station is able to place and receive calls in cdma2000 and IS-95 systems. Conversely, any cdma2000 system is able to place and receive calls for CDMAcdma2000 and IS-95 mobile stations.
2. The term “dual-mode mobile station” indicates a mobile station capable of both analog (FM) and spread spectrum (CDMA) operation.
3. This compatibility specification is based upon spectrum allocations that have been defined by various governmental administrations.
4. Each mobile station is assigned a single unique 32-bit binary serial number (ESN) that cannot be changed by the subscriber without rendering the mobile station inoperative (see 2.3.2).
5. “Base station” refers to the functions performed in the fixed network. These functions typically distributed among cells, sectors, and mobile switching centers.
6. This standard uses the following verbal forms: “Shall” and “shall not” identify requirements strictly to be followed in order to conform with the standard and from which no deviation is permitted. “Should” and “should not” indicate that one of several possibilities is recommended as particularly suitable, without mentioning or excluding others; that a certain course of action is preferred but not necessarily required; or that (in the negative form) a certain possibility or course of action is discouraged but not prohibited. “May” and “need not” indicate a course of action permissible within the limits of the standard. “Can” and “cannot” are used for statements of possibility and capability, whether material, physical, or causal.
7. Footnotes appear at various points in this specification to elaborate and further clarify items discussed in the body of the specification.
8. Unless indicated otherwise, this document presents numbers in decimal form. Binary numbers are distinguished in the text by the use of single quotation marks.
9. The following operators define mathematical operations:
 - \times indicates multiplication.
 - $\lfloor x \rfloor$ indicates the largest integer less than or equal to x : $\lfloor 1.1 \rfloor = 1$, $\lfloor 1.0 \rfloor = 1$.
 - $\lceil x \rceil$ indicates the smallest integer greater or equal to x : $\lceil 1.1 \rceil = 2$, $\lceil 2.0 \rceil = 2$.
 - $|x|$ indicates the absolute value of x : $|-17| = 17$, $|17| = 17$.
 - \oplus indicates exclusive OR (modulo-2 addition).
 - $\min(x, y)$ indicates the minimum of x and y .
 - $\max(x, y)$ indicates the maximum of x and y .
 - $x \bmod y$ indicates the remainder after dividing x by y : $x \bmod y = x - (y \times \lfloor x/y \rfloor)$.

NOTES

- ¹ 10. While communication between Layer 3 and Layer 2 is specified, there is no
² requirement to implement layering.

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

1. Reserved.
2. C.S0002-A, *Physical Layer Standard for cdma2000 Spread Spectrum Systems*, March 2000.
3. C.S0003-A, *Medium Access Control (MAC) Standard for cdma2000 Spread Spectrum Systems*, March 2000.
4. C.S0004-A, *Signaling Link Access Control (LAC) Standard for cdma2000 Spread Spectrum Systems*, March 2000.
5. Reserved.
6. C.S0006-A, *Analog Signaling Standard for cdma2000 Spread Spectrum Systems*, March 2000.
7. ANSI T1.607-1990, Integrated Services Digital Network (ISDN)-Layer 3 Signaling Specification for Circuit Switched Bearer Service for Digital Subscriber Signaling System Number 1 (DSS1), July 1990.
8. ANSI T1.610-1994, Generic Procedures for the Control of ISDN Supplementary Services, August, 1994.
9. ANSI X3.4-1986, Coded Character Set - 7-bit American National Standard Code for Information Interchange, 1992.
10. C.S0010-0, Recommended Minimum Performance Standards for Base Stations Supporting Dual-Mode Spread Spectrum Mobile Stations, September 1999.
11. C.S0011-0, Recommended Minimum Performance Standards for Dual-Mode Spread Spectrum Mobile Stations, November 1999.
12. TIA/EIA-553-A, Core Analog Standard 800 MHz Mobile Station - Land Station Compatibility Specification with Authentication, November 1999.
13. TIA/EIA-41-D, Cellular Radiotelecommunications Intersystem Operations, December 1997.
14. C.S0015-0, Short Message Services for Spread Spectrum Cellular Systems.
15. Common Cryptographic Algorithms, Revision C, 1997. An EAR-controlled document subject to restricted distribution. Contact the Telecommunications Industry Association, Arlington, VA.

16. ITU-T Recommendation E.163, Numbering Plan for the International Telephone Service, 1988. Note: merged with E.164.
17. ITU-T Recommendation E.164 (I.331), Numbering Plan for the ISDN Era, 1991.
18. ITU-T Recommendation E.212, Identification Plan for Land Mobile Stations, 1988.
19. ITU-T Recommendation F.69, The International Telex Service–Service and Operational Provisions of Telex Destination Codes and Telex Network Identifications Codes, 1994.
20. ITU-T Recommendation X.121, International Numbering Plan for Public Data Networks, 1992.
21. EIA/TIA/IS-54-B, Cellular System Dual-Mode Mobile Station - Base Station Compatibility Standard, April 1992.
22. TIA/EIA/IS-91, Mobile Station-Base Station Compatibility Standard for 800 MHz Analog Cellular, October 1994.
23. Interface Specification for Common Cryptographic Algorithms, Rev C, 1997. Contact the Telecommunications Industry Association, Arlington, VA.
24. TIA/EIA-95-B, Mobile Station-Base Station Compatibility Standard for Dual-Mode Spread Spectrum Cellular System, November 1998.
25. TIA/EIA/IS-136, 800 MHz TDMA Cellular-Radio Interface-Mobile Station-Base Station Compatibility, December 1994.
26. C.S0016-0, Over-the-Air Service Provisioning of Mobile Stations in Spread Spectrum Systems, June 1998.
27. TIA/EIA/IS-735, Enhancements to TIA/EIA-41-D & TIA/EIA-664 for Advanced Features in Wideband Spread Spectrum Systems, January 1998.
28. TSB16, Assignment of Access Overload Classes in the Cellular Telecommunications Services, March 1985.
29. TSB50, User Interface for Authentication Key Entry, March 1993.
30. C.R1001-0, Administration of Parameter Value Assignments for TIA/EIA Wideband Spread Spectrum Standards, December 1999.

1 No text.

GENERAL

1.1 Terms and Numeric Information

1.1.1 Terms

Abbreviated Alert. An abbreviated alert is used to remind the mobile station user that previously selected alternative routing features are still active.

AC. See Authentication Center.

Access Attempt. The entire process of sending one message and receiving (or failing to receive) an acknowledgment for that message, consisting of one or more access sub-attempts. See also Access Probe, Access Probe Sequence, and Access Sub-attempt.

Access Channel. A Reverse CDMA Channel used by mobile stations for communicating to the base station. The Access Channel is used for short signaling message exchanges such as call originations, responses to pages, and registrations. The Access Channel is a slotted random access channel.

Access Channel Message. The information part of an access probe consisting of the message body, length field, and CRC.

Access Channel Message Capsule. An Access Channel message plus the padding.

Access Channel Preamble. The preamble of an access probe consisting of a sequence of all-zero frames that are sent at the 4800 bps rate.

Access Channel Request Message. An Access Channel message that is autonomously generated by the mobile station. See also Access Channel Response Message.

Access Channel Response Message. A message on the Access Channel generated to reply to a message received from the base station.

Access Channel Slot. The assigned time interval for an access probe. An Access Channel slot consists of an integer number of frames. The transmission of an access probe is performed within the boundaries of an Access Channel slot.

Access Entry Handoff. The act of transferring reception of the Paging Channel from one base station to another, when the mobile station is transitioning from the *Mobile Station Idle State* to the *System Access State*.

Access Handoff. The act of transferring reception of the Paging Channel from one base station to another, when the mobile station is in the *System Access State* after an Access Attempt.

Access Overload Class. See Overload Class.

Access Probe. One Access Channel transmission consisting of a preamble and a message. The transmission is an integer number of frames in length and transmits one Access Channel message. See also Access Probe Sequence, Access Sub-attempt, and Access Attempt.

Access Probe Handoff. A handoff that occurs while the mobile station is performing an Access Attempt in the *System Access State*.

Access Probe Sequence. A sequence of one or more access probes on the Access Channel. Other than the reported pilot information, the same Access Channel message content is transmitted in every access probe of an access sub-attempt. See also Access Probe, Access Sub-attempt, and Access Attempt.

Access Sub-attempt. A sequence of one or more access probe sequences on the Access Channel transmitted to one pilot, containing the same message content other than the reported pilot information. See also Access Probe, Access Probe Sequence, and Access Attempt.

Acknowledgment. A Layer 2 response by the mobile station or the base station confirming that a signaling message was received correctly.

Action Time. The time at which the action implied by a message should take effect.

Active Set. The set of pilots associated with the CDMA Channels containing Forward Traffic Channels assigned to a particular mobile station.

Active User Zone. A user zone in which the mobile station makes its presence known via an explicit registration in order to activate tiered service features. See also CDMA Tiered Services, User Zone, and Passive User Zone.

Aging. A mechanism through which the mobile station maintains in its Neighbor Set the pilots that have been recently sent to it from the base station and the pilots whose handoff drop timers have recently expired.

A-key. A secret, 64-bit pattern stored in the mobile station and HLR/AC. It is used to generate/update the mobile station's Shared Secret Data.

Assured Mode. Mode of delivery that guarantees that a PDU will be delivered to the peer. A PDU sent in assured mode is retransmitted by the LAC sublayer, up to a maximum number of retransmissions, until the LAC entity at the sender receives an acknowledgement for the PDU. See also Confirmation of Delivery.

Authentication. A procedure used by a base station to validate a mobile station's identity.

Authentication Center (AC). An entity that manages the authentication information related to the mobile station.

Authentication Response (AUTHR). An 18-bit output of the authentication algorithm. It is used, for example, to validate mobile station registrations, originations and terminations.

Autonomous Registration. A method of registration in which the mobile station registers without an explicit command from the base station.

Auxiliary Pilot Channel. A non-data-bearing, direct-sequence spread spectrum signal optionally transmitted by a CDMA base station.

- 1 **Auxiliary Transmit Diversity Pilot Channel.** A pilot channel, counterpart to an Auxiliary
2 Pilot Channel, that is transmitted by a CDMA base station from the non-primary antenna
3 when orthogonal transmit diversity is employed.
- 4 **Bad Frames.** Frames classified as insufficient frame quality or as 9600 bps primary traffic
5 only, with bit errors. See also Good Frames.
- 6 **Band Class.** A set of CDMA frequency assignments and a numbering scheme for these
7 channels. See also CDMA Frequency Assignment.
- 8 **Base Station.** A fixed station used for communicating with mobile stations. Depending
9 upon the context, the term base station may refer to a cell, a sector within a cell, an MSC,
10 or other part of the cellular system. See also MSC.
- 11 **Base Station Authentication Response (AUTHBS).** An 18-bit pattern generated by the
12 authentication algorithm. AUTHBS is used to confirm the validity of base station orders to
13 update the Shared Secret Data.
- 14 **Base Station Random Variable (RANDBS).** A 32-bit random number generated by the
15 mobile station for authenticating base station orders to update the Shared Secret Data.
- 16 **Blank-and-Burst.** The preemption of an entire Traffic Channel frame's primary traffic by
17 signaling traffic or secondary traffic. Blank-and-burst is performed on a frame-by-frame
18 basis.
- 19 **BLOB.** Block of Bits.
- 20 **bps.** Bits per second.
- 21 **Broadcast Control Channel.** A code channel in a Forward CDMA Channel used for
22 transmission of control information from a base station to a mobile station.
- 23 **Broadcast User Zone.** A user zone that is identified to the mobile station by means of
24 broadcast messages. It corresponds to the RF coverage area of a particular set of cells and
25 sectors. See also CDMA Tiered Services and Mobile-Specific User Zone.
- 26 **Call Disconnect.** The process that releases the resources handling a particular call. The
27 disconnect process begins either when the mobile station user indicates the end of the
28 call by generating an on-hook condition or other call-release mechanism, or when the
29 base station initiates a release.
- 30 **Call History Parameter (COUNT).** A modulo-64 event counter maintained by the mobile
31 station and Authentication Center that is used for clone detection.
- 32 **Candidate Frequency.** The frequency, either analog or CDMA, for which the base station
33 specifies a search set, using a *Candidate Frequency Search Request Message*.
- 34 **Candidate Set.** The set of pilots that have been received with sufficient strength by the
35 mobile station to be successfully demodulated, but have not been placed in the Active Set
36 by the base station. See also Active Set, Neighbor Set, and Remaining Set.
- 37 **CDMA.** See Code Division Multiple Access.

CDMA Candidate Frequency. The Candidate Frequency specified for a search of CDMA pilots.

CDMA Channel. The set of channels transmitted between the base station and the mobile stations within a given CDMA Frequency Assignment. See also Forward CDMA Channel and Reverse CDMA Channel.

CDMA Channel Number. An 11-bit number that identifies a CDMA Frequency Assignment.

CDMA Frequency Assignment. A 1.23 or 3.69 MHz segment of spectrum. The center of a CDMA frequency assignment is given by a CDMA Channel Number.

CDMA Preferred Set. The set of CDMA channel numbers in a CDMA system corresponding to Frequency Assignments that a mobile station will normally search to acquire a CDMA Pilot Channel. For CDMA cellular systems, the primary and secondary channels comprise the CDMA Preferred Set.

CDMA Tiered Services. System features and services that are based on location, potentially including private networks. User zones establish the availability of services. See also User Zone, Broadcast User Zone, Mobile-Specific User Zone, Active User Zone, and Passive User Zone.

Center SR3 Frequency. The Spreading Rate 3 frequency that has the center frequency assignment.

Chip. See PN Chip.

Code Channel. A subchannel of a Forward CDMA Channel or Reverse CDMA Channel. Each subchannel uses an orthogonal Walsh function or quasi-orthogonal function.

Code Division Multiple Access (CDMA). A technique for spread-spectrum multiple-access digital communications that creates channels through the use of unique code sequences.

Code Symbol. The output of an error-correcting encoder. Information bits are input to the encoder and code symbols are output from the encoder. See Convolutional Code.

Configuration Change Indicator. A one-bit datum, sent on the Quick Paging Channel. Appearance of the Configuration Change Indicator in the Quick Paging Channel serves to alert a slotted mode mobile station, operating in the idle state, that, after performing an idle handoff, it should monitor the Paging Channel, the Forward Common Control Channel, or the Broadcast Control Channel in order to determine if it should update its stored parameters.

Confirmation of Delivery. A notification sent by the LAC sublayer to Layer 3 at the sender, when the LAC entity at the sender receives the acknowledgment for a specific PDU sent in assured mode.

Convolutional Code. A type of error-correcting code. A code symbol can be considered as modulo 2 the convolution of the input data sequence with the impulse response of a generator function.

CRC. See Cyclic Redundancy Code.

Cyclic Redundancy Code (CRC). A class of linear error detecting codes that generate parity check bits by finding the remainder of a polynomial division. See also Frame Quality Indicator.

dBc. The ratio (in dB) of the sideband power of a signal, measured in a given bandwidth at a given frequency offset from the center frequency of the same signal, to the total inband power of the signal.

dBm. A measure of power expressed in terms of its ratio (in dB) to one milliwatt.

dBm/Hz. A measure of power spectral density. The ratio, dBm/Hz, is the power in one Hertz of bandwidth, where power is expressed in units of dBm.

dBW. A measure of power expressed in terms of its ratio (in dB) to one Watt.

Dedicated Control Channel. A portion of a Traffic Channel (Forward or Reverse) that carries a combination of user data, signaling, and power control information.

Deinterleaving. The process of unpermuting the symbols that were permuted by the interleaver. Deinterleaving is performed on received symbols prior to decoding.

Discontinuous Transmission (DTX). A mode of operation in which a base station or a mobile station switches its transmitter on and off on a particular code channel autonomously. For the case of DTX operation on the Forward Dedicated Control Channel, the Forward Power Control Subchannel is still transmitted.

Distance-Based Registration. An autonomous registration method in which the mobile station registers whenever it enters a cell whose distance from the cell in which the mobile station last registered exceeds a given threshold.

DTMF. See Dual-Tone Multifrequency.

Dual-Tone Multifrequency (DTMF). Signaling by the simultaneous transmission of two tones, one from a group of low frequencies and another from a group of high frequencies. Each group of frequencies consists of four frequencies.

E_b . A measure of the energy in a signal, at some point in a communication system, per information bit conveyed by that signal, or an average value of such energies. Its relevance to system performance is most often expressed by its ratio to additive noise and interference, such as in E_b/N_0 or E_b/I_0 . Such ratios are dimensionless, and are usually expressed in dB units.

E_c/I_0 . A notation used to represent a dimensionless ratio of the average power of some code-distinguished CDMA signal channel, typically a pilot, to the total power comprised of signal plus interference, within the signal bandwidth. It is usually expressed in dB units.

Effective Radiated Power (ERP). The product of the power supplied to the antenna and its gain relative to a half-wave dipole in a given direction.

EIRP. See Equivalent Isotropic Radiated Power.

Electronic Serial Number (ESN). A 32-bit number assigned by the mobile station manufacturer, uniquely identifying the mobile station equipment.

Encoder Tail Bits. A fixed sequence of bits added to the end of a block of data to reset the convolutional encoder to a known state.

Enhanced Access Channel. A reverse channel used by mobile station for communicating to the base station. The Enhanced Access Channel operates in the Basic Access Mode, and Reservation Access Mode. It is used for transmission of short messages, such as signaling, MAC messages, response to pages, and call originations. It can also be used to transmit moderate-sized data packets.

Enhanced Access Channel Preamble. A non-data bearing portion of the Enhanced Access probe sent by the mobile station to assist the base station in initial acquisition and channel estimation.

Enhanced Access Channel Slot. The assigned time interval for an enhanced access probe. An Enhanced Access Channel slot consists of an integer number of Enhanced Access Channel frames. The transmission of an enhanced access probe is performed within the boundaries of an Enhanced Access Channel slot.

Enhanced Access Data. The data transmitted while in the Basic Access Mode on the Enhanced Access Channel or while in the Reservation Access Mode on a Reverse Common Control Channel.

Enhanced Access Header. A frame containing access origination information transmitted immediately after the Enhanced Access Channel Preamble while in the Reservation Access Mode.

Enhanced Access Probe. One Enhanced Access Channel transmission consisting of an Enhanced Access Channel preamble, optionally an Enhanced Access header, and optionally Enhanced Access data. See also Enhanced Access Probe Sequence.

Enhanced Access Probe Sequence. A sequence of one or more Enhanced Access probes on the Enhanced Access Channel. See also Enhanced Access Probe.

Equivalent Isotropically Radiated Power (EIRP). The product of the power supplied to the antenna and the antenna gain in a direction relative to an isotropic antenna.

Erase Indicator Bit. See [2].

ERP. See Effective Radiated Power.

ESN. See Electronic Serial Number.

f-csch. Forward common signaling logical channel.

f-dsch. Forward dedicated signaling logical channel.

Fade Timer. A timer kept by the mobile station as a measure of Forward Traffic Channel continuity. If the fade timer expires, the mobile station drops the call.

Flash. An indication sent on the Reverse CDMA Channel indicating that the user directed the mobile station to invoke special processing.

1 **Foreign NID Roamer.** A mobile station operating in the same system (SID) but in a
 2 different network (NID) from the one in which service was subscribed. See also Foreign
 3 SID Roamer and Roamer.

4 **Foreign SID Roamer.** A mobile station operating in a system (SID) other than the one
 5 from which service was subscribed. See also Foreign NID Roamer and Roamer.

6 **Forward CDMA Channel.** A CDMA Channel from a base station to mobile stations. The
 7 Forward CDMA Channel contains one or more code channels that are transmitted on a
 8 CDMA Frequency Assignment using a particular pilot PN offset. The code channels are
 9 associated with the Pilot Channel, Sync Channel, Paging Channels, Broadcast Control
 10 Channel, Forward Common Control Channels, and Traffic Channels. The Forward CDMA
 11 Channel always carries a Pilot Channel and may also carry up to one Sync Channel, up to
 12 seven Paging Channels, one Broadcast Control Channel, up to seven Forward Common
 13 Control Channels and up to the maximum number of channels allowed for the assigned
 14 Radio Configuration minus one Traffic Channels, as long as the total number of channels,
 15 including the Pilot Channel, is no greater than the maximum number of channels allowed
 16 for the assigned Radio Configuration (see [2] section 3.1.3.1.13).

17 **Forward Common Control Channel.** A control channel used for the transmission of digital
 18 control information from a base station to one or more mobile stations.

19 **Forward Dedicated Control Channel.** A Dedicated Control Channel that is transmitted on
 20 the Forward CDMA Channel.

21 **Forward Fundamental Channel.** A Fundamental Channel that is transmitted on the
 22 Forward CDMA Channel.

23 **Forward Pilot Channel.** A non-data-bearing direct-sequence spread spectrum signal
 24 transmitted continuously by each CDMA base station. The Forward Pilot Channel allows a
 25 mobile station to acquire the timing of the Forward CDMA Channel, provides a phase
 26 reference for coherent demodulation, and provides a means for signal strength
 27 comparisons between base stations for determining when to handoff. Different base
 28 stations are identified by different pilot PN sequence time phases. See also Pilot PN
 29 Sequence, Pilot PN Sequence Offset.

30 **Forward Supplemental Channel.** A Supplemental Channel that is transmitted on the
 31 Forward CDMA Channel.

32 **Forward Supplemental Code Channel.** A Supplemental Code Channel that is transmitted
 33 on the Forward CDMA Channel.

34 **Forward Traffic Channel.** One or more code channels used to transport user and signaling
 35 traffic from the base station to the mobile station. See Forward Fundamental Code
 36 Channel, Forward Dedicated Control Channel, Forward Fundamental Channel, Forward
 37 Supplemental, and Forward Supplemental Code Channel.

38 **Forward Transmit Diversity Pilot Channel.** A pilot channel transmitted by a CDMA base
 39 station from the non-primary antenna when orthogonal transmit diversity is employed.

Frame. A basic timing interval in the system. For the Access Channel, Paging Channel, Broadcast Control Channel, Forward Supplemental Code Channel, and Reverse Supplemental Code Channel, a frame is 20 ms long. For the Forward Supplemental Channel and Reverse Supplemental channel, a frame is 20, 40, or 80 ms long. For the Sync Channel, a frame is 26.666... ms long. For the Forward Fundamental Channel, Forward Dedicated Control Channel, Reverse Fundamental Channel, and Reverse Dedicated Control Channel, a frame is 5 or 20 ms long. For the Enhance Access Channel, the Forward Common Control Channel, and the Reverse Common Control Channel, a frame is 5, 10 or 20 ms long.

Frame Category. A classification of a received Traffic Channel frame based upon transmission data rate, the frame contents (primary traffic, secondary traffic, or signaling traffic), and whether there are detected errors in the frame.

Frame Offset. A time skewing of Traffic Channel frames from System Time in integer multiples of 1.25 ms. The maximum frame offset is 18.75 ms.

Frame Quality Indicator. See [2].

Full TMSI. The combination of TMSI_ZONE and TMSI_CODE. The full TMSI is a globally unique address for the mobile station.

Fundamental Channel. A portion of a Traffic Channel that can carry a combination of primary data, secondary data, signaling, and power control information.

Gating Rate Set. This specifies the set of supported reverse pilot gating rates. The base station and the mobile station may support one or more gating rates.

GHz. Gigahertz (10^9 Hertz).

Global Positioning System (GPS). A US government satellite system that provides location and time information to users. See Navstar GPS Space Segment / Navigation User Interfaces ICD-GPS-200 for specifications.

Good Frames. Frames not classified as bad frames. See also Bad Frames.

GPS. See Global Positioning System.

Handoff. The act of transferring communication with a mobile station from one base station to another.

Hard Handoff. A handoff characterized by a temporary disconnection of the Traffic Channel. Hard handoffs occur when the mobile station is transferred between disjoint Active Sets, when the CDMA Frequency Assignment changes, when the frame offset changes, or when the mobile station is directed from a CDMA Traffic Channel to an analog voice channel. See also Soft Handoff.

Hash Function. A function used by the mobile station to select one out of N available resources. The hash function distributes the available resources uniformly among a random sample of mobile stations.

Highest SR3 Frequency. The SR3 frequency that has the highest frequency assignment.

HLR. See Home Location Register.

- 1 **Home Location Register (HLR).** The location register to which a MIN/IMSI is assigned for
2 record purposes such as subscriber information.
- 3 **Home System.** The cellular or PCS system in which the mobile station subscribes for
4 service.
- 5 **Hopping Pilot Beacon.** A pilot beacon that changes CDMA Frequency periodically to
6 simulate multiple base stations operating on different frequencies. The transmission of
7 the hopping pilot beacon is discontinuous on any CDMA Channel.
- 8 **Idle Handoff.** The act of transferring reception of the Paging Channel, Broadcast Control
9 Channel or the Forward Common Control Channel from one base station to another, when
10 the mobile station is in the *Mobile Station Idle State*.
- 11 **Implicit Registration.** A registration achieved by a successful transmission of an
12 origination or page response on the r-csch.
- 13 **IMSI.** See International Mobile Station Identity.
- 14 **IMSI_M.** MIN-based IMSI using the lower 10 digits to store the MIN.
- 15 **IMSI_O.** Operational value of IMSI used by the mobile station for operation with the base
16 station.
- 17 **IMSI_T.** True IMSI not associated with MIN. This could be 15 digits or fewer.
- 18 **Interleaving.** The process of permuting a sequence of symbols.
- 19 **International Mobile Station Identity (IMSI).** A method of identifying stations in the land
20 mobile service as specified in [18].
- 21 **kHz.** Kilohertz (10^3 Hertz).
- 22 **ksps.** Kilo-symbols per second (10^3 symbols per second).
- 23 **LAC.** See Link Access Control.
- 24 **Layering.** A method of organization for communication protocols in which the transmitted
25 or received information is transferred in pipeline fashion, within each station, in well-
26 defined encapsulated data units between otherwise decoupled processing entities
27 ("layers"). A layer is defined in terms of its communication protocol to a peer layer in
28 another entity and the services it offers to the next higher layer in its own entity.
- 29 **Layer 1.** Layer 1 provides for the transmission and reception of radio signals between the
30 base station and the mobile station. Also see Physical Layer.
- 31 **Layer 2.** Layer 2 provides for the correct transmission and reception of signaling
32 messages, including partial duplicate detection. Layer 2 makes use of the services
33 provided by Layer 1. See also Layering and Layer 3.
- 34 **Layer 3.** Layer 3 provides the control messaging for the cellular or PCS telephone system.
35 Layer 3 originates and terminates signaling messages according to the semantics and
36 timing of the communication protocol between the base station and the mobile station.
37 Layer 3 makes use of the services provided by Layer 2. See also Layering and Layer 2.

Link Access Control. See LAC. The LAC Sublayer is the upper sublayer of Layer 2. It implements a data link protocol that provides for the correct transport and delivery of signaling messages generated by Layer 3. The LAC Sublayer makes use of the services provided by the Lower Layers (Layer 1 and the MAC Sublayer).

Local Control. An optional mobile station feature used to perform manufacturer-specific functions.

Logical Channel. A communication path between the mobile station and the base station, described in terms of the intended use of, and access to, the transferred data, and direction of transfer. A logical channel can be “mapped” to and from one or more physical channels.

Logical-to-physical Mapping. The technique for forming associations between logical and physical channels.

Long Code. A PN sequence with period $2^{42} - 1$ that is used for scrambling on the Forward CDMA Channel and spreading on the Reverse CDMA Channel. The long code uniquely identifies a mobile station on both the Reverse Traffic Channel and the Forward Traffic Channel. The long code provides limited privacy. The long code also separates multiple Access Channels and Enhanced Access Channels on the same CDMA Channel. See also Public Long Code and Private Long Code.

Long Code Mask. A 42-bit binary number that creates the unique identity of the long code. See also Public Long Code, Private Long Code, Public Long Code Mask, and Private Long Code Mask.

Lowest SR3 Frequency. The SR3 frequency that has the lowest frequency assignment.

LSB. Least significant bit.

LTU. Logical Transmission Unit. One of more Type 3 MuxPDUs with a 16-bit CRC.

MAC. See Medium Access Control.

Maximal Length Sequence (m-Sequence). A binary sequence of period $2^n - 1$, n being a positive integer, with no internal periodicities. A maximal length sequence can be generated by a tapped n -bit shift register with linear feedback.

MCC. See Mobile Country Code.

Mcps. Megachips per second (10^6 chips per second).

MCSB. See Message Control and Status Block.

Mean Input Power. The total received calorimetric power measured in a specified bandwidth at the antenna connector, including all internal and external signal and noise sources.

Mean Output Power. The total transmitted calorimetric power measured in a specified bandwidth at the antenna connector when the transmitter is active.

Medium Access Control. See MAC. The MAC Sublayer is the lower sublayer of Layer 2. It implements the medium access protocol and is responsible for transport of LAC protocol data units using the services provided by Layer 1.

- 1 **Message.** A data structure that conveys control information or application information. A
 2 message consists of a length field (MSG_LENGTH), a message body (the part conveying the
 3 information), and a CRC.
- 4 **Message Body.** The part of the message contained between the length field
 5 (MSG_LENGTH) and the CRC field.
- 6 **Message Capsule.** A sequence of bits comprising a single message and padding. The
 7 padding always follows the message and may be of zero length.
- 8 **Message Control and Status Block.** In this document, a parameter block representing
 9 the PCI being transferred between Layer 3 and Layer 2.
- 10 **Message CRC.** The CRC check associated with a message. See also Cyclic Redundancy
 11 Code.
- 12 **Message Field.** A basic named element in a message. A message field may consist of
 13 zero or more bits.
- 14 **Message Record.** An entry in a message consisting of one or more fields that repeats in
 15 the message.
- 16 **MHz.** Megahertz (10^6 Hertz).
- 17 **MIN.** See Mobile Identification Number.
- 18 **MNC.** See Mobile Network Code.
- 19 **Mobile Country Code (MCC).** A part of the E.212 IMSI identifying the home country. See
 20 [18].
- 21 **Mobile Directory Number.** A dialable directory number that is not necessarily the same
 22 as the mobile station's air interface identification, i.e., MIN, IMSI_M or IMSI_T.
- 23 **Mobile Identification Number (MIN).** The 34-bit number that is a digital representation
 24 of the 10-digit number assigned to a mobile station.
- 25 **Mobile Network Code (MNC).** A part of the E.212 IMSI identifying the home network
 26 within the home country. See [18].
- 27 **Mobile Protocol Capability Indicator (MPCI).** A 2-bit field used to indicate the mobile
 28 station's capabilities.
- 29 **Mobile-Specific User Zone.** A user zone that is identified by the mobile station. The
 30 mobile station may consider parameters such as the identity of the serving system, cell,
 31 and sector, and the geographic location of that station in making the determination. See
 32 also CDMA Tiered Services, User Zone, Broadcast User Zone, Active User Zone, and
 33 Passive User Zone.
- 34 **Mobile Station.** A station in the Public Cellular Radio Telecommunications Service
 35 intended to be used while in motion or during halts at unspecified points. Mobile stations
 36 include portable units (e.g., hand-held personal units) and units installed in vehicles.

Mobile Station Class. A classification of mobile stations based on characteristics such as slotted operation and transmission power. See Table 2.3.3-1 of [12] and Table 2.3.3-1 of this document.

Mobile Station Identification Number (MSIN). A part of the E.212 IMSI identifying the mobile station within its home network. See [18].

Mobile Station Originated Call. A call originating from a mobile station.

Mobile Station Terminated Call. A call received by a mobile station (not to be confused with a disconnect or call release).

ms. Millisecond (10^{-3} second).

MSB. Most significant bit.

MSC. See Mobile Switching Center.

MSIN. See Mobile Station Identification Number.

Multiplex Option. The ability of the multiplex sublayer and lower layers to be tailored to provide special capabilities. A multiplex option defines such characteristics as the frame format, the maximum number of Supplemental Code Channels supported, and the rate decision rules. See also Multiplex Sublayer.

Multiplex Sublayer. One of the conceptual layers of the system that multiplexes and demultiplexes primary traffic, secondary traffic, and signaling traffic.

NAM. See Number Assignment Module.

National Mobile Station Identity (NMSI). A part of the E.212 IMSI identifying the mobile station within its home country. The NMSI consists of the MNC and the MSIN. See [18].

NDSS. See Network Directed System Selection.

Neighbor Set. The set of pilots associated with the CDMA Channels that are probable candidates for handoff. Normally, the Neighbor Set consists of the pilots associated with CDMA Channels that cover geographical areas near the mobile station. See also Active Set, Candidate Set, Remaining Set, and Private Neighbor Set.

Network. A network is a subset of a cellular or PCS system, such as an area-wide cellular network, a private group of base stations, or a group of base stations set up to handle a special requirement. A network can be as small or as large as needed, as long as it is fully contained within a system. See also System.

Network Directed System Selection (NDSS). A feature that allows the mobile station to automatically register with a preferred system while roaming, or to be automatically directed by a service provider, typically the home service provider, to a suggested system, regardless of the frequency band class, cellular band, or PCS frequency block.

Network Identification (NID). A number that uniquely identifies a network within a cellular or PCS system. See also System Identification.

NID. See Network Identification.

- 1 **NMSI.** See National Mobile Station Identity.
- 2 **Non-Autonomous Registration.** A registration method in which the base station initiates
3 registration. See also Autonomous Registration.
- 4 **Non-Slotted Mode.** An operation mode of the mobile station in which the mobile station
5 continuously monitors the Paging Channel, or the Forward Common Control Channel/
6 Broadcast Control Channel.
- 7 **ns.** Nanosecond (10^{-9} second).
- 8 **NULL.** Any value that is not in the specified range of a field.
- 9 **Null Traffic Channel Data.** One or more frames of a specified data sequence sent at the
10 lowest agreed-upon rate of the negotiated radio configuration. Null Traffic Channel data
11 may be sent when there is no primary, secondary, or signaling traffic available. Null
12 Traffic Channel data serves to maintain the connectivity between the mobile station and
13 the base station.
- 14 **Number Assignment Module (NAM).** A set of MIN/IMSI-related parameters stored in the
15 mobile station.
- 16 **Numeric Information.** Numeric information consists of parameters that appear as
17 numeric fields in messages exchanged by the base station and the mobile station and
18 information used to describe the operation of the mobile station.
- 19 **Optional Field.** A field defined within a message structure that is optionally transmitted
20 to the message recipient.
- 21 **Order.** A type of message that contains control codes for either the mobile station or the
22 base station.
- 23 **Ordered Registration.** A registration method in which the base station orders the mobile
24 station to send registration related parameters.
- 25 **Orthogonal Transmit Diversity (OTD).** An optional method of transmission of the Forward
26 CDMA Channel that uses two antennas, each transmitting a fraction of the code symbols.
27 It can be used to enhance performance in the presence of multipath fading radio
28 propagation.
- 29 **OTD.** See Orthogonal Transmit Diversity
- 30 **Overhead Message.** A message sent by the base station on the Paging Channel or the
31 Broadcast Control Channel to communicate base-station-specific and system-wide
32 information to mobile stations.
- 33 **Overload Class (OLC).** The means used to control system access by mobile stations,
34 typically in emergency or other overloaded conditions. Mobile stations are assigned one (or
35 more) of sixteen overload classes. Access to the CDMA system can then be controlled on a
36 per class basis by persistence values transmitted by the base station.
- 37 **PACA.** Priority Access and Channel Assignment. See PACA Call.

1 **PACA Call.** A priority mobile station originated call for which no traffic channel or voice
 2 channel was immediately available, and which has been queued for a priority access
 3 channel assignment.

4 **Packet.** The unit of information exchanged between the service option applications of the
 5 base station and the mobile station.

6 **Padding.** A sequence of bits used to fill from the end of a message to the end of a message
 7 capsule, typically to the end of the frame or half frame. All bits in the padding are '0'.

8 **Paging.** The act of seeking a mobile station when a call has been placed to that mobile
 9 station.

10 **Paging Channel.** A code channel in a Forward CDMA Channel used for transmission of
 11 control information and pages from a base station to a mobile station.

12 **Paging Channel Slot.** An 80 ms interval on the Paging Channel. Mobile stations
 13 operating in the slotted mode are assigned specific slots in which they monitor messages
 14 from the base station.

15 **Paging Indicator.** A one-bit datum, sent on the Quick Paging Channel. Quick paging
 16 indicators are associated with mobile stations, in pairs, via a hashing algorithm.
 17 Appearance of both of its indicators in its assigned Quick Paging Channel slot serves to
 18 alert a slotted mode mobile station, operating in the idle state, that it should monitor the
 19 Paging Channel or the Forward Common Control Channel starting in the next slot. See
 20 also Quick Paging Channel.

21 **Parameter-Change Registration.** A registration method in which the mobile station
 22 registers when certain of its stored parameters change.

23 **Parity Check Bits.** Bits added to a sequence of information bits to provide error detection,
 24 correction, or both.

25 **Passive User Zone.** A user zone in which the implicit registration that takes place at call
 26 setup is sufficient to trigger a change in tiered service features. See also CDMA Tiered
 27 Services, User Zone, and Active User Zone.

28 **PCI.** See Protocol Control Information.

29 **PCS.** See Personal Communications Services.

30 **PCSC.** See Personal Communications Switching Center.

31 **PCS System.** See Personal Communications Services System.

32 **PDU.** See Protocol Data Unit.

33 **Personal Communications Services System.** A configuration of equipment that provides
 34 PCS radiotelephone services.

35 **Personal Communications Services (PCS).** A family of mobile and portable radio
 36 communications services for individuals and businesses that may be integrated with a
 37 variety of competing networks. Broadcasting is prohibited and fixed operations are to be
 38 ancillary to mobile operations.

- 1 **Personal Communications Switching Center (PCSC).** See Mobile Switching Center
2 (MSC).
- 3 **Physical Channel.** A communication path between stations, described in terms of the RF
4 characteristics such as coding, power control policies, etc.
- 5 **Physical Layer.** The part of the communication protocol between the mobile station and
6 the base station that is responsible for the transmission and reception of data. The
7 physical layer in the transmitting station is presented a frame by the multiplex sublayer
8 and transforms it into an over-the-air waveform. The physical layer in the receiving
9 station transforms the waveform back into a frame and presents it to the multiplex
10 sublayer above it.
- 11 **Pilot Beacon.** A transmit-only base station that broadcasts a Pilot Channel, a Sync
12 Channel, optionally a Paging Channel or a Broadcast Control Channel, but no Forward
13 Traffic Channels. The mobile station measures the pilot beacon to assist in CDMA hard
14 handoffs and inter-frequency idle-mode handoffs.
- 15 **Pilot Channel.** A non-data-bearing signal transmitted by a CDMA station. See Forward
16 Pilot Channel, Transmit Diversity Pilot Channel, Auxiliary Pilot Channel, Auxiliary
17 Transmit Diversity Pilot Channel, and Reverse Pilot Channel.
- 18 **Pilot PN Chip.** One bit, or bit pair, of a pilot PN sequence, or the time interval
19 corresponding thereto.
- 20 **Pilot PN Sequence.** A pair of modified maximal length PN sequences used to spread the
21 quadrature components of a CDMA Channel.
- 22 **Pilot PN Sequence Offset.** The time offset of a Forward Pilot Channel from CDMA System
23 time, as transmitted by the base station, expressed modulo the pilot period.
- 24 **Pilot PN Sequence Offset Index.** The pilot PN sequence offset in units of 64 PN chips of a
25 Forward Pilot Channel, relative to the zero offset pilot PN sequence.
- 26 **Pilot Strength.** The ratio of pilot power to total power in the signal bandwidth of a CDMA
27 Forward or Reverse Channel. See also E_c/I_o .
- 28 **PN.** Pseudonoise.
- 29 **PN Chip.** One bit in a PN sequence, or the time duration of such a bit. It corresponds to
30 the smallest modulation interval in a CDMA system.
- 31 **PN Sequence.** Pseudonoise sequence. A deterministic, periodic binary sequence having
32 limited statistical similarity to a Bernoulli (coin-tossing).
- 33 **Power Control Bit.** A bit sent on the Forward Power Control Subchannel or Reverse Power
34 Control Subchannel to signal the mobile station or base station to increase or decrease its
35 transmit power.
- 36 **Power Control Group.** A 1.25 ms interval on the Forward Traffic Channel and the Reverse
37 Traffic Channel. See also Power Control Bit.
- 38 **Power-Down Registration.** An autonomous registration method in which the mobile
39 station registers on power-down.

Power Up Function. A method by which the mobile station increases its output power to support location services.

Power-Up Registration. An autonomous registration method in which the mobile station registers on power-up.

PPM. Parts per million.

Preamble. See Access Channel Preamble and Traffic Channel Preamble.

Primary CDMA Channel. A pre-assigned channel in a CDMA Cellular System used by the mobile station for initial acquisition. See also Secondary CDMA Channel.

Primary Paging Channel (CDMA). The default code channel (code channel 1) assigned for paging on a CDMA Channel.

Primary Pilot. One of the three pilots on the Spreading Rate 3 Forward Channels. The primary pilot may be on any one of the SR3 frequencies and may have a higher transmission power comparing to the pilots on the other two SR3 frequencies.

Primary Traffic. The main traffic stream carried between the mobile station and the base station on the Traffic Channel. See also Secondary Traffic and Signaling Traffic.

Primitive. An atomic, well-defined method of transferring data and control information between two adjacent layers and sublayers. Conventionally represented as a function invocation with the data and/or control information as parameters.

Private Long Code. The long code characterized by the private long code mask. See also Long Code.

Private Long Code Mask. The long code mask used to form the private long code. See also Public Long Code Mask and Long Code.

Private Neighbor Set. The set of pilots associated with the private system base stations that are probable candidates for idle handoff. See also Active Set, Neighbor Set, Remaining Set, and CDMA Tiered Services.

Protocol Control Information (PCI). Data passed between adjacent layers in the protocol stack, together with the SDU, to assist a layer to properly encapsulate/decapsulate the SDU. Examples of PCI in this document are the MCSB and the PCSB.

Protocol Data Unit. Encapsulated data communicated between peer layers on the mobile station and base station. Unless specified otherwise, in this document PDU refers to the Layer 3 protocol data unit transferred at the interface between layer 3 and layer 2.

Protocol Stack. Conceptual model of the layered architecture for communication protocols (see Layering) in which layers within a station are represented in the order of their numeric designation and requiring that transferred data be processed sequentially by each layer, in the order of their representation. Graphically, the “stack” is drawn vertically, with the layer having the lowest numeric designation at the base.

Public Long Code. The long code characterized by the public long code mask.

Public Long Code Mask. The long code mask used to form the public long code. The mask contains a permutation of the bits of the ESN, and also includes the channel number when used for a Supplemental Code Channel. See also Private Long Code Mask and Long Code.

PUF. See Power Up Function.

PUF Attempt. A sequence of PUF probes sent by the mobile station in response to a *Power Up Function Message*.

PUF Probe. One or more consecutive frames on the Reverse Traffic Channel within which the mobile station transmits the PUF pulse.

PUF Pulse. Portion of PUF probe that may be transmitted at elevated output power.

PUF Target Frequency. The CDMA frequency assignment to which the base station directs a mobile station for transmitting the PUF probe.

Punctured Code. An error-correcting code generated from another error-correcting code by deleting (i.e., puncturing) code symbols from the coder output.

QoS. See Quality of Service.

Quality of Service. Set of parameters and procedures associated with a service and/or user, indicating some of the capabilities and constraints related to the delivery of the service to the user.

Quick Paging. A feature that permits mobile stations to further conserve battery power beyond the savings achieved by slotted mode operation. See also Paging Indicator and Configuration Change Indicator.

Quick Paging Channel. An uncoded, on-off-keyed (OOK) spread spectrum signal sent by base stations to inform slotted mode mobile stations, operating in the idle state, whether to monitor the Paging Channel or the Forward Common Control Channel. See also Quick Paging, Paging Indicator, and Configuration Change Indicator.

Quick Paging Channel Slot. An 80 ms interval on the Quick Paging Channel. See also Paging Indicator and Configuration Change Indicator.

Quick Repeats. Additional transmissions of identical copies of a message within a short interval to increase the probability that the message is received correctly.

r-csch. Reverse common signaling logical channel.

r-dsch. Reverse dedicated signaling logical channel.

Radio Configuration. A set of Forward Traffic Channel and Reverse Traffic Channel transmission formats that are characterized by physical layer parameters such as transmission rates, modulation characteristics and spreading rate. See Table 3.1.3.1-1 and Table 2.1.3.1-1 of [2].

Radio Configuration Class. A group of Radio Configurations. All Radio Configurations, for the Forward Traffic Channel and the Reverse Traffic Channel, are divided into three classes by the types of pre-spreading symbols (BPSK and QPSK) and spreading rates. RC

Class 1 consists of RC 1 and RC 2 for the Forward Traffic Channel and the Reverse Traffic Channel. RC Class 2 consists of RC 3 and RC 4 of the Reverse Traffic Channel, and RC 3, RC 4 and RC 5 of the Forward Traffic Channel. RC Class 3 consists of RC 5 and RC 6 of the Reverse Traffic Channel, and RC 6, RC 7, RC 8, and RC 9 of the Forward Traffic Channel.

RC. See Radio Configuration.

Registration. The process by which a mobile station identifies its location and parameters to a base station.

Registration Zone. A collection of one or more base stations treated as a unit when determining whether a mobile station should perform zone-based registration. See also User Zone, with which it should not be confused.

Release. A process that the mobile station and base station use to inform each other of call disconnect.

Remaining Set. The set of all allowable pilot offsets as determined by PILOT_INC, excluding the pilot offsets of the pilots in the Active Set, Candidate Set, and Neighbor Set. See also Active Set, Candidate Set, and Neighbor Set.

Request. A layer 3 message generated by either the mobile station or the base station to retrieve information, ask for service, or command an action.

Response. A layer 3 message generated as a result of another message, typically a request.

Reverse CDMA Channel. The CDMA Channel from the mobile station to the base station. From the base station's perspective, the Reverse CDMA Channel is the sum of all mobile station transmissions on a CDMA Frequency Assignment.

Reverse Dedicated Control Channel. A Dedicated Control Channel that is transmitted on the Reverse CDMA Channel.

Reverse Fundamental Channel. A Fundamental Channel that is transmitted on the Reverse CDMA Channel.

Reverse Pilot Channel. A non-data-bearing direct-sequence spread spectrum signal transmitted by each CDMA mobile station whenever the Enhanced Access Channel, Reverse Common Control Channel, or Reverse Traffic Channel is enabled. The Reverse Pilot Channel allows a base station to acquire the timing of the Reverse CDMA Channel and provides a phase reference for coherent demodulation. The Reverse Pilot Channel may be transmitted either continuously or in gated mode.

Reverse Supplemental Channel. A Supplemental Channel that is transmitted on the Reverse CDMA Channel.

Reverse Supplemental Code Channel. A Supplemental Code Channel that is transmitted on the Reverse CDMA Channel.

Reverse Traffic Channel. A Traffic Channel on which data and signaling are transmitted from a mobile station to a base station. The Reverse Traffic Channel is composed of zero or one Reverse Fundamental Channel, zero to seven Reverse Supplemental Code

Channels, zero to two Reverse Supplemental Channels, and zero or one Reverse Dedicated Control Channel.

Roamer. A mobile station operating in a cellular system (or network) other than the one from which service was subscribed. See also Foreign NID Roamer and Foreign SID Roamer.

SAP. See Service Access Point.

SCI. See Synchronized Capsule Indicator Bit.

SDU. See Service Data Unit.

Search Window. The range of PN sequence offsets that a mobile station searches for a pilot.

Search Window Offset. PN sequence offset used by the mobile station to position the search window when searching for a pilot.

Secondary CDMA Channel. A pre-assigned channel in a CDMA Cellular System used by the mobile station for initial acquisition. See also Primary CDMA Channel.

Secondary Traffic. An additional traffic stream that can be carried between the mobile station and the base station on the Traffic Channel. See also Primary Traffic and Signaling Traffic.

Service Access Point. Conceptual point at the interface between two adjacent layers where services are provided to the upper layer and data and protocol information is exchanged between layers.

Service Configuration. The common attributes used by the mobile station and the base station to build and interpret Traffic Channel frames. Service configuration corresponds to the parameters contained in the Service Configuration information record and the Non-negotiable Service Configuration information record. Examples of such parameters include Forward and Reverse Traffic Channel multiplex options, Forward and Reverse Traffic Channel transmission rates, service option connections, and reverse pilot gating rate.

Service Data Unit. Data transferred between adjacent layers in the protocol stack. Unless specified otherwise in this document SDU refers to the Layer 3 service data unit being transferred to/from Layer 2.

Service Negotiation. The procedures used by the mobile station and base station to establish a service configuration. See also Service Option Negotiation.

Service Option. A service capability of the system. Service options may be applications such as voice, data, or facsimile. See [30].

Service Option Connection. A particular instance or session in which the service defined by a service option is used. Associated with a service option connection are a reference, which is used for uniquely identifying the service option connection, a service option, which specifies the particular type of service in use, a Forward Traffic Channel traffic type, which specifies what type of Forward Traffic Channel traffic is used to support the service

option connection, and a Reverse Traffic Channel traffic type, which specifies what type of Reverse Traffic Channel traffic is used by the service option connection.

Service Option Connection Reference. A designator used by the base station and mobile station to uniquely identify a particular service option connection.

Service Option Negotiation. The procedures used by the mobile station and base station to establish a service configuration. Service option negotiation is similar to service negotiation, but allows less flexibility for specifying the attributes of the service configuration. See also Service Negotiation.

Service Redirection. The process by which the base station alters the system selection made by a mobile station. It can be used temporarily during maintenance and testing to divert subscribers to an alternate system.

Serving Frequency. The CDMA frequency on which a mobile station is currently communicating with one or more base stations.

Shared Secret Data (SSD). A 128-bit pattern stored in the mobile station (in semi-permanent memory) and known by the base station. SSD is a concatenation of two 64-bit subsets: SSD_A, which is used to support the authentication procedures, and SSD_B, which serves as one of the inputs to the process generating the encryption mask and private long code.

Short Message Services (SMS). A suite of services such as SMS Text Delivery, Digital Paging (i.e., Call Back Number - CBN), and Voice Mail Notification (VMN).

SID. See System Identification.

Signaling Traffic. Control messages that are carried between the mobile station and the base station on the Traffic Channel. See also Primary Traffic and Secondary Traffic.

Silent Re-origination. An autonomous attempt to re-originate a call after the mobile station Layer 3 receives an access attempt failure indication from Layer 2 following a user-initiated origination or a re-origination. Silent re-origination does not apply to any user-programmable capabilities or services, e.g. user-programmable automatic redial.

Slotted Mode. An operation mode of the mobile station in which the mobile station monitors only selected slots on the Paging Channel or the Forward Common Control Channel when in the *Mobile Station Idle State*.

Soft Handoff. A handoff occurring while the mobile station is in the *Mobile Station Control on the Traffic Channel State*. This handoff is characterized by commencing communications with a new base station on the same CDMA Frequency Assignment before terminating communications with an old base station. See also Hard Handoff.

SOM. Start-of-Message bit.

Space Time Spreading (STS). A forward link transmission method which transmits all forward link channel symbols on multiple antennas and spreads the symbols with complementary Walsh or quasi-orthogonal functions.

Spreading Rate. The PN chip rate of the system, defined as a multiple of 1.2288 Mcps.

Spreading Rate 1. A 1.2288 Mcps chip rate-based system using a direct-spread single carrier.

Spreading Rate 3. A 3.6864 Mcps chip rate-based system using three 1.2288 Mcps carriers on the Forward CDMA Channel. The Reverse CDMA Channel uses a 3.6864 Mcps direct-spread carrier.

sps. Symbols per second.

SR. See Spreading Rate.

SR1. See Spreading Rate 1.

SR3. See Spreading Rate 3.

SR3 Frequencies. CDMA frequencies for the three 1.2288 Mcps carriers on the Forward CDMA Channel. SR3 frequencies include the lowest SR3 frequency, the center SR3 frequency, and the highest SR3 frequency.

SR3 Primary Pilot. See Primary Pilot.

SSD. See Shared Secret Data.

Station Class Mark (SCM). An identification of certain characteristics of a mobile station. Classes are defined in Table 2.3.3-1 of [12] and Table 6.3.3-1 of this document.

Status Information. The following status information is used to describe mobile station operation when using the analog system:

- **Serving-System Status.** Indicates whether a mobile station is tuned to channels associated with System A or System B.
- **First Registration ID Status.** A status variable used by the mobile station in association with its processing of received Registration ID messages.
- **First Location Area ID Status.** A status variable used by the mobile station in association with its processing of received Location Area ID messages.
- **Location Registration ID Status.** A status variable used by the mobile station in association with its processing of power-up registrations and location-based registrations.
- **First Idle ID Status.** A status variable used by the mobile station in association with its processing of the Idle Task.
- **Local Control Status.** Indicates whether a mobile station must respond to local control messages.
- **Roam Status.** Indicates whether a mobile station is in its home system.
- **Termination Status.** Indicates whether a mobile station must terminate the call when it is on an analog voice channel.
- **Update Protocol Capability Status.** Indicates whether the mobile station should report its protocol capability to the serving system.

Supplemental Channel. An optional portion of a Traffic Channel (Forward or Reverse

Radio Configurations 3 and above) that operates in conjunction with a Fundamental Channel in that Traffic Channel, and (optionally) with other Supplemental Channels to provide higher data rate services.

Supplemental Code Channel. An optional portion of a Traffic Channel (Forward or Reverse Radio Configurations 1 and 2) that operates in conjunction with a Fundamental Code Channel in that Traffic Channel, and (optionally) with other Supplemental Code Channels to provide higher data rate services. On this channel a combination of primary data, secondary data, or both (but never signaling information) are transmitted.

Symbol. See Code Symbol and Modulation Symbol.

Sync Channel. Code channel 32 in the Forward CDMA Channel which transports the synchronization message to the mobile station.

Sync Channel Superframe. An 80 ms interval consisting of three Sync Channel frames (each 26.666... ms in length).

System. A system is a cellular telephone service or personal communications service that covers a geographic area such as a city, metropolitan region, county, or group of counties. See also Network.

System Identification (SID). A number uniquely identifying a cellular or PCS system.

System Time. The time reference used by the system. System Time is synchronous to UTC time (except for leap seconds) and uses the same time origin as GPS time. All base stations use the same System Time (within a small error). Mobile stations use the same System Time, offset by the propagation delay from the base station to the mobile station. See also Universal Coordinated Time.

Target Frequency. The CDMA frequency assignment to which the base station directs a mobile station in a handoff using an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*.

TD. See Transmit Diversity.

Temporary Mobile Station Identity (TMSI). A temporary mobile station identification assigned by the base station.

Timer-Based Registration. A registration method in which the mobile station registers whenever a counter reaches a predetermined value. The counter is incremented an average of once per 80 ms period.

Time Reference. A reference established by the mobile station that is synchronous with the earliest arriving multipath component used for demodulation.

TMSI. See Temporary Mobile Station Identity.

TMSI Zone. The administrative zone that allows the TMSI to be reused. The TMSI_CODE has to be unique within a TMSI zone but may be reused in a different TMSI zone. The TMSI zone is identified by the field TMSI_ZONE.

Traffic Channel. A communication path between a mobile station and a base station used for user and signaling traffic. The term Traffic Channel implies a Forward Traffic Channel

1 and Reverse Traffic Channel pair. See also Forward Traffic Channel and Reverse Traffic
2 Channel.

3 **Traffic Channel Preamble.** A sequence of all-zero frames that is sent by the mobile
4 station on the Reverse Traffic Channel as an aid to Traffic Channel acquisition.

5 **Transmit Diversity.** See Orthogonal Transmit Diversity and Space Time Spreading.

6 **Unassured Mode.** Mode of delivery that does not guarantee that a PDU will be delivered to
7 the peer. The LAC entity at the receiver does not acknowledge a PDU sent in unassured
8 mode.

9 **Unique Challenge-Response Procedure.** An exchange of information between a mobile
10 station and a base station for the purpose of confirming the mobile station's identity. The
11 procedure is initiated by the base station and is characterized by the use of a challenge-
12 specific random number (i.e., RANDU) instead of the random variable broadcast globally
13 (RAND).

14 **Unique Random Variable (RANDU).** A 24-bit random number generated by the base
15 station in support of the Unique Challenge-Response procedure.

16 **Universal Coordinated Time (UTC).** An internationally agreed-upon time scale
17 maintained by the Bureau International de l'Heure (BIH) used as the time reference by
18 nearly all commonly available time and frequency distribution systems i.e., WWV, WWVH,
19 LORAN-C, Transit, Omega, and GPS.

20 **User Zone.** An area within which CDMA Tiered Services may be provided. It may
21 correspond to an RF coverage area, or it may be established independent of RF topology.
22 User Zones are classified as broadcast versus mobile-specific, and as active versus
23 passive. See Broadcast User Zone, Mobile-Specific User Zone, Active User Zone, and
24 Passive User Zone. See also Registration Zone, with which it should not be confused.

25 **User Zone Registration.** An autonomous registration method in which the mobile station
26 registers when it selects an active user zone while in the Idle State. See also Zone-Based
27 Registration, with which it should not be confused.

28 **Upper Layers.** General reference to Layer 3 and the layers above it.

29 **User Zone Exit parameter.** A parameter used by the mobile station to determine if it
30 should exit a User Zone.

31 **UTC.** Universal Temps Coordoné. See Universal Coordinated Time.

32 **Voice Privacy.** The process by which user voice transmitted over a CDMA Traffic Channel
33 is afforded a modest degree of protection against eavesdropping over the air.

34 **Walsh Chip.** See [2].

35 **Walsh Function.** One of 2^N time orthogonal binary functions (note that the functions are
36 orthogonal after mapping '0' to 1 and '1' to -1).

37 **Wireless Local Loop.** Wireless alternative access mechanism to provide standard
38 telecommunication services using standard wireline terminal via a radio link between the
39 network and customer premises equipment.

WLL. See Wireless Local Loop.

Zone-Based Registration. An autonomous registration method in which the mobile station registers whenever it enters a zone that is not in the mobile station's zone list. See also User Zone Registration, with which it should not be confused.

Zone Timer. A timer used by the mobile station to remove outdated entries from its list of zones in which it has previously registered.

μs. Microsecond (10^{-6} second).

1.1.2 Numeric Information

Numeric information is used to describe the operation of the mobile station. The following subscripts are used to clarify the use of the numeric information:

- “s” indicates a value stored in a mobile station's temporary memory.
- “sv” indicates a stored value that varies as a mobile station processes various tasks.
- “sl” indicates the stored limits on values that vary.
- “r” indicates a value received by a mobile station over a forward analog control channel or a CDMA Forward Channel.
- “p” indicates a value set in a mobile station's permanent security and identification memory.
- “s-p” indicates a value stored in a mobile station's semi-permanent security and identification memory.

1.1.2.1 Reserved

1.1.2.2 CDMA Numeric Information

The following are internal values that are stored by the mobile station in temporary memory that are not sent over the air. See Annex F for values stored by the mobile station in permanent and semi-permanent memory.

1XRL_FREQ_OFFSET_s – Frequency offset of the 1X reverse link.

A41_SYS_PAR_MSG_SEQ_s – *ANSI-41 System Parameters Message* sequence number.

ACC_CHAN_s – Number of Access Channels supported by the current Paging Channel.

ACC_ENT_HO_ORDER_s – Access entry handoff permitted from the *Mobile Station Order and Message Processing Operation* of the *Mobile Station Idle State*.

ACCESS_ENTRY_HO_s – Idle handoff permitted when entering the *System Access State*.

ACCESS_HO_s – Handoff permitted after performing an access attempt while the mobile station is in the *System Access State*.

- 1 **ACCESS_HO_ALLOWED_s** – Handoff permitted to the corresponding neighbor base station
2 while in the *System Access State*.
- 3 **ACCESS_HO_LIST** – List of pilots to which access handoff or access probe handoff is
4 permitted.
- 5 **ACC_HO_LIST_UPD_s** – Access handoff list update permitted indicator.
- 6 **ACCESS_HO_MSG_RSP_s** – Access handoff permitted in the *System Access State* between
7 the time that the mobile station receives a message and responds to that message.
- 8 **ACCESS_PROBE_HO_s** – Access probe handoff permitted during an access attempt in the
9 *Mobile Station Origination Attempt Substate* or the *Page Response Substate*.
- 10 **ACC_MSG_SEQ_s** – Last received *Access Parameters Message* or *Enhanced Access Parameters*
11 *Message* sequence number.
- 12 **ACC_PROBE_HO_OTHER_MSG_s** – Access probe handoff permitted for Access Channel
13 messages other than the *Origination Message* and the *Page Response Message*.
- 14 **ACH_ACC_TMO_s** – Access Channel acknowledgment timeout, in units of 80 ms.
- 15 **ACK_WAITING_s[i]** – Acknowledgment status indicator for message sequence number i.
16 Set to YES if an acknowledgment is pending for the message; otherwise, set to NO.
- 17 **ADD_INTERCEPT_s** – The intercept in the inequality criterion for adding a pilot to the
18 Active Set.
- 19 **AGE_s** – Neighbor list age. For each pilot in the Neighbor Set, the mobile station
20 increments this counter each time a *Neighbor List Update Message* or an *Extended Neighbor*
21 *List Update Message* is received. When AGE_s exceeds NGBHR_MAX_AGE, the pilot is
22 deleted from the Neighbor Set.
- 23 **ALIGN_TIMING_USED_s** – Indicates whether the mobile station aligns the times of visits
24 away from the Serving Frequency, as requested by the base station, in the periodic search
25 procedures.
- 26 **ANALOG_CHAN_s** – Analog channel number for CDMA-to-analog handoff.
- 27 **ANALOG_NGHR_LIST** – List containing information about neighboring analog systems.
- 28 **AN_CHAN_TYPE_s** – Analog voice channel type.
- 29 **ASSIGNED_QPAGECH_s** – Assigned Quick Paging Channel number.
- 30 **AUTH_s** – Current authentication mode.
- 31 **AUTO_MSG_INTERVAL** – Autonomous message interval.
- 32 **AUTO_MSG_SUPPORTED** – Autonomous message supported indicator.
- 33 **BAD_FRAMES_s** – Bad frames count. The number of received bad frames.
- 34 **BASE_CLASS_s** – Base station class of the current base station.

- 1 **BASE_ID_s** – Base station identification of the current base station.
- 2 **BASE_LAT_s** – Latitude of the current base station, in units of 0.25 seconds.
- 3 **BASE_LONG_s** – Longitude of the current base station, in units of 0.25 seconds.
- 4 **BEGIN_PREAMBLE_s** – A stored variable in the mobile station that contains the size of the
 5 preamble that shall be transmitted on a Reverse Supplemental Code Channel at the
 6 beginning of a Reverse Supplemental Code Channel transmission.
- 7 **BKOFF_s** – Access Channel probe sequence backoff range.
- 8 **BRAT_s** – Data rate of the Broadcast Control Channel.
- 9 **BYPASS_ALERT_ANSWER_s** – Mobile station termination bypass indicator. This is set to
 10 '1' if the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile*
 11 *Station Answer Substate*, and proceed directly to the *Conversation Substate* when Layer 3
 12 receives a *forward dedicated channel-acquired* indication from Layer 2.
- 13 **CDMABAND_s**. CDMA band class. The CDMA band class currently used by the mobile
 14 station.
- 15 **CDMACH_s** – CDMA Channel number. The CDMA Channel number currently used by the
 16 mobile station.
- 17 **CF_CDMABAND_s** – Candidate Frequency CDMA band class. The CDMA band class
 18 specified in the *Candidate Frequency Search Request Message*.
- 19 **CF_CDMACH_s** – Candidate Frequency CDMA Channel number. The CDMA Channel
 20 number specified in the *Candidate Frequency Search Request Message*.
- 21 **CF_PILOT_INC_s** – PILOT_INC to be used by the mobile station after an inter-frequency
 22 hard handoff to the CDMA Candidate Frequency is successfully completed.
- 23 **CF_SEARCH_PRIORITY_INCL_s** – Candidate Frequency neighbor pilots' search priority
 24 included indicator.
- 25 **CF_SRCH_OFFSET_INCL_s** – Candidate Frequency neighbor pilot search window offset
 26 included indicator.
- 27 **CF_SRCH_WIN_NGHR_INCL_s** – Candidate Frequency neighbor pilots' search window
 28 included indicator.
- 29 **CF_SRCH_WIN_N_s** – Search window size for the Candidate Frequency Search Set.
- 30 **CF_SRCH_WIN_R_s** – Search window size to be used for the Remaining Set after an inter-
 31 frequency hard handoff to the CDMA Candidate Frequency is successfully completed.
- 32 **CF_T_ADD_s** – Pilot detection threshold to be used on the CDMA Candidate Frequency. The
 33 stored value is a positive value in units of 0.5 dB.
- 34 **CH_IND_s** – A two-bit physical channel indicator, based on the currently established
 35 physical channels. The least significant bit denotes the Fundamental Channel, and the
 36 most significant bit denotes the Dedicated Control Channel.

- 1 **CHAN_LST_MSG_SEQ_s** – CDMA Channel List Message sequence number.
- 2 **CODE_CHAN_LIST** – Code Channel List. A descriptive structure used to manage the
3 Forward Fundamental Channel, and Forward Supplemental Code Channels, if any,
4 associated with the mobile station's Active Set.
- 5 **COMPLETE_PUF_FRAME_s** – Number of power control groups required to make the PUF
6 probe an integer number of frames.
- 7 **COMPLETE_SEARCH_s** – Flag to indicate if the mobile station is to complete the search of
8 the Candidate Frequency Search Set after it has determined that the inter-frequency
9 handoff attempt to the CDMA Candidate Frequency is unsuccessful.
- 10 **CONFIG_MSG_SEQ_s** – Current message sequence number for the *System Parameters*
11 *Message*, *Neighbor List Message*, *Extended Neighbor List Message*, *General Neighbor List*
12 *Message*, *CDMA Channel List Message*, *Extended System Parameters Message*, *Global Service*
13 *Redirection Message*, *Private Neighbor List Message*, *User Zone Identification Message*, *Extended*
14 *CDMA Channel List Message*, *Extended Global Service Redirection Message*.
- 15 **COUNTER_ENABLED_s** – Timer-based registration indicator. Set to YES if timer-based
16 registration is enabled; otherwise, set to NO.
- 17 **CURR_ACC_MSG_SEQ** – Current *Access Parameter Message* or *Enhanced Access Parameters*
18 *Message* sequence number.
- 19 **CURRENT_ACTIVE_PILOT_s** – Identifies the current pilot in the Active Set during an
20 access attempt.
- 21 **CURRENT_PUF_PROBE_s** – Number of the next PUF probe to be transmitted within the PUF
22 attempt.
- 23 **DAYLT_s** – Daylight Savings Time indicator.
- 24 **DECORR** – Hashing function input used to decorrelate hashing function applications for
25 the same mobile station.
- 26 **DEFAULT_CONFIG_s** – Mobile station current default configuration.
- 27 **DELETE_FOR_TMSI_s** – A storage variable in the mobile station that indicates whether
28 the mobile station should delete its current TMSI if the TMSI was assigned in a different
29 TMSI zone.
- 30 **DIFF_RX_PWR_THRESH_s** – Threshold for the difference between the received power on
31 the Serving Frequency and the received power on the CDMA Candidate Frequency for the
32 mobile station to search for pilots on the CDMA Candidate Frequency.
- 33 **DISTANCE** – Distance from registered base station to current base station, used for
34 distance-based registration.
- 35 **DROP_INTERCEPT_s** – The intercept in the inequality criterion for dropping a pilot from
36 the Active Set.
- 37 **DSCC_s** – Digital supervisory color code.

- 1 **DTX_s** – Discontinuous transmission mode for analog channel assignment and CDMA-to-
 2 analog handoff.
- 3 **EACH_ACC_TMO_s** – Enhanced Access Channel acknowledgment timeout, in units of 20
 4 ms.
- 5 **EACH_SLOT_s** – See [2].
- 6 **EACH_SLOT_OFFSET1_s** – See [2].
- 7 **EACH_SLOT_OFFSET2_s** – See [2].
- 8 **EC_IO_THRESH_s** – Pilot E_c/I_o threshold used for system reselection.
- 9 **EC_THRESH_s** – Pilot power threshold used for system reselection.
- 10 **ENCRYPT_MODE_s** – Current message encryption mode.
- 11 **EXCL_P_REV_MS** – Exclude from redirection by MOB_P_REV indicator.
- 12 **EXT_NGHBR_LST_MSG_SEQ_s** – *Extended Neighbor List Message* sequence number.
- 13 **EXT_CHAN_LST_s** – *Extended CDMA Channel List Message* sent indicator.
- 14 **EXT_CHAN_LST_MSG_SEQ_s** – *Extended CDMA Channel List Message* sequence number.
- 15 **EXT_GLOBAL_REDIRECT_s** – *Extended Global Service Redirection Message* sent indicator.
- 16 **EXT_GLOB_SERV_REDIR_MSG_SEQ_s** – *Extended Global Service Redirection Message*
 17 sequence number.
- 18 **EXT_SYS_PARAMETER_s** – *Extended System Parameters Message* sent indicator.
- 19 **EXT_SYS_PAR_MSG_SEQ_s** – *Extended System Parameters Message* sequence number.
- 20 **FCCCH_s** – Current Forward Common Control Channel number.
- 21 **FIRST_ACTIVE_PILOT_s** – While the mobile station is in the *System Access State*, identifies
 22 the pilot to which the first access probe was transmitted, upon entering the *System Access*
 23 *State*.
- 24 **FOR_DURATION_s** – A stored variable in the mobile station that contains the duration (in
 25 units of 80 ms) of a forward Supplemental Code Channel transmission that begins at time
 26 FOR_START_TIME_s.
- 27 **FOR_FCH_RC_s** – Forward Fundamental Channel Radio Configuration.
- 28 **FOR_FRAME_40_MAX_RATE_s** – The maximum data rate for the mobile station's
 29 transmission at 40 ms frame length on the Forward Supplemental Channel.
- 30 **FOR_FRAME_80_MAX_RATE_s** – The maximum data rate for the mobile station's
 31 transmission at 80 ms frame length on the Forward Supplemental Channel.
- 32 **FOR_LINKED_HDM_SEQ_s** – Storage variable containing the most recent forward sequence
 33 number of the *General Handoff Direction Message* to which a *Supplemental Channel*

- 1 *Assignment Message* forward assignment was linked.
- 2 **FOR_NID_REG_s** – Foreign NID roamer autonomous registration enable.
- 3 **FOR_RC_s** – Forward Channel Radio Configuration.
- 4 **FOR_SCH_DURATION_s** – A stored variable in the mobile station which contains the
 5 duration of a forward Supplemental Channel transmission which begins at time
 6 FOR_SCH_START_TIME_s.
- 7 **FOR_SCH_FRAME_LENGTH_s** – The Forward Supplemental Channel frame length.
- 8 **FOR_SCH_START_TIME_s** – A stored variable in the mobile station which contains the
 9 System Time, in units of time specified by START_TIME_UNIT_s, (modulo 32) at which the
 10 mobile station shall start (or resume) processing Forward Supplemental Channels.
- 11 **FOR_SID_REG_s** – Foreign SID roamer autonomous registration enable.
- 12 **FOR_START_TIME_s** – A stored variable in the mobile station that contains the System
 13 Time, in units of 80 ms, (modulo 64) at which the mobile station shall start (or resume)
 14 processing Forward Supplemental Code Channels.
- 15 **FPC_DCCH_CURR_SETPT_s** – Current power control subchannel outer loop setpoint for the
 16 Forward Dedicated Control Channel.
- 17 **FPC_DCCH_FER_s** – Target frame error rate for the Forward Dedicated Control Channel.
- 18 **FPC_DCCH_MAX_SETPT_s** – Maximum value of the power control subchannel outer loop
 19 setpoint for the Forward Dedicated Control Channel.
- 20 **FPC_DCCH_MIN_SETPT_s** – Minimum value of the power control subchannel outer loop
 21 setpoint for the Forward Dedicated Control Channel.
- 22 **FPC_DELTA_SCH_SETPT_s** – The difference between the Fundamental Channel current
 23 power control subchannel outer loop setpoint and the Supplemental Channel current power
 24 control subchannel outer loop setpoint.
- 25 **FPC_DELTA_SETPT_s** – The difference between the Fundamental Channel current power
 26 control subchannel outer loop setpoint and the Dedicated Control Channel current power
 27 control subchannel outer loop setpoint.
- 28 **FPC_FCH_CURR_SETPT_s** – Current power control subchannel outer loop setpoint for the
 29 Forward Fundamental Channel.
- 30 **FPC_FCH_FER_s** – Target frame error rate for the Forward Fundamental Channel.
- 31 **FPC_FCH_MAX_SETPT_s** – Maximum value of the power control subchannel outer loop
 32 setpoint for the Forward Fundamental Channel.
- 33 **FPC_FCH_MIN_SETPT_s** – Minimum value of the power control subchannel outer loop
 34 setpoint for the Forward Fundamental Channel.
- 35 **FPC_MODE_s** – Forward power control operating mode.

- 1 **FPC_MODE_NO_SCH_s** – Forward power control operating mode except during the forward
2 Supplemental Channel assignment interval.
- 3 **FPC_MODE_SCH_s** – Forward power control operating mode during the forward
4 Supplemental Channel assignment interval.
- 5 **FPC_PRI_CHAN_s** – Primary power control subchannel measured channel.
- 6 **FPC_SEC_CHAN_s** – Index of Forward Supplemental Channel to be measured by the
7 secondary power control subchannel.
- 8 **FPC_SCH_CURR_SETPT_s[i]** – Current power control subchannel outer loop setpoint for
9 Forward Supplemental Channel i.
- 10 **FPC_SCH_FER_s[i]** – Target frame error rate for Forward Supplemental Channel i.
- 11 **FPC_SCH_MAX_SETPT_s[i]** – Maximum value of the power control subchannel outer loop
12 setpoint for Forward Supplemental Channel i.
- 13 **FPC_SCH_MIN_SETPT_s[i]** – Minimum value of the power control subchannel outer loop
14 setpoint for Forward Supplemental Channel i.
- 15 **FPC_SETPT_THRESH_s** – Power control subchannel outer loop setpoint report threshold for
16 the Dedicated Control Channel.
- 17 **FPC_SETPT_THRESH_SCH_s** – Power control subchannel outer loop setpoint report
18 threshold for the Supplemental Channel.
- 19 **FRAME_OFFSET_s** – Current Traffic Channel frame offset, in units of 1.25 ms.
- 20 **GEN_NGHR_LST_MSG_SEQ_s** – *General Neighbor List Message* sequence number.
- 21 **GLOBAL_REDIRECT_s** – *Global Service Redirection Message* sent indicator.
- 22 **GLOB_SERV_REDIR_MSG_SEQ_s** – *Global Service Redirection Message* sequence number.
- 23 **GRANTED_MODE_s** – Mobile station current granted mode.
- 24 **HASH_KEY** – Hashing function input that determines the return value. Derived from
25 IMSI_O.
- 26 **HDM_SEQ_s** – Last received *Extended Handoff Direction Message*, *General Handoff Direction*
27 *Message*, or *Universal Handoff Direction Message* sequence number.
- 28 **HOME_REG_s** – Home (non-roaming) autonomous registration enable.
- 29 **IGNORE_SCAM_s** – Identifies whether a mobile station will process the reverse
30 supplemental channel assignment portion of the subsequent Supplemental Channel
31 Assignment Message.
- 32 **IMSI_11_12_s** – The 11th and 12th digits of the IMSI used for address matching.
- 33 **IMSI_O_ADDR_NUM_s** – The number of digits in the NMSI of the Operational IMSI (IMSI_O)
34 minus four.

- 1 **IMSI_O_S_s** – The last 10-digits of Operational IMSI (IMSI_O).
- 2 **IMSI_O_11_12_s** – The 11th and 12th digits of the Operational IMSI (IMSI_O).
- 3 **INIT_PWR_s** – Initial power offset for Access Channel probes.
- 4 **LC_STATE_s** – Long code state obtained from the *Sync Channel Message*.
- 5 **LP_SEC_s** – Leap seconds count (offset of CDMA system time from UTC).
- 6 **LTM_OFF_s** – Local time offset from UTC, in units of 15 minutes.
- 7 **MAX_CAP_SZ_s** – Maximum number of Access Channel or *Enhanced Access Channel* frames
8 in an Access Channel message capsule, less 3.
- 9 **MAX_NUM_ALT_SO_s** – The maximum number of alternative service option numbers that
10 the mobile station is allowed to include in the *Origination Message* or in the *Page Response*
11 *Message*.
- 12 **MAX_NUM_PROBE_HO_s** – The maximum number of times that a mobile station is
13 permitted to perform an access probe handoff.
- 14 **MAX_PWR_PUF_s** – Maximum number of PUF probes to be transmitted at maximum mobile
15 station output power during a PUF attempt.
- 16 **MAX_REQ_SEQ_s** – Maximum number of access probe sequences for an Access Channel or
17 Enhanced Access Channel request.
- 18 **MAX_RSP_SEQ_s** – Maximum number of access probe sequences for an Access Channel or
19 Enhanced Access Channel response.
- 20 **MAX_SLOT_CYCLE_INDEX_s** – Maximum value of the slot cycle index allowed by the
21 current base station.
- 22 **MCC_s** – The Mobile Country Code used for address matching.
- 23 **MCC_O_s** – The Mobile Country Code of IMSI_O.
- 24 **MC_RR_PAR_MSG_SEQ_s** – *MC-RR System Parameters Message* sequence number.
- 25 **MEM_s** – Analog message encryption mode for CDMA-to-analog handoff.
- 26 **MIN_PILOT_EC_IO_THRESH_s** – Threshold for total E_c/I_o of pilots in the Serving Frequency
27 Active Set used in the Periodic Serving Frequency Pilot Report Procedure.
- 28 **MIN_PILOT_PWR_THRESH_s** – Threshold for total E_c of pilots in the Serving Frequency
29 Active Set used in the Periodic Serving Frequency Pilot Report Procedure.
- 30 **MIN_P_REV_s** – Minimum mobile station protocol revision level required for access to the
31 CDMA system.
- 32 **MIN_TOTAL_PILOT_EC_IO_s** – Total pilot strength threshold for the mobile station to
33 attempt to demodulate the Forward Traffic Channel on the CDMA Candidate Frequency.
- 34 **MOB_QOS_s** – Indicator of whether the mobile station is allowed to request QoS settings in

1 the *Origination Message*.

2 **MOB_TERM_s** – Mobile station termination indicator. Set to ‘1’ if the mobile station will
3 accept mobile station terminated calls in its current roaming status.

4 **MSG_PSIST_s** – Persistence modifier for Access Channel message and Enhanced Access
5 data transmissions.

6 **MS_LAT_s** – The latitude of the mobile station as estimated by the base station.

7 **MS_LOC_TSTAMP_s** – The time corresponding to the estimate of mobile station’s latitude
8 and longitude.

9 **MS_LONG_s** – The longitude of the mobile station as estimated by the base station.

10 **MULT_NIDS_s** – Multiple NID storage indicator. Set to ‘1’ if the mobile station may store
11 more than one entry in SID_NID_LIST_s for each SID.

12 **MULT_SIDS_s** – Multiple SID storage indicator. Set to ‘1’ if the mobile station may store
13 entries in SID_NID_LIST_s having different SIDs.

14 **NAR_AN_CAP_s** – Narrow analog voice channel capability.

15 **NDSS_ORIG_s** – NDSS Origination Indicator. Indicator used when the mobile station is
16 NDSS-redirected while originating a call.

17 **NGHBR_BAND_s** – Neighbor band class.

18 **NGHBR_CONFIG_s** – Neighbor base station channel allocation configuration.

19 **NGHBR_FREQ_s** – Neighbor CDMA channel number.

20 **NGHBR_LST_MSG_SEQ_s** – *Neighbor List Message* sequence number.

21 **NGHBR_MAX_AGE_s** – Neighbor set maximum age for retention in the set.

22 **NGHBR_PN_s** – Neighbor base station Pilot Channel PN sequence offset in units of 64 PN
23 chips.

24 **NGHBR_REC** – Record containing information about a neighbor base station (see also
25 NGHBR_REC_LIST).

26 **NGHBR_REC_LIST** – Neighbor base station record list. A descriptive structure used to
27 manage the base station’s information records about neighbor base stations (see also
28 NGHBR_REC).

29 **NGHBR_SET_ACCESS_INFO_s** – Neighbor Set access handoff or access probe handoff
30 information included indicator.

31 **NGHBR_SET_ENTRY_INFO_s** – Neighbor Set access entry handoff information included
32 indicator.

33 **NGHBR_SET_SIZE_s** – Size of the Neighbor Set.

- 1 **NGHBR_TIMING_INCL_s** – Indicates that hopping pilot beacon timing information is
2 included.
- 3 **NGHBR_TX_DURATION_s** – Hopping pilot beacon transmit time duration.
- 4 **NGHBR_TX_OFFSET_s** – Hopping pilot beacon transmit time offset.
- 5 **NGHBR_TX_PERIOD_s** – Hopping pilot beacon transmit time period.
- 6 **NID_s** – Network identification. A network is a subset of the base stations within a cellular
7 or PCS system.
- 8 **NOM_PWR_s** – Nominal transmit power offset. A correction factor to be used by mobile
9 stations in the open loop power estimate.
- 10 **NUM_ANALOG_NGHBR_s** – Number of neighboring analog systems.
- 11 **NUM_FCCCH_s** – Number of Forward Common Control Channels supported on the current
12 CDMA channel.
- 13 **NUM_PREAMBLE_s** – Number of Traffic Channel preamble.
- 14 **NUM_QPCH_s** – Number of Quick Paging Channels supported on the current CDMA
15 channel.
- 16 **NUM_REV_CODES_s** – A storage variable in the mobile station that contains the number of
17 Reverse Supplemental Code Channels that will be utilized in the next Reverse
18 Supplemental Code Channel transmission beginning at time REV_START_TIME_s. A value
19 of 0 indicates no Reverse Supplemental Code Channel transmission will be permitted (i.e.,
20 there is no pending Reverse Supplemental Code Channel transmission).
- 21 **NUM_STEP_s** – Number of access probes or enhanced access probes in a single access
22 probe sequence or enhanced access probe sequence.
- 23 **OTHER_REPORTED_LIST** – List of other pilots that have pilot strengths exceeding T_ADD
24 and that are not included in ACCESS_HO_LIST.
- 25 **PACA_s** – PACA call indicator. Set to enabled to indicate that the mobile station is waiting
26 for a priority access channel assignment; otherwise, set to disabled. In Sections 2 and 3,
27 PACA_s = 0 is equivalent to setting PACA_s to disabled and PACA_s = 1 is equivalent to setting
28 PACA_s to enabled.
- 29 **PACA_CANCEL** – PACA call cancel indicator. Set to '1' when the mobile station is directed
30 by the user to cancel the PACA call; otherwise, set to '0'.
- 31 **PACA_SID_s** – PACA system identifier. Equal to the SID of the system on which the mobile
32 station originated a PACA call.
- 33 **PACA_TIMEOUT_s** – PACA state timer duration. Specifies how long the mobile station
34 should wait for a *PACA Message* from the base station.
- 35 **PACKET_ZONE_ID_s** – Packet data services zone identifier of the base station.

- 1 **PAGECH_s** – Current CDMA Paging Channel number.
- 2 **PAGED** – Indicator for a page match detected while the mobile station is in the *System*
3 *Access State*.
- 4 **PAGE_CHAN_s** – Number of Paging Channels supported on the current CDMA channel.
- 5 **PAM_SZ_s** – Number of frames in the Access Channel or Enhanced Access Channel
6 preamble, less 1.
- 7 **PARAMETER_REG_s** – Parameter-change registration enable.
- 8 **PERIODIC_SEARCH_s** – Flag to indicate if the mobile station is to perform a periodic search
9 on the Candidate Frequency.
- 10 **PGSLOT** – Value obtained from the hashing function, used to determine the mobile
11 station's assigned Paging Channel slots.
- 12 **PILOT_ARRIVAL** – Time of occurrence, as measured at the mobile station antenna
13 connector, of the earliest arriving usable multipath component of the pilot. The arrival
14 time is measured relative to the mobile station's time reference.
- 15 **PILOT_GATING_RATE_s** – Reverse pilot gating rate on the Reverse Pilot Channel.
- 16 **PILOT_GATING_USE_RATE** – Reverse pilot gating rate enable indicator. It indicates
17 whether or not the Reverse Pilot Channel is gated.
- 18 **PILOT_INC_s** – Pilot PN sequence offset index increment. The interval between pilots, in
19 units of 64 PN chips, for base stations in a system.
- 20 **PILOT_PN_s** – Pilot Channel PN sequence offset, in units of 64 PN chips, for a base station.
- 21 **PILOT_PN_PHASE** – Calculated Pilot Channel PN phase, in chips, including the PN
22 sequence offset and the arrival time relative to the mobile station's time reference.
- 23 **PILOT_REPORT_s** – Pilot reporting indicator.
- 24 **POTENTIAL_CDMACH_s** – The CDMA Channel number that could potentially be used by the
25 mobile station.
- 26 **POWER_DOWN_REG_s** – Power down registration enable indicator.
- 27 **POWER_UP_REG_s** – Power up registration enable indicator.
- 28 **PPSMM_PERIOD_s** – The period used in the Periodic Serving Frequency Pilot Report
29 Procedure.
- 30 **PRAT_s** – Data rate of the Paging Channels.
- 31 **P_REV_s** – Protocol revision level supported by a base station.
- 32 **P_REV_IN_USE_s** – Protocol revision level currently in use by a mobile station.
- 33 **PREF_MSID_TYPE_s** – Preferred mobile station identifier field type.

- 1 **PREVIOUS_ACTIVE_PILOT_s** – Identifies the pilot, if any, which was in the Active Set
 2 immediately prior to the current pilot in the Active Set, during the current access attempt.
- 3 **PRI_NGHBR_LIST_s** – *Private Neighbor List Message* sent indicator.
- 4 **PRI_NGHBR_PN** – Private Neighbor base station Pilot Channel PN sequence offset in units
 5 of 64 PN chips.
- 6 **PRI_NGHBR_REC** – Record containing information about a private neighbor base station
 7 (see also PRI_NGHBR_REC_LIST).
- 8 **PRI_NGHBR_REC_LIST** – Private neighbor base station record list. A descriptive structure
 9 used to manage the base station's information records about private neighbor base
 10 stations (see also PRI_NGHBR_REC).
- 11 **PRI_NGHBR_LST_MSG_SEQ_s** – *Private Neighbor List Message* sequence number.
- 12 **PROBE_BKOFF_s** – Access Channel probe backoff range, in slots.
- 13 **PROBE_PN_RAN_s** – Range for hashing function selection of the delay prior to transmission
 14 of Access Channel probes. Value is $\log_2(\text{range} + 1)$.
- 15 **PSIST_s** – Persistence value for the mobile station's overload class.
- 16 **PUF_FREQ_INCL_s** – Flag to indicate whether the mobile station is to transmit a PUF probe
 17 on the serving frequency or on a target frequency.
- 18 **PUF_INIT_PWR_s** – Power increase (in dB) of the first PUF pulse in a PUF attempt.
- 19 **PUF_INTERVAL_s** – Number of frames between the start of each PUF probe.
- 20 **PUF_PULSE_SIZE_s** – Duration of a PUF pulse in power control groups.
- 21 **PUF_PWR_STEP_s** – Amount (in dB) by which the mobile station is to increment the power
 22 of a PUF pulse above nominal power from one PUF pulse to the next.
- 23 **PUF_SETUP_SIZE_s** – Number of power control groups within a PUF probe before the
 24 transmission of the PUF pulse.
- 25 **PUF_SF_CDMABAND_s** – Serving Frequency CDMA band class.
- 26 **PUF_SF_CDMACH_s** – Serving Frequency CDMA Channel number.
- 27 **PUF_TF_CDMABAND_s** – Target Frequency CDMA band class.
- 28 **PUF_TF_CDMACH_s** – Target Frequency CDMA Channel number.
- 29 **PUF_TX_PWR_s** – Mobile station's output power for the PUF pulse.
- 30 **PWR_CNTL_STEP_s** – Power control step size assigned by the base station that the mobile
 31 station is to use for closed loop power control.
- 32 **PWR_PERIOD_ENABLE_s** – Forward power control periodic reporting enabled indicator.

- 1 **PWR_REP_DELAY_s** – Power report delay. The period that the mobile station waits
 2 following an autonomous *Power Measurement Report* before restarting frame counting for
 3 power control purposes.
- 4 **PWR_REP_FRAMES_s** – Power control reporting frame count. The number of frames over
 5 which the mobile station is to count frame errors. Value is $2 \times \log_2(\text{frames} / 5)$.
- 6 **PWR_REP_THRESH_s** – Power control reporting threshold. The number of bad frames to be
 7 received in a measurement period before the mobile station is to generate a *Power*
 8 *Measurement Report Message*.
- 9 **PWR_STEP_s** – Power increment for successive access probes, in units of 1.0 dB.
- 10 **PWR_THRESH_ENABLE_s** – Forward power control threshold reporting enabled indicator.
- 11 **QPAGECH_s** – Current Quick Paging Channel number.
- 12 **QPCH_CCI_SUPPORTED_s** – Flag to indicate if configuration change indicators are
 13 supported on the Quick Paging Channel.
- 14 **QPCH_POWER_LEVEL_PAGE_s** – Relative power level of the transmitted Quick Paging
 15 Channel Paging Indicator modulation symbols, relative to the Forward Pilot Channel.
- 16 **QPCH_POWER_LEVEL_CONFIG_s** – Relative power level of the transmitted Quick Paging
 17 Channel Configuration Change Indicator modulation symbols, relative to the Forward Pilot
 18 Channel.
- 19 **QPCH_RATE_s** – Indicator rate of the current Quick Paging Channel(s).
- 20 **QPCH_SUPPORTED_s** – Flag to indicate if the Quick Paging Channel is supported by the
 21 base station.
- 22 **RA** – Random access channel number. The Access Channel number generated (pseudo-
 23 randomly) by the mobile station.
- 24 **RAND_s** – Authentication random challenge value.
- 25 **RANDC** – The eight most-significant bits of the random challenge value used by the mobile
 26 station.
- 27 **RANDOM_TIME** – Random time. A portion of SYS_TIME used to seed the random number
 28 generator.
- 29 **RC_CAP_REQUESTED_s** – Radio Configuration Capability indicator. When set to “1” the
 30 mobile station shall include the Radio Configuration capabilities that it supports in the
 31 *Origination Message and Page Response Message*.
- 32 **RCCCH_SLOT_s** – See [2].
- 33 **RCCCH_SLOT_OFFSET1_s** – See [2].
- 34 **RCCCH_SLOT_OFFSET2_s** – See [2].

- 1 **REDIRECTION_s** – Service redirection indicator. Set to enabled to indicate that service
2 redirection is currently in effect; otherwise, set to disabled.
- 3 **REDIRECT_REC_s** – Holds the service redirection criteria specified in the redirection
4 record of the most recently received *Global Service Redirection Message* or *Service Redirection*
5 *Message*.
- 6 **REG_COUNT_s** – The timer-based registration counter.
- 7 **REG_COUNT_MAX_s** – Timer-based registration count limit. The timer-based registration
8 counter expiration value computed from REG_PRD_r.
- 9 **REG_DIST_s** – Registration distance. Distance from last registration that causes a
10 distance-based registration to occur.
- 11 **REG_ENABLED_s** – Autonomous registrations enabled indicator.
- 12 **REGISTERED_s** – Mobile station registered indicator.
- 13 **REG_PRD_s** – Registration period. The time interval between timer-based registrations.
14 Value is $4 \times \log_2(\text{time} / 0.08 \text{ s})$.
- 15 **REG_PERSIST_s** – Persistence modifier for registration accesses (except ordered
16 registrations).
- 17 **REG_ZONE_s** – Registration zone number of the base station.
- 18 **REJECT_UZID_s** – User Zone identifier of the User Zone rejected by the base station.
- 19 **RESELECT_INCLUDED_s** – System reselection information included indicator. When this
20 is set to '1', the system reselection procedure is enabled.
- 21 **RESUME_PREAMBLE_s** – A storage variable in the mobile station that contains the size of
22 the preamble that shall be transmitted on a Reverse Supplemental Code Channel at the
23 beginning of transmission on a Reverse Supplemental Code Channel when resuming
24 transmission following an interruption when discontinuous transmission is occurring.
- 25 **RETRY_DELAY_s[i]** – A storage variable in the mobile station that contains the system
26 time before which the mobile station may not transmit a specific message. The type of
27 message that cannot be transmitted is specified by RETRY_TYPE, represented here by i. A
28 RETRY_DELAY_s[i] value of 0 indicates no retry delay is in effect, and a value of '11111111'
29 indicates an infinite retry delay.
- 30 **RETRY_DELAY_UNIT_s** – The units for the value of RETRY_DELAY_s. Possible values are
31 1000ms and 60000ms.
- 32 **RETRY_DELAY_VALUE_s** – The unitless value of the retry delay.
- 33 **RETRY_TYPE_s** – The retry delay type. It specifies the type of message to which the retry
34 delay value applies. If set to a value of 0, it indicates that all retry delay values should be
35 cleared.

1 **RETURN_CAUSE_s** – Reason for the mobile station registering or accessing the system.

2 **RETURN_IF_FAIL_s** – Return if fail indicator. Set to '1' to indicate that mobile station is to
3 return to the system from which it was redirected if it fails to acquire service on a system
4 using specified redirection criteria. Otherwise, set to '0'.

5 **RETURN_IF_HANDOFF_FAIL_s** – Return if handoff fail indicator. Indicates if the mobile
6 station is to resume using the Active Set on the Serving Frequency following an
7 unsuccessful hard handoff attempt.

8 **REV_DTX_DURATION_s** – Maximum duration of time in units of 20 ms that the mobile
9 station is allowed to stop transmitting on a Reverse Supplemental Code Channel or
10 Reverse Supplemental Channel within the reverse assignment duration.

11 **REV_DURATION_s** – A stored variable in the mobile station that contains the duration (in
12 units of 80 ms) of the Reverse Supplemental Code Channel transmission that will begin at
13 time REV_START_TIME_s.

14 **REV_FCH_GATING_MODE_s** – The reverse Fundamental Traffic Channel gating mode in
15 Radio Configurations 3, 4, 5, and 6 where 50% of the PCGs in the 1500 bps and 1800 bps
16 frames are gated off (see 2.1.3.7.8 of C.P0002-A). Set to '1' if the mobile station is operating
17 in the reverse fundamental channel gating mode.

18 **REV_FCH_RC_s** – Reverse Fundamental Channel Radio Configuration.

19 **REV_FRAME_40_MAX_RATE_s** – The maximum data rate for the mobile station's
20 transmission at 40 ms frame length on the Reverse Supplemental Channel.

21 **REV_FRAME_80_MAX_RATE_s** – The maximum data rate for the mobile station's
22 transmission at 80 ms frame length on the Reverse Supplemental Channel.

23 **REV_LINKED_HDM_SEQ_s** – Storage variable containing the most recent reverse
24 sequence number of the *General Handoff Direction Message* to which a *Supplemental*
25 *Channel Assignment Message* reverse assignment was linked.

26 **REV_PWR_CNTL_DELAY_s** – The reverse link power control delay for the reverse
27 fundamental channel gating mode in Radio Configurations 3, 4, 5, and 6 and the gated
28 preamble transmission on the Enhanced Access Channel or the Reverse Common Control
29 Channel. The delay is the time between the end of the reverse link PCG and the
30 beginning of the forward link PCG minus one, when the round trip delay is zero.

31 **REV_RC_s** – Reverse Channel Radio Configuration.

32 **REV_SCH_DTX_DURATION_s** – Maximum duration of time in units of 20 ms that the
33 mobile station is allowed to stop transmitting on a Reverse Supplemental Channel within
34 the reverse assignment duration.

35 **REV_SCH_DURATION_s** – A stored variable in the mobile station which contains the
36 duration of the Reverse Supplemental Channel transmission which will begin at time
37 REV_SCH_START_TIME_s.

- 1 **REV_SCH_FRAME_LENGTH_s** – The Reverse Supplemental Channel frame length.
- 2 **REV_SCH_START_TIME_s** – A stored variable in the mobile station which contains the
 3 System Time, in units of time specified by START_TIME_UNIT_s, (modulo 32) at which the
 4 mobile station shall start (or resume) processing Reverse Supplemental Channels.
- 5 **REV_START_TIME_s** – A stored variable in the mobile station that contains the next 80 ms
 6 frame boundary (modulo 64) on which the mobile station is assigned to start Reverse
 7 Supplemental Code Channel transmission.
- 8 **RN_HASH_KEY_s** – Name of an internal variable having the same value as the mobile
 9 station's ESN. This variable is used by procedures defined in [3].
- 10 **ROAM_INDI_s** – Enhanced roaming indicator used for mobile station roaming condition
 11 display.
- 12 **RS** – Inter-probe sequence backoff. The delay in slots generated (pseudorandomly) by the
 13 mobile station following an unsuccessful access probe sequence or prior to the first access
 14 probe in a response attempt.
- 15 **RT** – Inter-probe backoff. The delay in slots generated (pseudorandomly) by the mobile
 16 station following an unacknowledged access probe.
- 17 **SCC_s** – SAT color code for analog channel assignment and CDMA-to-analog handoff.
- 18 **SCAM_FOR_DURATION_MODE_s** – Indicator for a specific or an indefinite Forward
 19 Supplemental Code Channel assignment duration.
- 20 **SCAM_FOR_ORDER_s** – The stop or start command set by a *Supplemental Channel*
 21 *Assignment Message* that is linked to a *General Handoff Direction Message*.
- 22 **SCAM_REV_DURATION_MODE_s** – Indicator for a specific or an indefinite Reverse
 23 Supplemental Code Channel assignment duration.
- 24 **SYNC_ID_s** – Service Configuration Synchronization Identifier. This is a 16-bit CRC
 25 computed over the entire Service Configuration information record and Non-negotiable
 26 Service Configuration information record and used for determining whether these two
 27 information records should be included in *the Service Connect Message* sent by the base
 28 station to the mobile station. The mobile station generates this parameter based on the
 29 Service Configuration information record and Non-negotiable Service Configuration
 30 information record stored at the mobile station (if stored), and sends it to the base station
 31 in the *Origination Message* or the *Page Response Message*. The base station computes this
 32 parameter based on these two information records targeted to be sent to the mobile
 33 station. If the computed value matches the one sent by the mobile station, then base
 34 station does not send these two information records over the air and expects the mobile
 35 station to start using the stored ones.
- 36 **SCRM_SEQ_NUM_s** – Storage variable containing the most recently transmitted
 37 *Supplemental Channel Request Message* sequence number.

SEARCH_MODE_s – Search mode to be used in a periodic search on the Candidate Frequency.

SEARCH_OFFSET_s – Time offset of the start of the first search from the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that starts a search.

SEARCH_PERIOD_s – Period for search on the Candidate Frequency.

SEARCH_PRIORITY_s – Neighbor Pilot Channel search priority.

SEARCH_PRIORITY_INCL_s – Search priorities included indicator.

SEARCH_TIME_RESOLUTION_s – Unit of delay used in the *Candidate Frequency Search Report Message* to report the total and maximum times away from the Serving Frequency.

SENDING_RAND_s – *ANSI-41 RAND Message* sent indicator.

SERV_NEG_s – Service negotiation indicator. Indicates whether the mobile station is to use service negotiation or service option negotiation.

SERV_REQ_NUM_s – Service request sequence number. Sequence number to use when requesting a new service configuration.

SERVSYS_s – Selected serving system indicator for Band Class 0. Set to SYS_A if the mobile station operates in system A; otherwise, set to SYS_B.

SETTING_SEARCH_WIN – SRCH_WIN_NGHBR Setting flag. Set to '1' if the mobile station shall set the SRCH_WIN_NGHBR field of each NGHBR_REC to SEARCH_WIN_N_s for all NGHBR_SET_SIZE_s entries upon receiving the *System Parameters Message*.

SF_ADD_INTERCEPT_s – Intercept of the handoff add criterion for the Serving Frequency, stored during hard handoff.

SF_CDMABAND_s – Serving Frequency CDMA band class, stored during hard handoff.

SF_CDMACH_s – Serving Frequency CDMA Channel number, stored during hard handoff.

SF_CODE_CHAN_LIST_s – Serving Frequency Code Channel List, stored during hard handoff.

SF_DROP_INTERCEPT_s – Intercept of the handoff drop criterion for the Serving Frequency, stored during hard handoff.

SF_ENCRYPT_MODE_s – Message encryption indicator for the Serving Frequency, stored during hard handoff.

SF_FRAME_OFFSET_s – Traffic Channel frame offset used on the Serving Frequency, stored during hard handoff.

SF_NOM_PWR_s – Nominal transmit power offset used on the Serving Frequency, stored during hard handoff.

- 1 **SF_NOM_PWR_EXT_s** –Extended nominal transmit power offset indicator for the Serving
2 Frequency, stored during hard handoff.
- 3 **SF_P_REV_s** – Protocol revision level supported by the base station on the Serving
4 Frequency.
- 5 **SF_P_REV_IN_USE_s** – Protocol revision level currently used by the mobile station on the
6 Serving Frequency.
- 7 **SF_PRIVATE_LCM_s** – Private long code mask indicator for the Serving Frequency, stored
8 during hard handoff.
- 9 **SF_SERV_NEG_s** – Service negotiation indicator for the Serving Frequency, stored during
10 hard handoff.
- 11 **SF_SERVICE_CONFIG_s** – Service configuration (service configuration record and non-
12 negotiable service configuration record) for the Serving Frequency.
- 13 **SF_SOFT_SLOPE_s** – Slope of the handoff add/drop criterion for the Serving Frequency,
14 stored during hard handoff.
- 15 **SF_SRCH_WIN_A_s** – Search window size for the Active Set and Candidate Set used on the
16 Serving Frequency, stored during hard handoff.
- 17 **SF_SRCH_WIN_N_s** – Search window size for the Neighbor Set used on the Serving
18 Frequency, stored during hard handoff.
- 19 **SF_SRCH_WIN_R_s** – Search window size for the Remaining Set used on the Serving
20 Frequency, stored during hard handoff.
- 21 **SF_T_ADD_s** – Pilot detection threshold used on the Serving Frequency, stored during hard
22 handoff.
- 23 **SF_T_COMP_s** – Active Set versus Candidate Set comparison threshold used on the Serving
24 Frequency, stored during hard handoff.
- 25 **SF_T_DROP_s** – Pilot drop threshold used on the Serving Frequency, stored during hard
26 handoff.
- 27 **SF_T_TDROP_s** – Pilot drop timer value used on the Serving Frequency, stored during hard
28 handoff.
- 29 **SF_TOTAL_EC_THRESH_s** – Threshold for total E_c of pilots in the Serving Frequency Active
30 Set used in the Candidate Frequency periodic search procedures.
- 31 **SF_TOTAL_EC_IO_THRESH_s** – Threshold for total E_c/I_o of pilots in the Serving Frequency
32 Active Set used in the Candidate Frequency periodic search procedures.
- 33 **SID_s** – System identifier.
- 34 **SID_NID_LIST_s** – Registration SID, NID list. The SID, NID pairs in which the mobile
35 station has registered.

- 1 **SLOT_CYCLE_INDEX_s** – Slot cycle index. Equal to the smaller of SLOT_CYCLE_INDEX_p
2 and the received maximum slot cycle index.
- 3 **SLOT_NUM** – Paging Channel or Forward Common Control Channel slot number.
- 4 **SOFT_SLOPE_s** – The slope in the inequality criterion for adding a pilot to the Active Set, or
5 dropping a pilot from the Active Set.
- 6 **SO_REQ_s** – Service option request number. The number of the service option requested by
7 the mobile station during service option negotiation.
- 8 **SR1_BRAT_NON_TD_s** – Spreading Rate 1 Broadcast data rate with no transmit diversity.
- 9 **SR1_BRAT_TD_s** – Spreading Rate 1 Broadcast data rate with transmit diversity.
- 10 **SR1_CRAT_NON_TD_s** – Spreading Rate 1 coding rate with no transmit diversity.
- 11 **SR1_CRAT_TD_s** – Spreading Rate 1 coding rate with transmit diversity.
- 12 **SR1_TD_MODE_s** – Spreading Rate 1 transmit diversity mode in support of OTD or STS.
- 13 **SR1_TD_LEVEL_s** – Spreading Rate 1 transmit diversity power level.
- 14 **SR3_BRAT_s** – Data rate of the Broadcast Control Channel on SR3 frequencies.
- 15 **SR3_PRIMARY_PILOT_s** – Frequency offset of the primary SR3 pilot.
- 16 **SR3_PILOT_POWER1_s** – The power level of the primary pilot with respect to the pilot on
17 the lower frequency of the two remaining SR3 frequencies.
- 18 **SR3_PILOT_POWER2_s** – The power level of the primary pilot with respect to the pilot on
19 the higher frequency of the two remaining SR3 frequencies.
- 20 **SRCH_OFFSET_INCL_s** – Neighbor pilot search window offset included indicator.
- 21 **SRCH_OFFSET_NGHBR_s** – Neighbor pilot search window offset.
- 22 **SRCH_WIN_A_s** – Search window size for the Active Set and Candidate Set.
- 23 **SRCH_WIN_NGHBR_s** – Neighbor Pilot Channel search window size.
- 24 **SRCH_WIN_NGHBR_INCL_s** – Neighbor Pilot Channel search window size included
25 indicator.
- 26 **SRCH_WIN_N_s** – Search window size for the Neighbor Set.
- 27 **SRCH_WIN_R_s** – Search window size for the Remaining Set.
- 28 **START_TIME_UNIT_s** – A stored variable in the mobile station which contains the time
29 unit used for determining FOR_SCH_START_TIME and REV_SCH_START_TIME on
30 Supplemental Channels.
- 31 **SYS_PAR_MSG_SEQ_s** – *System Parameters Message* sequence number.
- 32 **SYS_TIME_s** – Current value of CDMA system time as received in the *Sync Channel*
33 *Message*.

- 1 **TA** – Acknowledgment response timeout.
- 2 **T_ADD_s** – Pilot detection threshold. The stored value is a positive value in units of 0.5 dB.
- 3 **T_COMP_s** – Active Set versus Candidate Set comparison threshold. The stored value is a
4 positive value in units of 0.5 dB.
- 5 **T_DROP_s** – Pilot drop threshold. The stored value is a positive value in units of 0.5 dB.
- 6 **TAG_s** – Transaction identifier. This is a 4-bit parameter maintained by the mobile station
7 which is used to uniquely identify a new call origination (via an *Enhanced Origination*
8 *Message*) by the mobile station. When the mobile station is to send an *Enhanced Origination*
9 *Message*, the mobile station increments the stored value of TAG and includes it in the
10 message.
- 11 **TAG_OUTSTANDING_LIST** – List of outstanding TAG values. This corresponds to those
12 values of TAG sent in the *Enhanced Origination Message* which have neither been accepted
13 by the base station (by assigning the requested call) nor rejected by the base station.
- 14 **TEMP_SUB_s** – User Zone temporary subscription flag.
- 15 **TF_CDMABAND_s** – Target Frequency CDMA band class. The CDMA band class specified in
16 the *Extended Handoff Direction Message* or the *General Handoff Direction Message*.
- 17 **TF_CDMACH_s** – Target Frequency CDMA Channel number. The CDMA Channel number
18 specified in the *Extended Handoff Direction Message* or the *General Handoff Direction*
19 *Message*.
- 20 **TF_RESET_FPC_s** – Flag to initialize the Forward Traffic Channel power control counters on
21 the Target Frequency.
- 22 **TF_RESET_L2_s** – Flag to reset acknowledgment procedures on the Target Frequency.
- 23 **TF_T_ADD_s** – Pilot detection threshold to be used on the Target Frequency. The stored
24 value is a positive value in units of 0.5 dB.
- 25 **TF_WAIT_TIME_s** – Maximum time that the mobile station may wait to receive a good
26 frame when acquiring the CDMA Candidate Frequency.
- 27 **TMSI_ZONE_s** – TMSI zone number of the base station.
- 28 **TMSI_ZONE_LEN_s** – The number of octets in TMSI zone.
- 29 **T_MULCHAN_s** – A storage variable in the mobile station that contains the Reverse
30 Supplemental Code Channel neighbor pilot strength measurement offset. The stored
31 value is a positive value in units of 0.5 dB.
- 32 **TOTAL_PUF_PROBES_s** – Maximum number of PUF probes transmitted in a PUF attempt.
- 33 **TOTAL_ZONES_s** – Number of registration zones to be retained in ZONE_LIST_s.
- 34 **TOT_FRAMES_s** – Total frames received. The total number of received frames, counted for
35 Forward Traffic Channel power control.

- 1 **T_TDROP_s** – Pilot drop timer value.
- 2 **USE_FOR_HDM_SEQ_s** – Storage variable containing a flag indicating a pending
3 Supplemental Channel Assignment Message forward assignment that is linked to a
4 *General Handoff Direction Message*.
- 5 **USE_REV_HDM_SEQ_s** – Storage variable containing a flag indicating a pending
6 Supplemental Channel Assignment Message reverse assignment that is linked to a
7 *General Handoff Direction Message*.
- 8 **USE_T_ADD_ABORT_s** – A storage variable in the mobile station that contains the Reverse
9 Supplement Code Channel assignment T_ADD abort indicator.
- 10 **USE_TMSI_s** – Base station's preference of the use of TMSI.
- 11 **USER_ZONE_ID_s** – *User Zone Identification Message* sent indicator.
- 12 **USER_ZONE_ID_MSG_SEQ_s** – *User Zone Identification Message* sequence number.
- 13 **UZ_EXIT_IN_USE_s** – The User Zone Exit parameter that the mobile station received from
14 the *User Zone Identification Message* broadcast by the last base station of the old user zone.
- 15 **UZ_EXIT_RCVD_s** – The User Zone Exit parameter that the mobile station just received
16 from the *User Zone Identification Message* broadcast by the currently serving base station.
- 17 **UZID_s** – User Zone identifier.
- 18 **UZ_REC** – Record containing information about a User Zone broadcast by the base station
19 (see also UZ_REC_LIST).
- 20 **UZ_REC_LIST** – Broadcast User Zone record list. A descriptive structure used to manage
21 the base station's information records about broadcast User Zones (see also UZ_REC).
- 22 **UZ_REV_s** – User Zone update revision number.
- 23 **VMAC_s** – Analog voice mobile station attenuation code for analog channel assignment or
24 CDMA-to-analog handoff.
- 25 **ZONE_LIST_s** – Registration zone list. List of zones in which the mobile station has
26 registered.
- 27 **ZONE_TIMER_s** – Zone timer length.
- 28

1.2 Signaling Architecture

Layer 3 signaling for cdma2000 is modeled as follows:

- **Protocol Layer.** Layer 3 generates Layer 3 PDUs and passes these PDUs to Lower Layers, where proper encapsulation into Lower Layer PDUs is performed. On the receiving end, Lower Layer PDUs are decapsulated and the resulting SDUs are sent from Lower Layers to Layer 3 for processing.
- **Service Access Points.** SAPs and corresponding communication primitives are defined between the Layer 3 and Lower Layers over the data plane. No SAPs are defined for communications through the control plane.

1.3 Signaling and Functionality

1.3.1 General Architecture

The general architecture is presented in Figure 1.3.1-1.

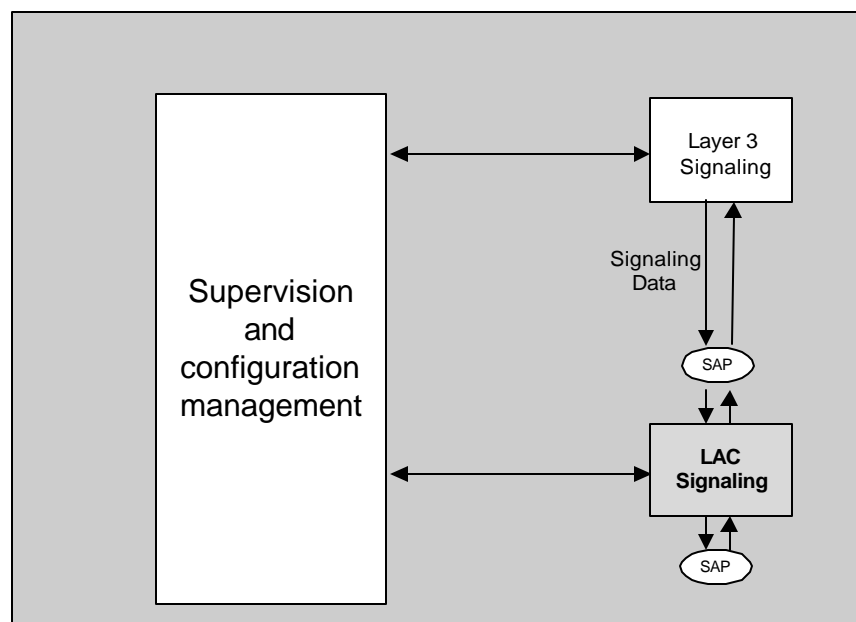


Figure 1.3.1-1. cdma2000 Signaling – General Architecture

1.3.2 Interface to Layer 2

The interface between Layer 3 and Layer 2 is a Service Access Point (SAP). At the SAP, Layer 3 and Layer 2 exchange Service Data Units (SDU) and interface control information in the form of Message Control and Status Blocks (MCSB) using a set of primitives.

1.3.2.1 Message Control and Status Block (MCSB)

The MCSB is a parameter block for the defined primitives, containing relevant information about an individual Layer 3 message (PDU), as well as instructions on how the message

may be handled or how it is to be (for transmission), or was (for reception), processed by Layer 2. The MCSB is a conceptual construct and is not subject to detailed specification in this document; however, it is envisioned the MCSB will contain information such as:

- The MSG_TAG. If the message is generated in response to a previously received message, the MSG_TYPE of the previously received message is also stored.
- The length of the PDU.
- A unique instance identifier associated with the message, which enables identification of a message for notifications of delivery/non-delivery or recovery procedures.
- Whether the message should be acknowledged at Layer 2 (i.e., delivered in assured mode or unassured mode).
- Whether notification of delivery is required.
- The identity of the addressee for the message.
- Whether the PDU delivered to Layer 3 is a duplicate (in cases where Layer 2 does not discard duplicates).
- Data needed by the authentication procedures (e.g., the CHARi fields of the *Origination Message*).
- Relevant PDU classification (e.g., registrations, originations), where processing at Layer 2 is sensitive to the kind of PDU being transferred.
- The encryption status of the logical channel.
- CDMA System Time corresponding to the frame in which the first or last bit of a message was received.
- Transmission instructions for Layer 2, such as an instruction to send a message with a certain priority (before, after, or by interrupting the transmission of other messages), an instruction regarding supervision, and so on.
- Abnormal conditions indications from Layer 2.

1.3.2.2 Interface Primitives

The following primitives are defined for communication between the Layer 3 and Layer 2:

Name: **L2-Data.Request**

Type: Request

Direction: Layer 3 to Layer 2

Parameters: PDU, MCSB

Action: The PDU is handed to Layer 2 for delivery across the radio interface.

1	Name:	L2-Data.Confirm
2	Type:	Confirm
3	Direction:	Layer 2 to Layer 3
4	Parameters:	MCSB
5	Action:	Reception of the specified (in the MCSB) transmitted PDU was acknowledged
6		at Layer 2 by the addressee.
7		
8	Name:	L2-Data.Indication
9	Type:	Indication
10	Direction:	Layer 2 to Layer 3
11	Parameters:	PDU, MCSB
12	Action:	The received PDU is handed to Layer 3.
13		
14	Name:	L2-Condition.Notification
15	Type:	Indication
16	Direction:	Layer 2 to Layer 3
17	Parameters:	MCSB
18	Action:	Layer 3 is notified of a relevant event (e.g. abnormal condition) detected at
19		Layer 2. Details are indicated via the MCSB.
20		
21	Name:	L2-Supervision.Request
22	Type:	Request
23	Direction:	Layer 3 to Layer 2
24	Parameters:	MCSB
25	Action:	Layer 2 executes a control command as directed by Layer 3. This could be,
26		for example, an order to abandon retransmission of a message or an order
27		for local reset for the message sequence number, acknowledgment
28		sequence number and duplicate detection.

29 1.3.3 Reserved

30

31

1.3.4 Functional Description

In the Data Plane, Layer 3 originates and terminates signaling data units according to the semantic and timing of the communication protocol between the base station and the mobile station. From a semantic point of view the signaling data units are referred to as “messages” (or “orders”). From a protocol point of view, the signaling data units are PDUs. In general, the language of this specification does not explicitly distinguish between the terms “PDU” and “Message”. It is considered that the context provides enough information to allow the reader to make the appropriate distinctions.

1.3.5 PDU Transmission and Reception

Layer 3 employs the services offered at the interface with Layer 2 to transfer PDUs to and from the layer 3 entity.

When requesting the transmission of a PDU, Layer 3 will typically specify whether the transfer will be performed in *assured mode* or in *unassured mode* (for example, by setting the proper parameters in the MCSB argument of the L2-Data.Request primitive). For transmission in assured mode, layer 3 may specify if *confirmation of delivery* of the PDU is required.

Layer 2 guarantees that an assured mode PDU received from the transmitting Layer 3 entity is delivered to the receiving Layer 3 entity. Each assured mode PDU is delivered to the receiving Layer 3 entity only once and without errors. Additionally, if the transmitting Layer 3 entity requests confirmation of delivery of an assured mode PDU, Layer 2 will send an indication to the transmitting Layer 3 entity (for example by using the L2-Data.Confirm primitive) when Layer 2 receives an acknowledgment for that PDU. If Layer 2 is not able to deliver an assured mode PDU, it sends an indication of the failure to Layer 3 which can then take corrective action.

Layer 2 does not guarantee that an unassured mode PDU received from the transmitting Layer 3 entity is delivered to the receiving Layer 3 entity. Thus, Layer 2 acknowledgments may not be required for unassured mode PDUs. To increase the probability of delivery of unassured mode PDUs, Layer 3 may request Layer 2 to send those PDUs multiple times in quick repeat sequence and rely on the duplicate detection capabilities of the receiver to achieve uniqueness of delivery.

Layer 3 can also request Layer 2 to perform a reset of the Layer 2 ARQ procedures (for example, by using the L2-Supervision.Request primitive).

1 **REQUIREMENTS FOR MOBILE STATION CDMA OPERATION**

2 This section defines requirements that are specific to CDMA mobile station equipment
3 and operation. A CDMA mobile station may support operation in one or more band classes.

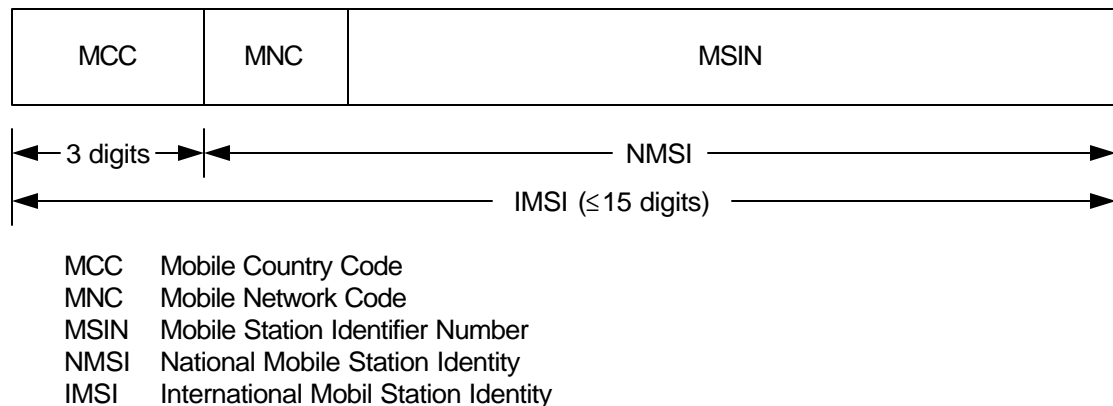
4 **2.1 Reserved**

5 **2.2 Reserved**

6 **2.3 Security and Identification**

7 2.3.1 Mobile Station Identification Number

8 Mobile stations operating in the CDMA mode are identified by the International Mobile
9 Station Identity (IMSI).¹ Mobile Stations shall have two different identifiers, IMSI_T and
10 IMSI_M. The IMSI consists of up to 15 numerical characters (0-9). The first three digits of
11 the IMSI are the Mobile Country Code (MCC), and the remaining digits are the National
12 Mobile Station Identity (NMSI). The NMSI consists of the Mobile Network Code (MNC) and
13 the Mobile Station Identification Number (MSIN). The IMSI structure is shown in Figure
14 2.3.1-1.



16
17
18 **Figure 2.3.1-1. IMSI Structure**

19
20 An IMSI that is 15 digits in length is called a class 0 IMSI (the NMSI is 12 digits in length);
21 an IMSI that is less than 15 digits in length is called a class 1 IMSI (the NMSI is less than
22 12 digits in length).

¹ See *CCITT Blue Book*, Volume II-Fascicle II.2, Recommendation E.212, November 1988.

IMSI_M is an IMSI that contains a MIN in the lower ten digits of the NMSI. An IMSI_M can be a class 0 or a class 1 IMSI. If the IMSI_M is not programmed, the mobile station shall set the four least-significant digits of the IMSI_M to the value of the ESN_p, converted directly from binary to decimal, modulo 10000, and the mobile station shall set the other digits to 0.

IMSI_T is an IMSI that is not associated with the MIN assigned to the mobile station. An IMSI_T can be a class 0 or class 1 IMSI. If the IMSI_T is not programmed, the mobile station shall set the four least-significant digits of the IMSI_T to the value of the ESN_p, converted directly from binary to decimal, modulo 10000, and the mobile station shall set the other digits to 0.

When operating in the CDMA mode the mobile station shall set its operational IMSI value, IMSI_O, to either the IMSI_M or the IMSI_T depending on the capabilities of the base station (See 2.6.2.2.5).

An IMSI_S is a 10-digit (34-bit) number derived from the IMSI. When an IMSI has ten or more digits, IMSI_S is equal to the last ten digits. When an IMSI has fewer than ten digits, the least significant digits of IMSI_S are equal to the IMSI and zeros are added to the most significant side to obtain a total of ten digits. A 10-digit IMSI_S consists of 3- and 7-digit parts, called IMSI_S2 and IMSI_S1, respectively, as illustrated in Figure 2.3.1-2. IMSI_S is mapped into a 34-bit number (see 2.3.1.1). The IMSI_S derived from IMSI_M is designated IMSI_M_S. The IMSI_S derived from IMSI_T is designated IMSI_T_S. The IMSI_S derived from IMSI_O is designated IMSI_O_S.

The mobile station shall have memory to store the 34-bit IMSI_M_S_p and the 34-bit IMSI_T_S_p. IMSI_M_S_p is represented by the 10-bit IMSI_M_S2_p and the 24 bit IMSI_M_S1_p. IMSI_T_S_p is represented by the 10-bit IMSI_T_S2_p and the 24 bit IMSI_T_S1_p.

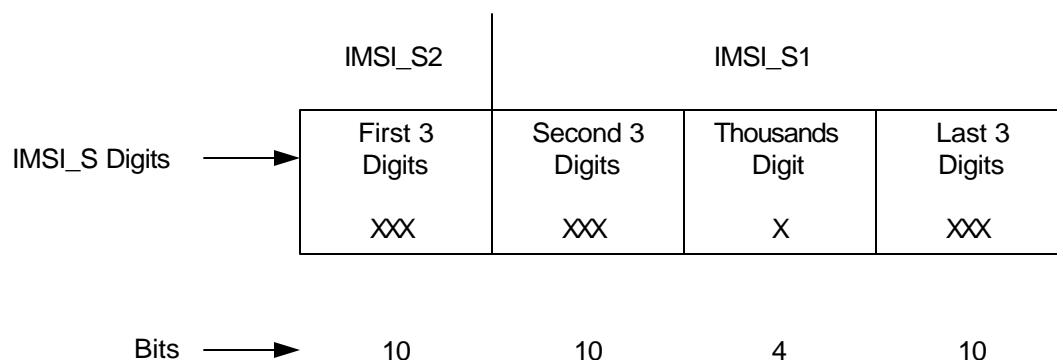


Figure 2.3.1-2. IMSI_S Binary Mapping

When an IMSI has 12 or more digits, IMSI_{11_12} is equal to the 11th and 12th digits of the IMSI. When an IMSI has fewer than 12 digits, digits with a value equal to zero are added to the most significant side to obtain a total of 12 digits and the IMSI_{11_12} is equal to the 11th and 12th digits of the resulting number.

IMSI_{11_12} is encoded as described in 2.3.1.2. The mobile station shall have memory to store the 7-bit IMSI_{M_11_12p} and the 7-bit IMSI_{T_11_12p}.

The 3-digit MCC is encoded as described in 2.3.1.3. The mobile station shall have memory to store the 10-bit MCC_{Mp} and the 10-bit MCC_{Tp}.

If the mobile station has a class 1 IMSI_T, or IMSI_M, it shall have memory to store IMSI_{T_ADDR_NUMp} and IMSI_{M_ADDR_NUMp}. IMSI_{T_ADDR_NUMp} is equal to the number of digits in the NMSI² minus four. IMSI_{M_ADDR_NUMp} is equal to the number of digits in the NMSI of the IMSI_M minus four.

2.3.1.1 Encoding of IMSI_{M_S} and IMSI_{T_S}

The IMSI_{M_S} and IMSI_{T_S} binary mapping is defined as follows:

1. The first three digits of the IMSI_{M_S} and the first three digits of the IMSI_{T_S} are mapped into ten bits (corresponding to IMSI_{M_S2p} and IMSI_{T_S2p}, respectively) by the following coding algorithm:
 - a. Represent these three digits as $D_1 D_2 D_3$ with the digit equal to zero being given the value of ten.
 - b. Compute $100 \times D_1 + 10 \times D_2 + D_3 - 111$.
 - c. Convert the result in step b to binary by the standard decimal-to-binary conversion as shown in Table 2.3.1.1-1.

² It is assumed that the number of digits in NMSI is greater than three.

Table 2.3.1.1-1. Decimal to Binary Conversion Table

Decimal Number	Binary Number
0	0000000000
1	0000000001
2	0000000010
3	0000000011
4	0000000100
.	.
.	.
.	.
998	1111100110
999	1111100111

- 2.
2. The second three digits of IMSI_M_S and the second three digits of IMSI_T_S are mapped into the ten most significant bits of IMSI_M_S1_p and IMSI_T_S1_p, respectively, by the coding algorithm indicated in 1.
3. The last four digits of IMSI_M_S and the last four digits of IMSI_T_S are mapped into the 14 least significant bits of IMSI_M_S1_p and IMSI_T_S1_p, respectively, as follows:
 - a. The thousands digit is mapped into four bits by a Binary-Coded-Decimal (BCD) conversion, as shown in Table 2.3.1.1-2.
 - b. The last three digits are mapped into ten bits by the coding algorithm indicated in 1.

Table 2.3.1.1-2. BCD Mapping

Decimal Digit	Binary Number
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001
0	1010

The following example illustrates the IMSI_T_S2_p and IMSI_T_S1_p calculation procedure. Let the IMSI_T be the 9-digit number 123456789. Since the IMSI_T has fewer than ten digits, the nine least significant digits of the IMSI_T_S are equal to the IMSI_T digits and the most significant IMSI_T_S digit is set to zero. So the 10-digit IMSI_T_S is 012 345 6789. IMSI_T_S2_p and IMSI_T_S1_p are calculated as follows:

- IMSI_T_S2_p. The ten-bit IMSI_T_S2_p is derived from the first three digits of the IMSI_T_S (i.e., 012):

a. D1 = 10; D2 = 1; D3 = 2.

b. $100 \times D1 + 10 \times D2 + D3 - 111 = 100 \times 10 + 10 \times 1 + 2 - 111 = 901$.

c. 901 in binary is '11 1000 0101'.

Therefore, IMSI_T_S2_p is '11 1000 0101'.

- IMSI_T_S1_p. The ten most significant bits of IMSI_T_S1_p are derived from the second three digits of the IMSI_T_S (i.e., 345):

a. D1 = 3; D2 = 4; D3 = 5.

b. $100 \times D1 + 10 \times D2 + D3 - 111 = 100 \times 3 + 10 \times 4 + 5 - 111 = 234$.

c. 234 in binary is '0011 1010 10'.

The next four most significant bits of IMSI_T_S1_p are derived from the thousands digit of the IMSI_T_S (i.e., 6) by BCD conversion: 6 in BCD is '0110'.

The ten least significant bits of IMSI_T_S1_p are derived from the last three digits of the IMSI_T_S (i.e., 789):

a. $D_1 = 7; D_2 = 8; D_3 = 9$.

b. $100 \times D_1 + 10 \times D_2 + D_3 - 111 = 100 \times 7 + 10 \times 8 + 9 - 111 = 678$.

c. 678 in binary is '10 1010 0110'.

Therefore, IMSI_T_S1_p is '0011 1010 1001 1010 1010 0110'.

2.3.1.2 Encoding of IMSI_M_11_12 and IMSI_T_11_12

The IMSI_M_11_12 and IMSI_T_11_12 binary mapping is defined as follows:

1. Represent the 11th digit as D_{11} and the 12th digit as D_{12} with the digit equal to zero being given the value of ten.
2. Compute $10 \times D_{12} + D_{11} - 11$.
3. Convert the result in step 2 to binary by a standard decimal-to-binary conversion as described in Table 2.3.1.1-1 and limit the resulting number to the 7 least significant bits.

2.3.1.3 Encoding of the MCC_M and MCC_T

The MCC_M and MCC_T binary mapping is defined as follows:

1. Represent the 3-digit Mobile Country Code as $D_1 D_2 D_3$ with the digit equal to zero being given the value of ten.
2. Compute $100 \times D_1 + 10 \times D_2 + D_3 - 111$.
3. Convert the result in step (2) to binary by a standard decimal-to-binary conversion as described in Table 2.3.1.1-1.

2.3.1.4 Mobile Directory Number

A Mobile Directory Number (MDN) is a dialable number associated with the mobile station through a service subscription. A Mobile Directory Number is not necessarily the same as the mobile station identification on the air interface, i.e., MIN, IMSI_M or IMSI_T . An MDN consists of up to 15 digits. The mobile station should have memory to store at least one Mobile Directory Number (see Table F.3-1).

2.3.2 Electronic Serial Number

The ESN is a 32-bit binary number that uniquely identifies the mobile station to any wireless system. The ESN value is available to procedures in the mobile station as the value of the variable ESN_p . The value of the variable RN_HASH_KEY_s is the same as the value of the variable ESN_p , and need not be stored separately.

2.3.3 Station Class Mark

Class-of-station information referred to as the station class mark (SCM_p) must be stored in a mobile station. The digital representation of this class mark for Band Class 0 and Band Class 1 is specified in Table 2.3.3-1.

Table 2.3.3-1. Station Class Mark

Function	Bit(s)	Setting
Extended SCM Indicator	7	Band Class 0 0XXXXXXX
		Band Class 1 1XXXXXXX
Dual Mode	6	CDMA Only X0XXXXXX
		Dual Mode X1XXXXXX
Slotted Class	5	Non-Slotted XX0XXXXX
		Slotted XX1XXXXX
IS-54 Power Class	4	Always 0 XXX0XXXX
25 MHz Bandwidth	3	Always 1 XXXX1XXX
Transmission	2	Continuous XXXXX0XX
		Discontinuous XXXXX1XX
Power Class for Band Class 0 Analog Operation	1 - 0	Class I XXXXXX00
		Class II XXXXXX01
		Class III XXXXXX10
		Reserved XXXXXX11

If the mobile station supports analog mode operation in Band Class 0, the mobile station shall set the Power Class function bits to reflect its analog power class at Band Class 0, regardless of the band class in which it is operating; otherwise, the mobile station shall set these bits to '00'.

2.3.4 Registration Memory

The mobile station shall have memory to store one element in the zone-based registration list ZONE_LIST_{s-p} (see 2.6.5.1.5 and 2.6.5.5). This stored element shall include both REG_ZONE and the corresponding (SID, NID) pair. The data retention time under power-off conditions shall be at least 48 hours. If, after 48 hours, the data integrity cannot be guaranteed, then the entry in ZONE_LIST_{s-p} shall be deleted upon power-on.

The mobile station shall have memory to store one element in the system/network registration list SID_NID_LIST_{s-p} (see 2.6.5.1.5 and 2.6.5.5). The data retention time under power-off conditions shall be at least 48 hours. If, after 48 hours, the data integrity cannot be guaranteed, then the entry in SID_NID_LIST_{s-p} shall be deleted upon power-on.

1 The mobile station shall have memory to store the distance-based registration variables
 2 BASE_LAT_REG_{S-p}, BASE_LONG_REG_{S-p}, and REG_DIST_REG_{S-p} (see 2.6.5.1.4 and 2.6.5.5).
 3 The data retention time under power-off conditions shall be at least 48 hours. If, after 48
 4 hours, the data integrity cannot be guaranteed, then REG_DIST_REG_{S-p} shall be set to zero
 5 upon power-on.

6 2.3.5 Access Overload Class

7 The 4-bit access overload class indicator (ACCOLC_p) is used to identify which overload
 8 class controls access attempts by the mobile station and is used to identify redirected
 9 overload classes in global service redirection.

10 The mobile station shall store 4-bit access overload class (ACCOLC_p). Mobile stations that
 11 are not for test or emergency use should be assigned to overload classes ACCOLC 0
 12 through ACCOLC 9. For mobile stations that are classified as overload classes ACCOLC 0
 13 through ACCOLC 9, the mobile station's 4-bit access overload class indicator (ACCOLC_p)
 14 shall be automatically derived from the last digit of the associated decimal representation
 15 of the IMSI_M by a decimal to binary conversion as specified in Table 2.3.5-1. When a
 16 mobile station's IMSI_M is updated, the mobile station shall re-calculate the ACCOLC_p as
 17 indicated above. Mobile stations designated for test use should be assigned to ACCOLC 10;
 18 mobile stations designated for emergency use should be assigned to ACCOLC 11. ACCOLC
 19 12 through ACCOLC 15 are reserved.³ Programming the 4bit ACCOLC_p for overload
 20 classes ACCOLC 10 through ACCOLC 15 as specified in Table 2.3.5-2 shall require a
 21 special facility only available to equipment manufacturers and system operators.

22 The content of ACCOLC_p shall not be visible through the mobile station's display.

³ For more information, refer to [28].

Table 2.3.5-1. ACCOLC_p Mapping for ACCOLC 0 through ACCOLC 9

Last Digit of the Decimal Representation of the IMSI (binary)	ACCOLC_p
0	0000
1	0001
2	0010
3	0011
4	0100
5	0101
6	0110
7	0111
8	1000
9	1001

Table 2.3.5-2. ACCOLC_p Mapping for ACCOLC 10 through ACCOLC 15

Overload Class (binary)	ACCOLC_p
10	1010
11	1011
12	1100
13	1101
14	1110
15	1111

2.3.6 Public Long Code Mask

The Public Long Code Mask consists of 42 bits (see [2]). The 37 least significant bits (PLCM_37) are set as follows:

Bits M_{36} through M_{32} shall be set to '11000'; bits M_{31} through M_0 shall be set to a permutation of the mobile station's ESN as follows:

1 ESN = (E₃₁, E₃₀, E₂₉, E₂₈, E₂₇, E₂₆, E₂₅, . . . E₂, E₁, E₀)

2 Permuted ESN = (E₀, E₃₁, E₂₂, E₁₃, E₄, E₂₆, E₁₇, E₈, E₃₀, E₂₁, E₁₂, E₃, E₂₅, E₁₆, E₇,
3 E₂₉, E₂₀, E₁₁, E₂, E₂₄, E₁₅, E₆, E₂₈, E₁₉, E₁₀, E₁, E₂₃, E₁₄, E₅, E₂₇,
4 E₁₈, E₉).

5 2.3.7 Reserved

6 2.3.8 Home System and Network Identification

7 In addition to the HOME_SID_p parameter that the mobile station stores for 800 MHz analog
8 operation, the mobile station shall provide memory to store at least one home (SID_p, NID_p)
9 pair. The mobile station shall also provide memory to store the 1-bit parameters
10 MOB_TERM_HOME_p, MOB_TERM_FOR_SID_p, and MOB_TERM_FOR_NID_p (see 2.6.5.3).

11 2.3.9 Local Control Option

12 If the mobile station supports the local control option, a means shall be provided within the
13 mobile station to enable or disable the local control option.

14 2.3.10 Preferred Operation Selection

15 2.3.10.1 Preferred System

16 If the mobile station supports operation in Band Class 0 (see [2]), a means shall be provided
17 within the mobile station to identify the preferred system. In addition, the mobile station
18 may provide a means for allowing operation only with System A or only with System B.

19 2.3.10.2 Preferred CDMA or Analog

20 If the mobile station supports operation in Band Class 0 (see [2]), a means may be provided
21 within the mobile station to identify the preferred operation type as either CDMA mode or
22 analog mode. In addition, the mobile station may provide a means for allowing operation
23 only in the preferred mode.

24 2.3.11 Discontinuous Reception

25 The mobile station shall provide memory to store the preferred slot cycle index,
26 SLOT_CYCLE_INDEX_p (see 2.6.2.1.1.3.2).

27 2.3.12 Authentication, Encryption of Signaling Information/User Data and Voice Privacy

28 2.3.12.1 Authentication

29 Authentication is the process by which information is exchanged between a mobile station
30 and base station for the purpose of confirming the identity of the mobile station. A
31 successful outcome of the authentication process occurs only when it can be demonstrated
32 that the mobile station and base station possess identical sets of shared secret data.

The authentication algorithms are described in [15]. The interface (input and output parameters) for the algorithms is described in [23]. Table 2.3.12.1-1 summarizes the setting of the input parameters of the Auth_Signature procedure for each of its uses in this standard.

For authentication purposes, the mobile station shall use IMSI_M if it is programmed; otherwise, the mobile station shall use IMSI_T. The base station uses the IMSI selected according to the same criteria.

Table 2.3.12.1-1. Auth_Signature Input Parameters

Procedure	RAND_CHALLENGE	ESN	AUTH_DATA	SSD_AUTH	SAVE_REGISTERS
Unique Challenge (2.3.12.1.4)	RANDU and 8 LSBs of IMSI_S2	ESN _p	IMSI_S1	SSD_A	FALSE
Base Station Challenge (2.3.12.1.5)	RANDBS	ESN _p	IMSI_S1	SSD_A _NEW	FALSE

2.3.12.1.1 Shared Secret Data (SSD)

SSD is a 128-bit quantity that is stored in semi-permanent memory in the mobile station and is readily available to the base station. As depicted in Figure 2.3.12.1.1-1, SSD is partitioned into two distinct subsets. Each subset is used to support a different process.

Contents	SSD_A	SSD_B
Length (bits)	64	64

Figure 2.3.12.1.1-1. Partitioning of SSD

SSD_A is used to support the authentication procedures and SSD_B is used to support voice privacy (see 2.3.12.3) and message encryption (see 2.3.12.2). SSD is generated according to the procedure specified in 2.3.12.1.5. The SSD shall not be accessible to the user.

2.3.12.1.2 Random Challenge Memory (RAND)

RAND is a 32-bit value held in the mobile station. When operating in CDMA mode, it is equal to the RAND value received in the last *Access Parameters Message* (see 3.7.2.3.2.2) or the *ANSI-41 RAND Message* (see 3.7.2.3.2.31) of the CDMA f-csch.

RAND_S is used in conjunction with SSD_A and other parameters, as appropriate, to authenticate mobile station originations, terminations and registrations.

2.3.12.1.3 Call History Parameter (COUNT_{S-P})

COUNT_{S-P} is a modulo-64 count held in the mobile station. COUNT_{S-P} is updated by the mobile station when a *Parameter Update Order* is received on the f-dsch (see 3.7.4).

2.3.12.1.4 Unique Challenge-Response Procedure

The Unique Challenge-Response Procedure is initiated by the base station and can be carried out either on the f-csch and r-csch, or on the f-dsch and r-dsch. The procedure is as follows:

The base station generates the 24-bit quantity RANDU and sends it to the mobile station in the *Authentication Challenge Message* on either the f-csch or f-dsch. Upon receipt of the *Authentication Challenge Message*, the mobile station shall set the input parameters of the Auth_Signature procedure (see [23] section 2.3) as illustrated in Figure 2.3.12.1.5-3. The 24 most significant bits of the RAND_CHALLENGE input parameter shall be filled with RANDU, and the 8 least significant bits of RAND_CHALLENGE shall be filled with the 8 least significant bits of IMSI_S2.

The mobile station shall set the SAVE_REGISTERS input parameter to FALSE.

The mobile station shall then execute the Auth_Signature procedure. The 18-bit output AUTH_SIGNATURE shall be used to fill the AUTHU field of the *Authentication Challenge Response Message*, which shall be sent to the base station.

The base station computes the value of AUTHU in the same manner as the mobile station, but using its internally stored value of SSD_A. The base station compares its computed value of AUTHU to the value received from the mobile station. If the comparison fails, the base station may deny further access attempts by the mobile station, drop the call in progress, or initiate the process of updating SSD (see 2.3.12.1.5).

2.3.12.1.5 Updating the Shared Secret Data (SSD)

SSD is updated using the SSD_Generation procedure (see [23], section 2.2.1), initialized with mobile station specific information, random data, and the mobile station's A-key. The A-key is 64 bits long. It is assigned to the mobile station and is stored in the mobile station's permanent security and identification memory. The A-key is known only to the mobile station and to its associated Home Location Register/Authentication Center (HLR/AC) (see [13]). Non-manual methods, such as described in [26], are preferred for entry of the A-key into the mobile station. A manual method of entry that may be used when automated methods are not available is described in [29].

The SSD update procedure is performed as follows (see Figure 2.3.12.1.5-1):

The base station sends an *SSD Update Message* on either the f-csch or the f-dsch. The RANDSSD field of the *SSD Update Message* contains the same value used for the HLR/AC computation of SSD.

1 Upon receipt of the *SSD Update Message* the mobile station shall set the input parameters
 2 of the *SSD_Generation* procedure (see [23], section 2.2.1) as illustrated in Figure
 3 2.3.12.1.5-2. The mobile station shall then execute the *SSD_Generation* procedure. The
 4 mobile station shall set *SSD_A_NEW* and *SSD_B_NEW* to the outputs of the
 5 *SSD_Generation* procedure.

6 The mobile station shall then select a 32-bit random number, *RANDBS*, and shall send it to
 7 the base station in a *Base Station Challenge Order* on the *r-csch* or *r-dsch*.

8 Both the mobile station and the base station shall then set the input parameters of the
 9 *Auth_Signature* procedure (see [23], section 2.3) as illustrated in Figure 2.3.12.1.5-3 and
 10 shall execute the *Auth_Signature* procedure.

11 The mobile station and base station shall set the *SAVE_REGISTERS* input parameter to
 12 *FALSE*.

13 The mobile station and base station shall execute the *Auth_Signature* procedure. *AUTHBS*
 14 is set to the 18-bit result *AUTH_SIGNATURE*. The base station sends its computed value of
 15 *AUTHBS* to the mobile station in a *Base Station Challenge Confirmation Order* on the *f-csch*
 16 or the *f-dsch*.

17 Upon receipt of the *Base Station Challenge Confirmation Order* the mobile station shall
 18 compare the received value of *AUTHBS* to its internally computed value. (If the mobile
 19 station receives a *Base Station Challenge Confirmation Order* when an *SSD update* is not in
 20 progress, the mobile station shall respond with an *SSD Update Rejection Order*.)

21 If the comparison is successful, the mobile station shall execute the *SSD_Update*
 22 procedure (see [23], section 2.2.2) to set *SSD_A* and *SSD_B* to *SSD_A_NEW* and
 23 *SSD_B_NEW*, respectively. The mobile station shall then send an *SSD Update Confirmation*
 24 *Order* to the base station, indicating successful completion of the *SSD update*.

25 If the comparison is not successful, the mobile station shall discard *SSD_A_NEW* and
 26 *SSD_B_NEW*. The mobile station shall then send an *SSD Update Rejection Order* to the base
 27 station, indicating unsuccessful completion of the *SSD update*.

28 Upon receipt of the *SSD Update Confirmation Order*, the base station sets *SSD_A* and *SSD_B*
 29 to the values received from the HLR/AC (see [13]).

30 If the mobile station fails to receive the *Base Station Challenge Confirmation Order* within
 31 *T_{64m}* seconds of when the acknowledgment to the *Base Station Challenge Order* was
 32 received, the mobile station shall discard *SSD_A_NEW* and *SSD_B_NEW*. The mobile
 33 station shall then terminate the *SSD update* process.

34

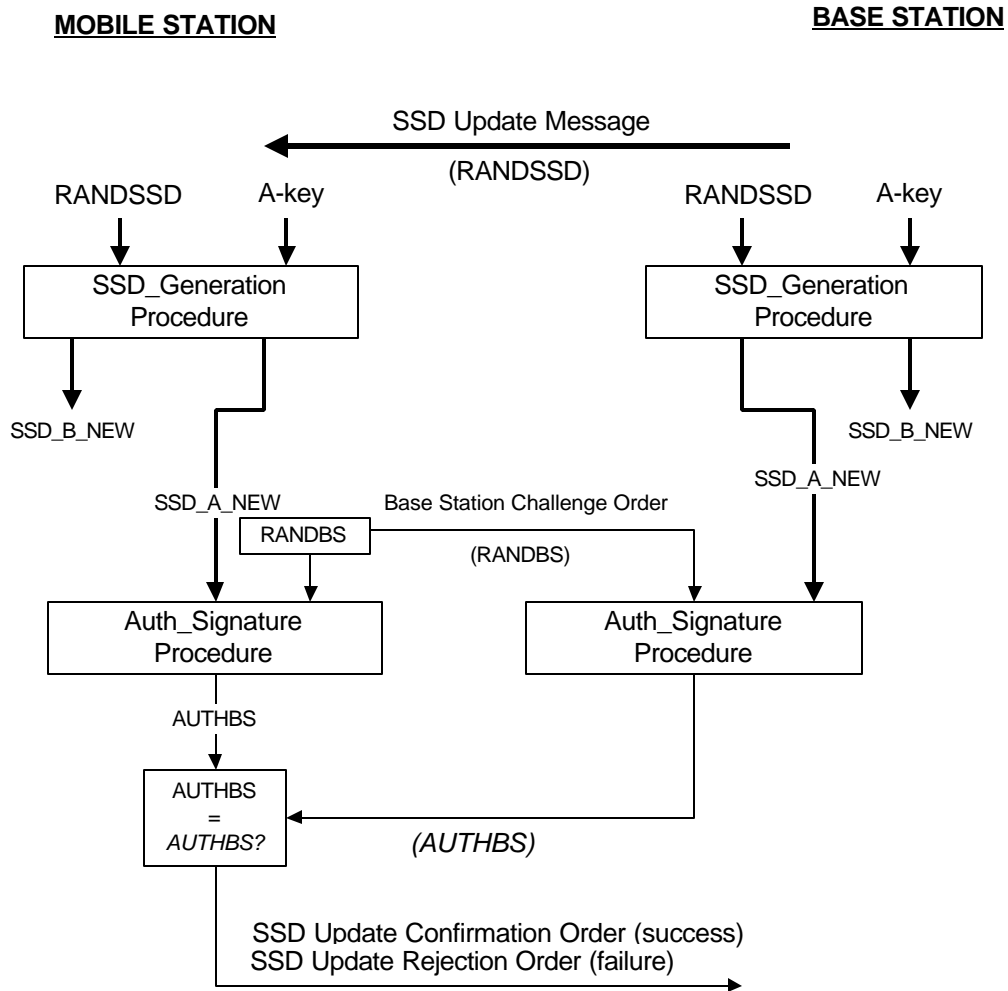


Figure 2.3.12.1.5-1. SSD Update Message Flow

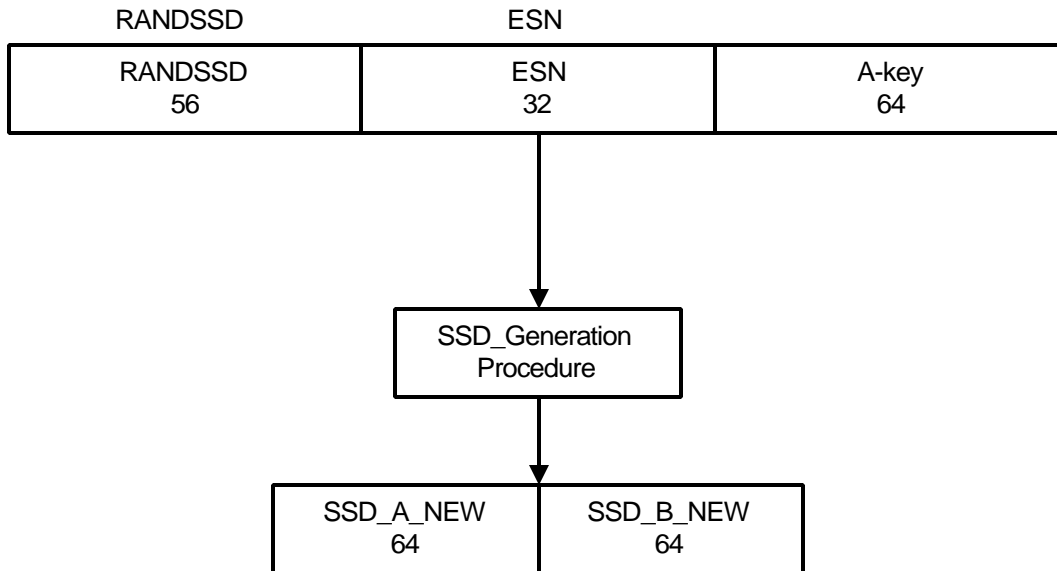


Figure 2.3.12.1.5-2. Computation of Shared Secret Data (SSD)

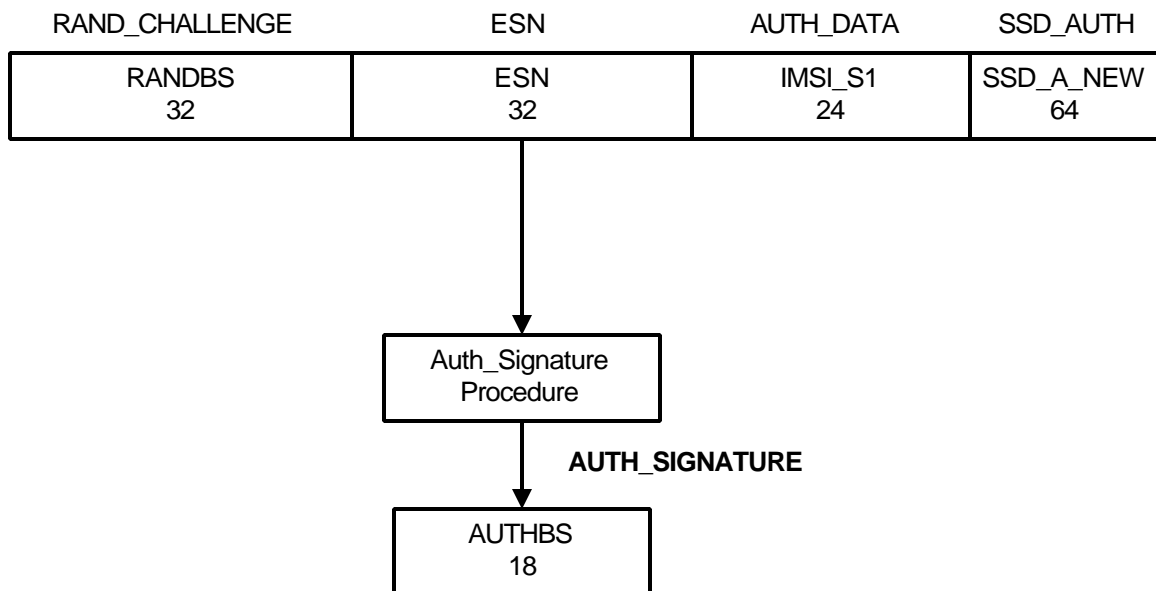


Figure 2.3.12.1.5-3. Computation of AUTHBS

2.3.12.2 Signaling Message Encryption

In an effort to enhance the authentication process and to protect sensitive subscriber information (such as PINs), a method is provided to encrypt certain fields of selected f-dsch or r-dsch signaling messages.

The following is a description of the messages on f-dsch (See 2.3.12.2.1) and r-dsch (see 2.3.12.2.2) that are enciphered using the Cellular Message Encryption Algorithm (see section 2.5.1, [15]) or the Enhanced Cellular Message Encryption Algorithm (see section 2.5.2, [15]). The availability of encryption algorithm information is under government control.

For each message, the enciphered fields are identified. The messages are grouped by channel designation.

Messages shall not be encrypted if authentication is not performed (AUTH_S is set to '00'). See [23] for details of the initialization and use of the encryption procedure.

Signaling message encryption is controlled for each call individually. The mobile station identifies its encryption capability in the ENCRYPTION_SUPPORTED field in the *Origination Message* and the *Page Response Message* as shown in Table 2.7.1.3.2.4-5. The initial encryption mode for the call is established by the value of the ENCRYPT_MODE field in the *Channel Assignment Message* or in the *Extended Channel Assignment Message*. If ENCRYPT_MODE is set to '00', message encryption is off. To turn encryption on after channel assignment, the base station sends one of the following f-dsch messages to the mobile station:

- *Extended Handoff Direction Message* with the ENCRYPT_MODE field set to '01' or '10'
- *General Handoff Direction Message* with the ENCRYPT_MODE field set to '01' or '10'
- *Universal Handoff Direction Message* with the ENCRYPT_MODE field set to '01' or '10'
- *Analog Handoff Direction Message* with the MEM field set to '1'
- *Message Encryption Mode Order* with the ENCRYPT_MODE field set to '01' or '10'

To turn signaling message encryption off, the base station sends one of the following f-dsch messages to the mobile station:

- *Extended Handoff Direction Message* with the ENCRYPT_MODE field set to '00'
- *General Handoff Direction Message* with the ENCRYPT_MODE field set to '00'
- *Universal Handoff Direction Message* with the ENCRYPT_MODE field set to '00'
- *Analog Handoff Direction Message* with the MEM field set to '0'
- *Message Encryption Mode Order* with the ENCRYPT_MODE field set to '00'

Encryption shall apply only to the part of the Layer 3 message specified below.

When encryption is off, all fields of all Layer 3 messages sent by the mobile station and base station are unencrypted.

When additional octets are inserted, the overall Lower Layers message length is updated to reflect the addition. Specific Layer 3 record length fields (e.g., RECORD_LEN, NUM_FIELDS, or NUM_DIGITS) shall not be affected by the insertion of additional bits.

If the Enhanced Cellular Message Encryption Algorithm is used, the following requirements apply:

- The mobile station and base station shall each maintain an 8-bit encryption sequence counter. The encryption sequence counter shall be incremented modulo 256 for each new encryption. The counter value, hereafter called ES_COUNT, shall be used to form the SYNC parameter of the Enhanced Cellular Message Encryption Algorithm as described below.
- As part of each encryption, an additional octet of value ES_COUNT shall be inserted immediately following the encrypted part of the message. This additional octet shall not be encrypted. The additional octet shall be removed from the message after decryption.

2.3.12.2.1 Encrypted Messages on the f-dsch

When encryption is on (ENCRYPT_MODE_S equal to binary '01' or '10'), the encryptable fields of the following messages sent on f-dsch, as listed below, shall be encrypted. All other messages sent on f-dsch shall be unencrypted.

1. *Alert With Information Message* (see 3.7.3.3.2.3) and *Extended Alert With Information Message* (see 3.7.3.3.2.42) are encrypted.

The type-specific fields of all information records (see 3.7.5) shall be encrypted. For each information record, the type-specific fields shall be treated by the encryption procedure as a new single message. If the type-specific fields of an information record consist of a single octet (RECORD_LEN field equal to 1), an additional octet of value '00000000' shall be inserted following the information record and shall be encrypted as if part of the record. (If the RECORD_LEN field is 0, the information record contains no type-specific fields, and the record contains no encrypted data.)

No other fields in the *Alert With Information Message* and *Extended Alert With Information Message* are encrypted.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply for each information record:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = RECORD_TYPE

2. *Flash With Information Message* (see 3.7.3.3.2.14) and *Extended Flash With Information Message* (see 3.7.3.3.2.43) are encrypted.

The type-specific fields of all information records (see 3.7.5) shall be encrypted. For

each information record, the type-specific fields shall be treated by the encryption procedure as a new single message. If the type-specific fields of an information record consist of a single octet (RECORD_LEN field equal to 1), an additional octet of value '00000000' shall be inserted following the information record and shall be encrypted as if part of the record. (If the RECORD_LEN field is 0, the information record contains no type-specific fields, and the record contains no encrypted data.)

No other fields in the *Flash With Information Message* and *Extended Flash With Information Message* are encrypted.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s equal to binary '10'), the following requirements apply for each information record:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = RECORD_TYPE

3. *Send Burst DTMF Message* (see 3.7.3.3.2.9) is encrypted.

The DIGIT_i fields of the *Send Burst DTMF Message* shall be encrypted. These fields are treated by the encryption procedure as a new single message, with the 4-bit digit codes packed into consecutive octets. If the NUM_DIGITS field contains an odd number, four bits of value '0000' shall follow the last digit and shall be included in the encrypted message. If NUM_DIGITS is less than 3, an additional eight bits of value '00000000' shall follow the DIGIT_i fields and shall be included in the encrypted part of the message.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s equal to binary '10'), the following requirements apply:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = MSG_TYPE = '00001001'

4. *Continuous DTMF Tone Order* (see 3.7.3.3.2.1) is encrypted.

The 16 bits comprised of ADD_RECORD_LEN, the order-specific fields and the first five (5) bits of the RESERVED field shall be encrypted. These fields shall be treated by the encryption procedure as a new single message.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s equal to binary '10'), the following requirements apply:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT

1 – SYNC[1] = MSG_TYPE = '00000001'

2 5. *Data Burst Message* (see 3.7.3.3.2.4) is encrypted.

3 If BURST_TYPE is equal to '111110' or '111111', all CHARi fields after the first two shall
4 be encrypted; otherwise, all CHARi fields shall be encrypted.

5 If the CHARi field consists of a single octet (NUM_FIELDS field equal to 1), an additional
6 octet of value '00000000' shall be inserted following the information record and shall be
7 encrypted as if part of the record. (If the NUM_FIELDS field is 0, the information record
8 contains no type-specific fields, and the record contains no encrypted data).

9 If the Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s equal to binary
10 '01'), the following requirements apply:

- 11 • If BURST_TYPE is equal to '000011' (SMS) or '000100' (OTASP), the message
12 shall be encrypted.
- 13 • For all other values of BURST_TYPE, the message shall be encrypted only if
14 encryption is required by the service option standard governing use of the *Data*
15 *Burst Message*; otherwise, the message shall not be encrypted.

16 If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s
17 equal to binary '10'), the following requirements apply:

- 18 • If BURST_TYPE is equal to '000100' (OTASP), the DATA_TYPE parameter shall be
19 set to '0'. Otherwise, the DATA_TYPE parameter shall be set to '1'.
- 20 • The SYNC parameter shall be set as follows:
21 – SYNC[0] = ES_COUNT
22 – SYNC[1] = MSG_TYPE = '00000100'

23 6. *Power Up Function Completion Message* (see 3.7.3.3.2.30) is encrypted.

24 If the LOC_IND field is set to '1', the fields RESERVED (3 bits), MS_LAT (22 bits),
25 MS_LONG (23 bits), and MS_LOC_TSTAMP (24 bits) are encrypted. These fields shall be
26 treated by the encryption procedure as a new single message.

27 Otherwise, if the LOC_IND field is set to '0', no fields in this message are encrypted.

28 If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_s
29 equal to binary '10'), the following requirements apply:

- 30 • The DATA_TYPE parameter shall be set to '1'.
- 31 • The SYNC parameter shall be set as follows:
32 – SYNC[0] = ES_COUNT
33 – SYNC[1] = MSG_TYPE = '00011110'

34 2.3.12.2.2 Encrypted Messages on the r-dsch

35 When encryption is on (ENCRYPT_MODE_s equal to binary '01' or '10') the encryptable fields

of the following r-dsch layer 3 messages, as listed below, shall be encrypted. All other r-dsch messages shall be unencrypted.

1. *Origination Continuation Message* (see 2.7.2.3.2.9) and *Enhanced Origination Message* are encrypted.

The CHARi fields of the *Origination Continuation Message* and *Enhanced Origination Message* shall be encrypted. These fields shall be treated by the encryption procedure as a new single message, with the character codes packed into consecutive octets. If DIGIT_MODE is '0' and the NUM_FIELDS field contains an odd number, four bits of value '0000' shall follow the last digit and shall be included in the encrypted part of the message. In addition, if ENCRYPT_MODE_S is equal to '01', the following requirement applies

- If DIGIT_MODE is '0' and NUM_FIELDS is less than 3, or if DIGIT_MODE is '1' and NUM_FIELDS is less than 2, an additional eight bits of value '00000000' shall follow the CHARi fields and shall be included in the encrypted part of the message.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = MSG_TYPE = '00001001' for *Origination Continuation Message*
 - SYNC[1] = MSG_TYPE = '00011010' for *Enhanced Origination Message*

The type-specific fields of all information records (see 2.7.4) in the *Origination Continuation Message* and *Enhanced Origination Message* shall be encrypted. For each information record, the type-specific fields shall be treated by the encryption procedure as a new single message. If the type-specific fields of an information record consist of a single octet (RECORD_LEN field equal to 1), an additional octet of value '00000000' shall be inserted following the information record and shall be encrypted as if part of the record. (If the RECORD_LEN field is 0, the information record contains no type-specific fields, and the record contains no encrypted data.)

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply for each information record:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = RECORD_TYPE

2. *Flash With Information Message* (see 2.7.2.3.2.3) and *Extended Flash With Information Message* (see 2.7.2.3.2.32) are encrypted.

The type-specific fields of all information records (see 2.7.4) shall be encrypted. For each information record, the type-specific fields shall be treated by the encryption procedure as a new single message. If the type-specific fields of an information record consist of a single octet (RECORD_LEN field equal to 1), an additional octet of value '00000000' shall be inserted following the information record and shall be encrypted as if part of the record. (If the RECORD_LEN field is 0, the information record contains no type-specific fields, and the record contains no encrypted data.)

No other fields in the *Flash With Information Message* and *Extended Flash With Information Message* are encrypted.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply for each information record:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = RECORD_TYPE

3. *Send Burst DTMF Message* (see 2.7.2.3.2.7) is encrypted.

The DIGIT_i fields of the *Send Burst DTMF Message* shall be encrypted. These fields shall be treated by the encryption procedure as a new single message, with the 4-bit digit codes packed into consecutive octets. If the NUM_DIGITS field contains an odd number, four bits of value '0000' shall follow the last digit and shall be included in the encrypted message. If NUM_DIGITS is less than 3, an additional eight bits of value '00000000' shall follow the DIGIT_i fields and shall be included in the encrypted part of the message.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = MSG_TYPE = '00000111'

4. *Continuous DTMF Tone Order* (see 2.7.2.3.2.1) is encrypted.

The 16 bits comprised of ADD_RECORD_LEN, the order-specific fields and the first five (5) bits of the RESERVED field shall be encrypted. These fields shall be treated by the encryption procedure as a new single message.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply:

- The DATA_TYPE parameter shall be set to '0'.
- The SYNC parameter shall be set as follows:

- SYNC[0] = ES_COUNT
- SYNC[1] = MSG_TYPE = '00000001'

5. *Data Burst Message* (see 2.7.2.3.2.4) is encrypted.

If BURST_TYPE is equal to '111110' or '111111', all CHAR_i fields after the first two shall be encrypted; otherwise, all CHAR_i fields shall be encrypted.

If the CHAR_i field consists of a single octet (NUM_FIELDS field equal to 1), an additional octet of value '00000000' shall be inserted following the information record and shall be encrypted as if part of the record. (If the NUM_FIELDS field is 0, the information record contains no type-specific fields, and the record contains no encrypted data).

If the Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '01'), the following requirements apply:

- If BURST_TYPE is equal to '000011' (SMS) or '000100' (OTASP), the message shall be encrypted.
- For all other values of BURST_TYPE, the message shall be encrypted only if encryption is required by the service option standard governing use of the *Data Burst Message*; otherwise, the message shall not be encrypted.

If the Enhanced Cellular Message Encryption Algorithm is used (ENCRYPT_MODE_S equal to binary '10'), the following requirements apply:

- If BURST_TYPE is equal to '000100' (OTASP), the DATA_TYPE parameter shall be set to '0'. Otherwise, the DATA_TYPE parameter shall be set to '1'.
- The SYNC parameter shall be set as follows:
 - SYNC[0] = ES_COUNT
 - SYNC[1] = MSG_TYPE = '00000100'

2.3.12.3 Voice Privacy

Also see [2].

Voice privacy is provided in the CDMA system by means of the private long code mask used for PN spreading.

Voice privacy is provided on the Traffic Channels only. All calls are initiated using the public long code mask for PN spreading. The mobile station user may request voice privacy during call setup using the *Origination Message* or *Page Response Message*, and during Traffic Channel operation using the *Long Code Transition Request Order*.

The transition to private long code mask shall not be performed if authentication is not performed (AUTH_S is set to '00' or mobile station unable to perform authentication).

To initiate a transition to the private or public long code mask, either the base station or the mobile station sends a *Long Code Transition Request Order* on the f-dsch or r-dsch. The mobile station actions in response to receipt of this order are specified in 2.6.4, and the base station actions in response to receipt of this order are specified in 3.6.4.

The base station can also cause a transition to the private or public long code mask by sending the *Extended Handoff Direction Message*, the *General Handoff Direction Message*, or the *Universal Handoff Direction Message* with the PRIVATE_LCM bit set appropriately.

2.3.12.4 Extended-Encryption for Signaling Message and User Information

In an effort to enhance the authentication process and to protect sensitive subscriber information (such as PINs), a method is provided to encrypt selected f-dsch, r-dsch, f-csch, or r-csch Layer 3 signaling SDUs.

The availability of encryption algorithm information is under government control.

Messages shall not be encrypted if authentication is not performed (AUTH_S is set to '00'). See [23] for details of the initialization and use of the encryption procedure.

The mobile station or the base station shall follow the following procedures for transmission of messages that are encrypted, in the order listed:

1. The sender of the message shall compute an 8-bit Layer 3 SDU CRC as specified in 2.3.12.4.5 over the un-encrypted layer-3 SDU.
2. The sender of the message shall append the 8-bit CRC to the end of the Layer 3 SDU.
3. The sender of the message shall encrypt the concatenated Layer 3 SDU and the 8-bit Layer-3 CRC .
4. The sender of the message shall pass the encrypted concatenated Layer 3 SDU and the 8-bit Layer-3 CRC to the LAC layer.

The mobile station or the base station shall follow the following procedures upon reception of encrypted messages, in the order listed:

1. The receiver of the message shall decrypt the concatenated Layer 3 SDU and the 8-bit Layer-3 CRC
2. The receiver of the message shall compute an 8-bit CRC as specified in 2.3.12.4.4 over the un-encrypted layer-3 SDU (excluding the received 8-bit CRC).
3. The receiver of the message shall compare the value of the computed CRC with the decrypted 8-bit CRC. If the two CRCs are equal, the receiver shall declare that the decryption has been performed successfully, otherwise the decryption is not successful.

When encryption is off, the Layer 3 SDUs sent by the mobile station and base station are unencrypted (the 8-bit CRC is not appended to the Layer 3 SDU).

In addition, the following requirements apply:

- The mobile station and base station shall each maintain a 32-bit extended encryption sequence counter.
- The encryption sequence counter shall be incremented modulo 2^{32} for each new encryption.

2.3.12.4.1 Extended-Encryption of Signaling Messages

All the broadcast messages (messages that are not addressed to a particular mobile station) shall be sent un-encrypted. When signaling encryption is on, the Layer 3 SDU of the signaling messages listed below shall not be encrypted. All other signaling messages shall be encrypted.

- *Registration Message.*
- *Registration Accepted Order*
- *General Page Message*
- *Origination Message*, if it is an emergency call (i.e., the GLOBAL_EMERGENCY_CALL is included and is set to '1')
- *Enhanced Origination Message*, if it is an emergency call (i.e., the GLOBAL_EMERGENCY_CALL is included and is set to '1')

2.3.12.4.1.1 Extension of ENC_SEQ to EXT_ENC_SEQ

EXT_ENC_SEQ is the Extended Encryption Sequence Number that is used as one of the inputs to the encryption algorithm as shown in Figure 2.3.12.4.2-1. The following formula shall be used to compute the 32-bit EXT_ENC_SEQ from the 8-bit ENC_SEQ:

If $[\text{ENC_SEQ}_S \leq \text{ENC_SEQ}_R < (\text{ENC_SEQ}_S + 128)]$:

$$\text{EXT_ENC_SEQ}_S = (\text{EXT_ENC_SEQ}_S + (\text{ENC_SEQ}_R - \text{ENC_SEQ}_S) \bmod 256) \bmod 2^{32}$$

Else:

$$\text{EXT_ENC_SEQ}_S = (\text{EXT_ENC_SEQ}_S - (\text{ENC_SEQ}_S - \text{ENC_SEQ}_R) \bmod 256) \bmod 2^{32}.$$

2.3.12.4.1.2 Encryption Procedures

If the ENC_SEQ field is included in a message, EXT_ENC_SEQ_S shall be computed as specified in 2.3.12.4.1.1 and ENC_SEQ_S shall be set to ENC_SEQ_R.

The encryption mask shall be computed as illustrated in Figure 2.3.12.4.1.2-1.

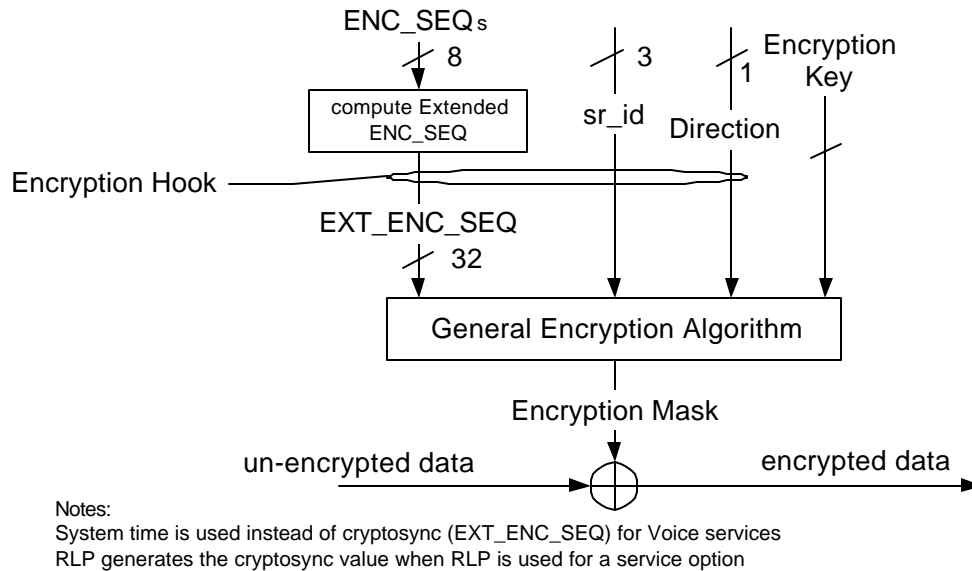


Figure 2.3.12.4.1.2-1. Generation of Encryption Mask

The inputs to the encryption algorithm are described as follows:

- Extended ENC_SEQ - A 32-bit Extended Encryption Sequence Number (EXT_ENC_SEQ_S) derived from the 8-bit ENC_SEQ as described in 2.3.12.4.1.1.
- sr_id - Service Reference Identifier (see [3]), which identifies the associated service option instance. The value of '000' is reserved for signaling.
- Direction - The direction of the message being transmitted. This shall be set to '0' if the message is transmitted on a forward link. Otherwise, it shall be set to '1'.
- Encryption Key - Session Key for Encryption. This shall be a result of successful Session Key Agreement between the base station and the mobile station. The Encryption Key shall be stored by the mobile station in a semi-permanent memory.

2.3.12.4.2 Extended-Encryption for Voice

Extended-Encryption for voice service option is performed by means of the encryption procedures as specified in 2.3.12.4.1.2. Note that SYS_TIME_S is used instead of EXT_ENC_SEQ_S as an input to the encryption mask generation procedure specified in 2.3.12.4.1.2.

2.3.12.4.3 Encryption Negotiation

The mobile station shall indicate to the base station the encryption algorithms supported by using SIG_ENCRYPT_SUP and UI_ENCRYPT_SUP in one of the following messages:

- Registration Message*
- Origination Message*

- *Page Response Message*
- *Security Mode Request Message*

The mobile station can also indicate to the base station the encryption algorithms supported by using SIG_ENCRYPT_SUP and UI_ENCRYPT_SUP in Encryption Capability information record in the *Status Response Message* or *Extended Status Response Message*.

The base station may turn on or turn off the encryption of the voice, data services, or signaling encryption with a *Security Mode Command Message* sent on f-dsch or f-csch. Similarly, the mobile station may propose to turn on or turn off the user information encryption or signaling encryption with a *Security Mode Request Message* sent on r-dsch or r-csch.

2.3.12.4.4 Computation of the 8-bit Layer 3 SDU CRC Field

The generator polynomials for the 8-bit Layer 3 SDU CRC field shall be as follows:

$$g(x) = x^8 + x^7 + x^4 + x^3 + x + 1$$

The Layer 3 SDU CRC field shall be computed according to the following procedure using the logic shown in Figures 2.3.12.4.4-1:

- Initially, all shift register elements shall be set to logical one and the switches shall be set in the up position.
- The register shall be clocked a number of times equal to the number bits in the Layer 3 SDU with those bits as input.
- The switches shall be set in the down position so that the output is a modulo-2 addition with a '0' and the successive shift register inputs are '0'.
- The register shall be clocked an additional 8 number of times.
- These additional bits shall be the Layer 3 SDU CRC field indicator bits.
- The bits shall be transmitted in the order calculated.

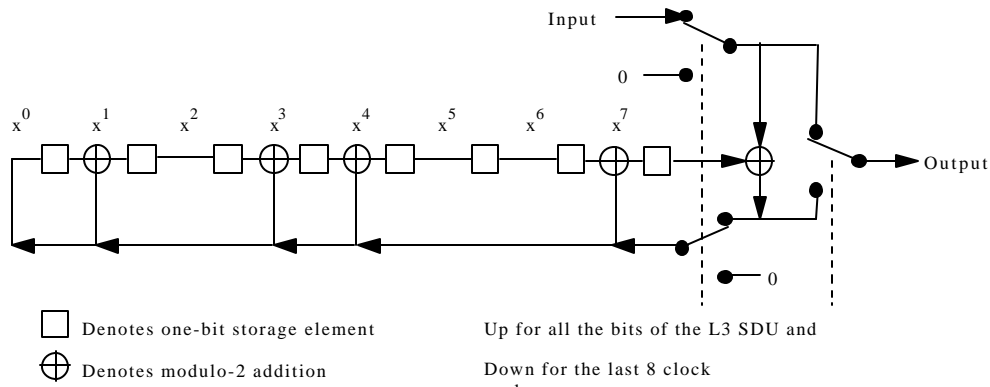


Figure 2.3.12.4.4-1. 8-Bit Layer 3 SDU CRC Field Calculation

2.3.12.4.5 Computation of ENC_SEQ_H_SIG

The ENC_SEQ_H_SIG field (included in the *Registration Message*) is a signature of the most significant 24 bits of the cryptosync (ENC_SEQ_H). The mobile station shall compute this 8-bit field as follows:

1. The mobile station shall construct the *message bits* as shown in Figure 2.3.12.4.5-1.

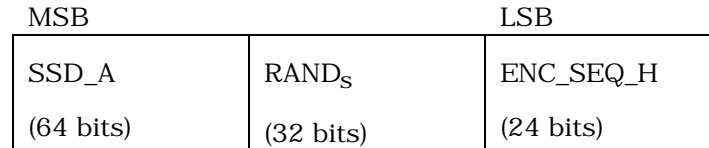


Figure 2.3.12.4.5-1. Message Bits

2. The mobile station shall pad the *message bits* constructed in the previous step, as specified in FIPS PUB 180-1 (Federal Information Processing Standards Publication 180-1), and compute the 160-bit *message digest* as specified in FIPS PUB 180-1.
3. The mobile station shall store the 8 rightmost (least significant) bits of the *message digest* in ENC_SEQ_H_SIG.

2.3.13 Lock and Maintenance Required Orders

The mobile station shall have memory to store the lock reason code (LCKRSN_{P_s-p}) received in the *Lock Until Power-Cycled Order*. The data retention time under power-off conditions shall be at least 48 hours.

The mobile station shall have memory to store the maintenance reason code (MAINTRSN_{S-p}) received in the *Maintenance Required Order*. The data retention time under power-off conditions shall be at least 48 hours.

There are no requirements on the use of the lock and maintenance reason codes, and interpretation and use are implementation dependent.

2.3.14 Mobile Station Revision Identification

The mobile station shall provide memory to store the following parameters sent in the *Status Message*, the *Status Response Message*, or the *Extended Status Response Message* (*Terminal Information* information record):

- Mobile manufacturer code (MOB_MFG_CODE_p)
- Manufacturer's model number (MOB_MODEL_p)
- Firmware revision number (MOB_FIRM_REV_p)

In addition, the mobile station shall provide memory to store the following parameter for each supported band class:

- Protocol revision number (MOB_P_REV_p)

2.3.15 Temporary Mobile Station Identity

2.3.15.1 Overview

The Temporary Mobile Station Identity (TMSI) is a temporary locally assigned number used for addressing the mobile station. The mobile station obtains a TMSI when assigned by the base station. The TMSI as a number does not have any association with the mobile station's IMSI, ESN, or directory number all of which are permanent identifications.

A TMSI zone is an arbitrary set of base stations for the administrative assignment of TMSIs. A TMSI_CODE is uniquely assigned to a mobile station inside a TMSI zone. A TMSI zone is identified by the TMSI_ZONE field. The same TMSI_CODE may be reused to identify a different mobile station in a different TMSI zone. The pair (TMSI_ZONE, TMSI_CODE) is a globally unique identity for the mobile station. This pair is called the full TMSI. The TMSI_CODE can be two, three, or four octets in length. The TMSI_ZONE can range from 1 to 8 octets in length. Figure 2.3.15-1 shows an example of a TMSI_ZONE where the TMSI_ZONE is a subset of the NID (see 2.6.5.2).

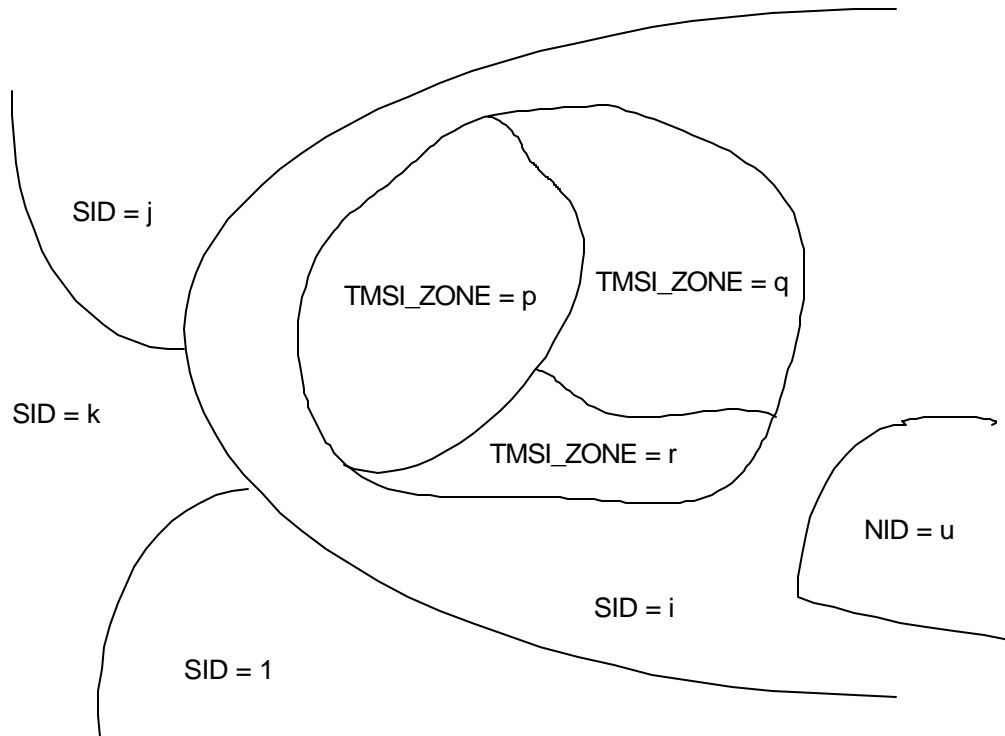


Figure 2.3.15-1. TMSI Zone Example

The base station sends a *TMSI Assignment Message* to assign a TMSI. In response, the mobile station sends a *TMSI Assignment Completion Message*. The base station instructs the mobile station to delete the TMSI by sending a *TMSI Assignment Message* with all the bits in the TMSI_CODE field set equal to '1'.

The TMSI expiration time is used to automatically delete the assigned TMSI. The mobile station obtains the expiration time when the TMSI is assigned in the *TMSI Assignment Message*. The mobile station compares the expiration time to the current System Time when it powers up and periodically during operation.

Whenever the mobile station sends its full TMSI, the mobile station sets a timer, called the full-TMSI timer. If the full-TMSI timer expires, the mobile station deletes the TMSI by setting all bits in the TMSI_CODE field to '1'.

2.3.15.2 TMSI Assignment Memory

The mobile station shall provide memory to store the following parameters:

- 4-bit assigning TMSI zone length (ASSIGNING_TMSI_ZONE_LEN_{S-p})
- 8-octet assigning TMSI zone (ASSIGNING_TMSI_ZONE_{S-p})
- 4-octet TMSI code (TMSI_CODE_{S-p})
- 3-octet TMSI expiration time (TMSI_EXP_TIME_{S-p})

2.4 Accumulated Statistics

2.4.1 Monitored Quantities and Statistics

The mobile station shall store the value described in Table 2.4.1-1.

Table 2.4.1-1. Monitored Quantities and Statistics

Quantity Identifier	Length (bits)	Description
OTHER_SYS_TIME	36	The SYS_TIME field from the most recently received <i>Sync Channel Message</i>

2.4.2 Accumulated Paging, Broadcast, and Forward Common Control Channel Statistics

The mobile station shall maintain the counters shown in Table 2.4.2-1. The counters shall have the length as specified in Table 2.4.2-1. The mobile station shall initialize each counter described herein to zero upon power-on; the mobile station shall not re-initialize any counter described herein at any other time except upon command from the base station. Each counter shall be maintained modulo 2^{Length} , where Length is specified in Table 2.4.2-1.

The mobile station shall increment the counter PAG_6 each time that it declares a loss of the Paging Channel (see 2.6.2.1.1.4). The mobile station shall increment the counter PAG_7 for each idle handoff it performs. The mobile station shall increment the counter FCCCH_4 each time that it declares a loss of the Forward Common Control Channel (see 2.6.2.1.1.4). The mobile station shall increment the counter BCCH_5 each time that it declares a loss of the Broadcast Control Channel (see 2.6.2.1.1.4).

Table 2.4.2-1. Accumulated PCH/BCCH/F-CCCH Channel Statistics

Counter Identifier	Length (bits)	Description
PAG_6	16	Number of times that the mobile station declared a loss of the Paging Channel
PAG_7	16	Number of mobile station idle handoffs
FCCCH_4	16	Number of times that the mobile station declared a loss of the Forward Common Control Channel
BCCH_5	16	Number of times that the mobile station declared a loss of the Broadcast Control Channel

1 **2.5 Reserved**

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2.6 Layer 3 Processing

This section describes mobile station layer 3 processing. It contains frequent references to the messages that flow between the mobile station and base station. While reading this section, it may be helpful to refer to the SDU formats (see 2.7 and 3.7), and to the message flow examples (see Annex B).

The mobile station shall ignore fields at the end of messages that do not exist in the protocol revision supported by the mobile station.

The values for the time and numerical constants used in this section (e.g., T_{20m} , N_{4m}) are specified in Annex D.

As illustrated in Figure 2.6-1, mobile station layer 3 processing consists of the following states:

- *Mobile Station Initialization State* - In this state, the mobile station selects and acquires a system.
- *Mobile Station Idle State* - In this state, the mobile station monitors messages on the f-csch.
- *System Access State* - In this state, the mobile station sends messages to the base station on the r-csch and receives messages from the base station on the f-csch.
- *Mobile Station Control on the Traffic Channel State* - In this state, the mobile station communicates with the base station using the f/r-dsch and f/r-dtch.

After power is applied to the mobile station, it shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a power-up indication (see 2.6.1.1).

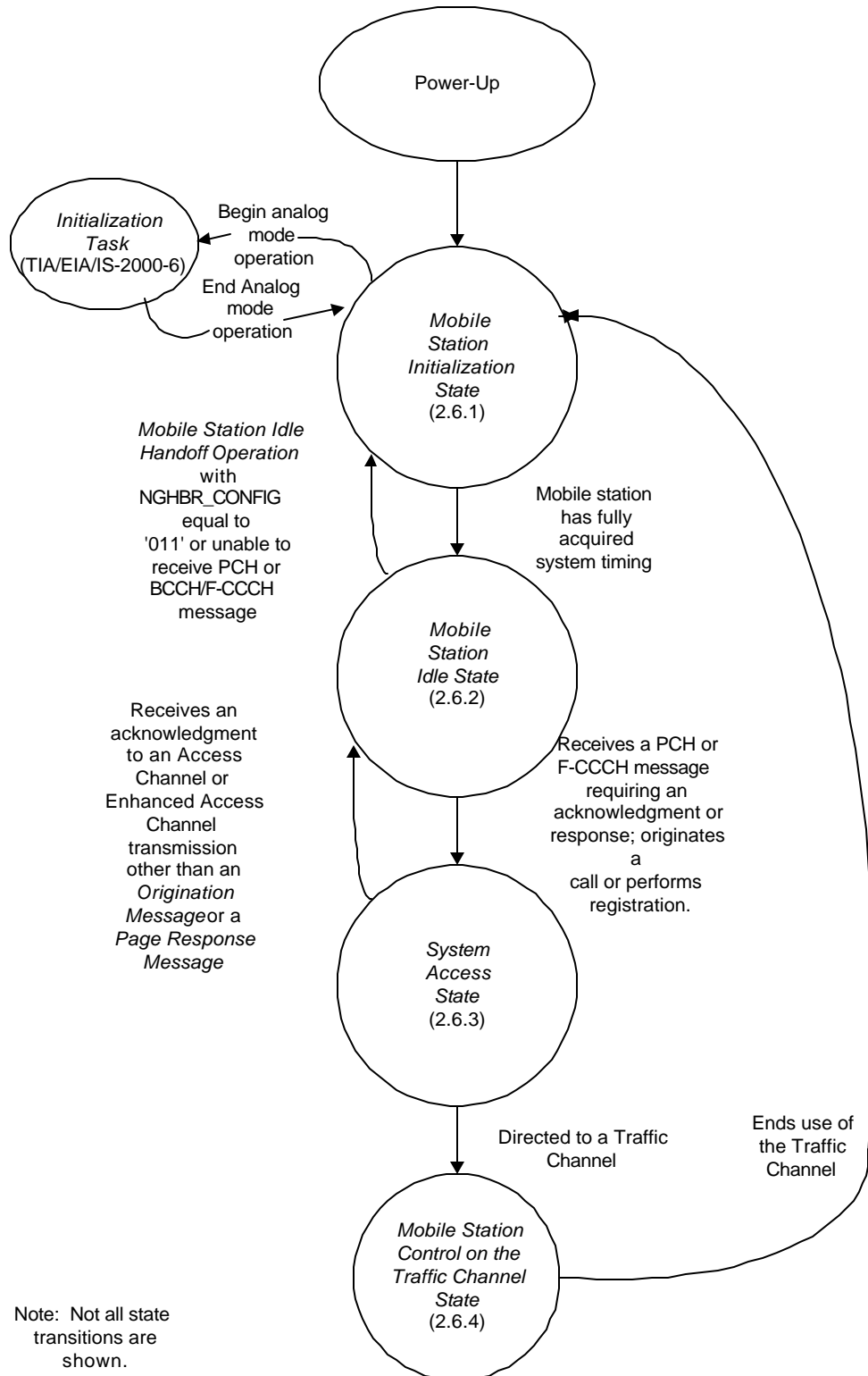


Figure 2.6-1. Mobile Station Layer 3 Processing States

2.6.1 Mobile Station Initialization State

In this state, the mobile station first selects a system to use. If the selected system is a CDMA system, the mobile station proceeds to acquire and then synchronize to the CDMA system. If the selected system is an analog system, the mobile station begins analog mode operation (see 2.6.1 of [6]).

As illustrated in Figure 2.6.1-1, the *Mobile Station Initialization State* consists of the following substates:

- *System Determination Substate* - In this substate, the mobile station selects which system to use.
- *Pilot Channel Acquisition Substate* - In this substate, the mobile station acquires the Pilot Channel of a CDMA system.
- *Sync Channel Acquisition Substate* - In this substate, the mobile station obtains system configuration and timing information for a CDMA system.
- *Timing Change Substate* - In this substate, the mobile station synchronizes its timing to that of a CDMA system.

While in the *Mobile Station Initialization State*, the mobile station shall update all active registration timers as specified in 2.6.5.5.1.2.

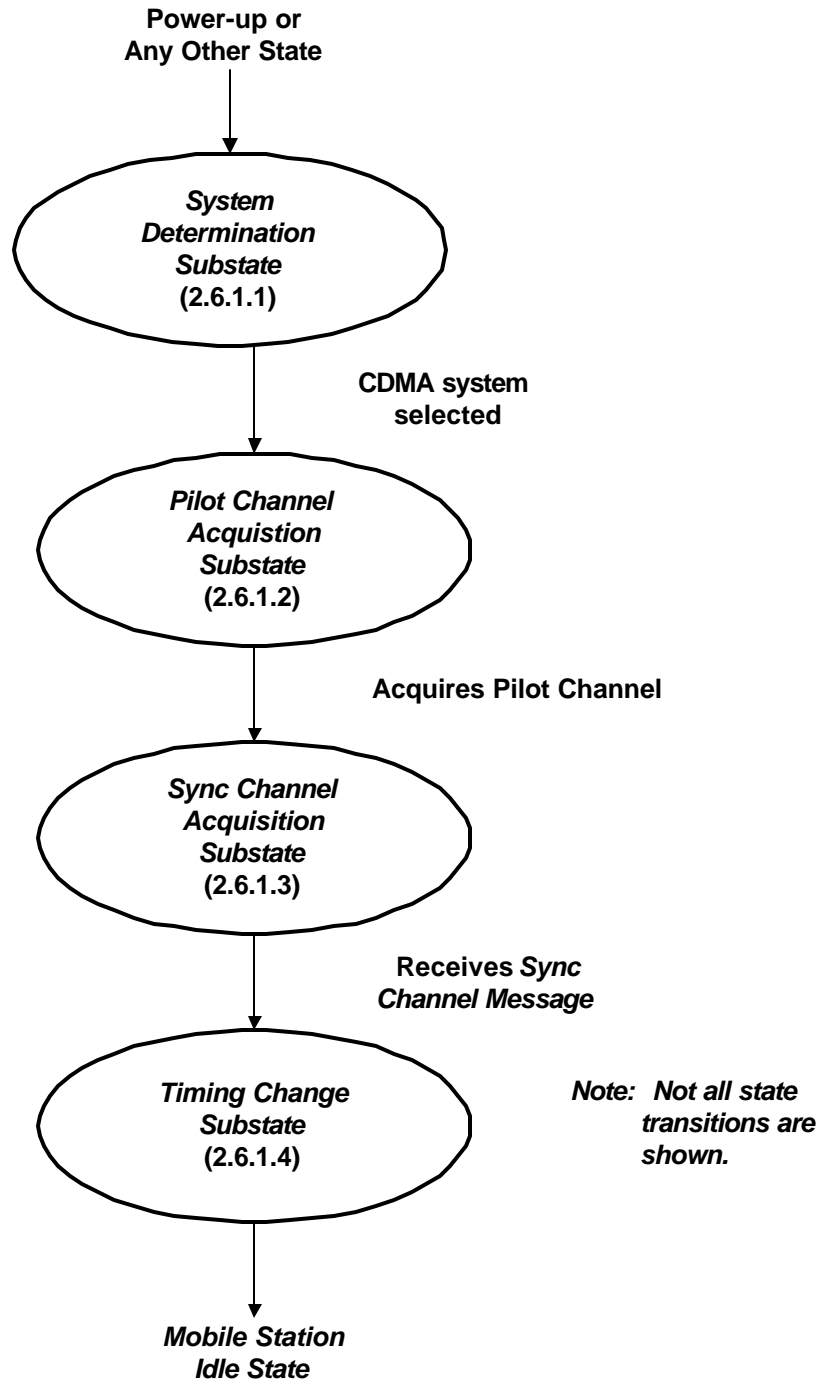


Figure 2.6.1-1. Mobile Station Initialization State

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2.6.1.1 System Determination Substate

In this substate, the mobile station selects the system to use.

Upon entering the *System Determination Substate*, the mobile station shall initialize registration parameters as specified in 2.6.5.5.1.1.

If the mobile station enters the *System Determination Substate* with a power-up indication, the mobile station shall set $RAND_S$ to 0 (see 2.3.12.1.2), $PACA_S$ to disabled, $PACA_CANCEL$ to '0', the $PACA$ state timer to disabled, $NDSS_ORIG_S$ to disabled, $MAX_REDIRECT_DELAY_S$ to 31, $REDIRECTION_S$ to disabled, all entries of $SDB_SO_OMIT_S$ to '0', and $T_SLOTTED_S$ to T_{74m} . If the mobile station supports analog mode operation in Band Class 0, the mobile station shall set the First-Idle ID status to enabled (see [6]). The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with any indication other than a power-up indication, and if $PACA_S$ is equal to enabled, the mobile station shall also set $PACA_S$ to disabled, $PACA_CANCEL$ to '0', the $PACA$ state timer to disabled, and should indicate to the user that the $PACA$ call has been canceled.

If the mobile station enters the *System Determination Substate* with an acquisition failure indication, the mobile station shall perform the following:

- If $REDIRECTION_S$ is equal to enabled, the mobile station shall attempt to select another system in accordance with the current redirection criteria (see 2.6.1.1.2). If the mobile station is able to select another system, the mobile station shall attempt to acquire the selected system (see 2.6.1.1.4). Otherwise, if the mobile station has exhausted all possible selections using the current redirection criteria, the mobile station shall perform the following:
 - The mobile station shall set $REDIRECTION_S$ to disabled.
 - The mobile station shall set $RETURN_CAUSE_S$ to '0001'.
 - If $RETURN_IF_FAIL_S$ is equal to '1', the mobile station shall attempt to select the system from which it was redirected and shall attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to select the system from which the mobile station was redirected is left to the mobile station manufacturer.
 - If $RETURN_IF_FAIL_S$ is equal to '0', the mobile station shall select a system other than the system from which it was redirected in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4). The precise process that the mobile station uses to avoid selecting the system from which it was redirected is left to the mobile station manufacturer.

- If REDIRECTION_S is equal to disabled, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a new system indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination has been canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a CDMA available indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station should set CDMACH_S to the CDMA Channel (CDMA_FREQ) specified in the *CDMA Capability Global Action Message* and should attempt to acquire a CDMA system on the specified CDMA channel (see 2.6.1.1.4). If the mobile station does not attempt to acquire a CDMA system on the specified CDMA Channel, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with an additional CDMA available indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station should set CDMACH_S to the CDMA Channel (CDMA_FREQ) specified in the *CDMA Info Order* and should attempt to acquire a CDMA system on the specified CDMA channel (see 2.6.1.1.4). If the mobile station does not attempt to acquire a CDMA system on the specified CDMA Channel, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a reselection indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a system reselection indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station should attempt to select a system available for system reselection as specified in 2.6.1.1.3, and should attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to

select such a system is left to the mobile station manufacturer. If the mobile station does not attempt to select such a system, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a rescan indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a protocol mismatch indication, the mobile station shall perform the following:

- If REDIRECTION_S is equal to enabled, the mobile station shall attempt to select another system in accordance with the current redirection criteria (see 2.6.1.1.2). If the mobile station is able to select another system, the mobile station shall attempt to acquire the selected system (see 2.6.1.1.4). Otherwise, if the mobile station has exhausted all possible selections using the current redirection criteria, the mobile station shall perform the following:
 - The mobile station shall set REDIRECTION_S to disabled.
 - The mobile station shall set RETURN_CAUSE_S to '0010'.
 - If RETURN_IF_FAIL_S is equal to '1', the mobile station shall attempt to select the system from which it was redirected and shall attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to select the system from which the mobile station was redirected is left to the mobile station manufacturer.
 - If RETURN_IF_FAIL_S is equal to '0', the mobile station shall select a system other than the system from which it was redirected in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to avoid the system from which the mobile station was redirected is left to the mobile station manufacturer.
- If REDIRECTION_S is equal to disabled, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a system lost indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station should attempt to select the same system that was lost, and should attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to select the same system is left to the

mobile station manufacturer. If the mobile station does not attempt to select the same system, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a lock indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with an unlock indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with an access denied indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with an NDSS off indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4).

If the mobile station enters the *System Determination Substate* with a release indication and REDIRECTION_S is equal to enabled, the mobile station shall attempt to select the same system on which the release occurred and shall attempt to acquire the selected system (see 2.6.1.1.4). The precise process for determining how to select the same system is left to the mobile station manufacturer. If REDIRECTION_S is equal to disabled, the mobile station shall select a system in accordance with the custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected system (see 2.6.1.1.4). If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled.

If the mobile station enters the *System Determination Substate* with an error indication, the mobile station shall set REDIRECTION_S to disabled. If NDSS_ORIG_S is enabled, the mobile station shall set NDSS_ORIG_S to disabled and should indicate to the user that the call origination is canceled. The mobile station shall select a system in accordance with the

1 custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the selected
2 system (see 2.6.1.1.4).

3 If the mobile station enters the *System Determination Substate* with a redirection indication,
4 the mobile station shall set REDIRECTION_S to enabled. The mobile station shall delete all
5 entries from the ZONE_LIST_S and SID_NID_LIST_S. The mobile station shall select a
6 system in accordance with the current redirection criteria (see 2.6.1.1.2) and shall
7 attempt to acquire the selected system (see 2.6.1.1.4).

8 If the mobile station enters the *System Determination Substate* with a registration rejected
9 indication, the mobile station shall perform the following:

- 10 • If REDIRECTION_S is equal to enabled, the mobile station shall perform the following:
 - 11 – The mobile station shall set REDIRECTION_S to disabled.
 - 12 – The mobile station shall set RETURN_CAUSE_S to '0011'.
 - 13 – If RETURN_IF_FAIL_S is equal to '1', the mobile station shall attempt to select the
14 system from which it was redirected and shall attempt to acquire the selected
15 system (see 2.6.1.1.4). The precise process for determining how to select the
16 system from which the mobile station was redirected is left to the mobile
17 station manufacturer.
 - 18 – If RETURN_IF_FAIL_S is equal to '0', the mobile station shall select a system
19 other than the system from which it was redirected in accordance with the
20 custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the
21 selected system (see 2.6.1.1.4). The precise process for determining how to
22 avoid the system from which the mobile station was redirected is left to the
23 mobile station manufacturer.
- 24 • If REDIRECTION_S is equal to disabled, the mobile station shall select a system in
25 accordance with the custom system selection process (see 2.6.1.1.1) and shall
26 attempt to acquire the selected system (see 2.6.1.1.4).

27 If the mobile station enters the *System Determination Substate* with a wrong system
28 indication, the mobile station shall perform the following:

- 29 • If REDIRECTION_S is equal to enabled, the mobile station shall attempt to select
30 another system in accordance with the current redirection criteria (see 2.6.1.1.2).
31 If the mobile station is able to select another system, the mobile station shall
32 attempt to acquire the selected system (see 2.6.1.1.4). Otherwise, if the mobile
33 station has exhausted all possible selections using the current redirection criteria,
34 the mobile station shall perform the following:
 - 35 – The mobile station shall set REDIRECTION_S to disabled.
 - 36 – The mobile station shall set RETURN_CAUSE_S to '0100'.

- 1 – If RETURN_IF_FAIL_S is equal to '1', the mobile station shall attempt to select the
2 system from which it was redirected and shall attempt to acquire the selected
3 system (see 2.6.1.1.4). The precise process for determining how to select the
4 system from which the mobile station was redirected is left to the mobile
5 station manufacturer.
- 6 – If RETURN_IF_FAIL_S is equal to '0', the mobile station shall select a system
7 other than the system from which it was redirected in accordance with the
8 custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the
9 selected system (see 2.6.1.1.4). The precise process for determining how to
10 avoid the system from which the mobile station was redirected is left to the
11 mobile station manufacturer.
- 12 • If REDIRECTION_S is equal to disabled, the mobile station shall select a system in
13 accordance with the custom system selection process (see 2.6.1.1.1) and shall
14 attempt to acquire the selected system (see 2.6.1.1.4).

15 If the mobile station enters the *System Determination Substate* with a wrong network
16 indication, the mobile station shall perform the following:

- 17 • If REDIRECTION_S is equal to enabled, the mobile station shall attempt to select
18 another system in accordance with the current redirection criteria (see 2.6.1.1.2).
19 If the mobile station is able to select another system, the mobile station shall
20 attempt to acquire the selected system (see 2.6.1.1.4). Otherwise, if the mobile
21 station has exhausted all possible selections using the current redirection criteria,
22 the mobile station shall perform the following:
 - 23 – The mobile station shall set REDIRECTION_S to disabled.
 - 24 – The mobile station shall set RETURN_CAUSE_S to '0101'.
 - 25 – If RETURN_IF_FAIL_S is equal to '1', the mobile station shall attempt to select
26 the system from which it was redirected and shall attempt to acquire the
27 selected system (see 2.6.1.1.4). The precise process for determining how to
28 select the system from which the mobile station was redirected is left to the
29 mobile station manufacturer.
 - 30 – If RETURN_IF_FAIL_S is equal to '0', the mobile station shall select a system
31 other than the system from which it was redirected in accordance with the
32 custom system selection process (see 2.6.1.1.1) and shall attempt to acquire the
33 selected system (see 2.6.1.1.4). The precise process for determining how to
34 avoid the system from which the mobile station was redirected is left to the
35 mobile station manufacturer.
- 36 • If REDIRECTION_S is equal to disabled, the mobile station shall select a system in
37 accordance with the custom system selection process (see 2.6.1.1.1) and shall
38 attempt to acquire the selected system (see 2.6.1.1.4).

2.6.1.1.1 Custom System Selection Process

The precise process for custom system selection is left to the mobile station manufacturer. It is typically influenced by a set of expressed user preferences, such as the following:

- System A (or B) only (Band Class 0 only)
- System A (or B) preferred (Band Class 0 only)
- CDMA (or analog) system only
- CDMA (or analog) system preferred
- 800 MHz (or 1.8 GHz) band only (CDMA system)
- 800 MHz (or 1.8 GHz) band preferred (CDMA system)

The mobile station shall perform the custom system selection process as follows:

- The mobile station shall determine which system to use.
- If the mobile station is to use a CDMA system, it shall set $CDMABAND_S$ to the band class (see [30]) for the selected system.
- If the mobile station is to use a CDMA system with $CDMABAND_S = '00000'$, it shall perform the following:
 - If the mobile station is to use System A, it shall set $SERVSYS_S$ to SYS_A . If the mobile station is to use System B, it shall set $SERVSYS_S$ to SYS_B .
 - The mobile station shall set $CDMACH_S$ either to the Primary or Secondary CDMA Channel number (see 2.1.1.1.1 of [2]) for the selected serving system ($SERVSYS_S$). If the mobile station fails to acquire a CDMA system on the first CDMA Channel it tries, the mobile station should attempt to acquire on the alternate CDMA Channel (Primary or Secondary) before attempting other alternatives.
- If the mobile station is to use a CDMA system with $CDMABAND_S = '00001'$, it shall set $CDMACH_S$ to the CDMA Channel number (see 2.1.1.1.1 of [2]) for the selected system.

If the mobile station is to use System A of the 800 MHz analog system, it shall set $SERVSYS_S$ to SYS_A . If the mobile station is to use System B of the 800 MHz analog system, it shall set $SERVSYS_S$ to SYS_B .

2.6.1.1.2 System Selection Using Current Redirection Criteria

To perform system selection using current redirection criteria, the mobile station shall use information received either in a *Service Redirection Message*, a *Global Service Redirection Message*, or an *Extended Global Service Redirection Message* and stored in the variable $REDIRECT_REC_S$.

If the RECORD_TYPE field of REDIRECT_REC_S is equal to '00000001' and the mobile station supports Band Class 0, the mobile station shall perform system selection as follows:

- If the SYS_ORDERING field is equal to '000', the mobile station shall make sequential system selections as follows:
 - The mobile station shall set SERVSYS_S either to SYS_A or SYS_B. The precise process for determining how many system selections to make and for determining whether to use SYS_A or SYS_B is left to the mobile station manufacturer.
- If the SYS_ORDERING field is equal to '001', the mobile station shall select no more than one system selection as follows:
 - The mobile station shall set SERVSYS_S to SYS_A.
- If the SYS_ORDERING field is equal to '010', the mobile station shall select no more than one system selection as follows:
 - The mobile station shall set SERVSYS_S to SYS_B.
- If the SYS_ORDERING field is equal to '011', the mobile station shall make at most two sequential system selections as follows:
 - For the first system selection, the mobile station shall set SERVSYS_S to SYS_A.
 - For the second system selection, the mobile station shall set SERVSYS_S to SYS_B.
- If the SYS_ORDERING field is equal to '100', the mobile station shall make at most 2 sequential system selections as follows:
 - For the first system selection, the mobile station shall set SERVSYS_S to SYS_B.
 - For the second system selection, the mobile station shall set SERVSYS_S to SYS_A.
- If the SYS_ORDERING field is equal to '101', the mobile station shall make at most 2 sequential system selections as follows:
 - For the first system selection, the mobile station shall set SERVSYS_S either to SYS_A or SYS_B. The precise process for determining whether to use SYS_A or SYS_B first is left to the mobile station manufacturer.
 - For the second system selection, the mobile station shall set SERVSYS_S to SYS_B if SYS_A was used for the first selection, or to SYS_A if SYS_B was used for the first selection.

If the RECORD_TYPE field of REDIRECT_REC_S is equal to '00000010', the mobile station shall perform system selection as follows:

- 1 • If the BAND_CLASS field is equal to '00000' and the mobile station supports CDMA
2 mode operation in Band Class 0, the mobile station shall make at most n
3 sequential system selections, where n is equal to the value of the NUM_CHANS
4 field, as follows:
 - 5 – For the i^{th} system selection, where i ranges from 1 to n , the mobile station shall
6 set CDMACH_S to the value of the i^{th} occurrence of the CDMA_CHAN field and
7 shall set CDMABAND_S to 0.
- 8 • If the BAND_CLASS field is equal to '00001' and the mobile station supports CDMA
9 mode operation in Band Class 1, the mobile station shall make at most n
10 sequential system selections, where n is equal to the value of the NUM_CHANS
11 field, as follows:
 - 12 – For the i^{th} system selection, where i ranges from 1 to n , the mobile station shall
13 set CDMACH_S to the value of the i^{th} occurrence of the CDMA_CHAN field and
14 shall set CDMABAND_S to 1.

15 2.6.1.1.3 System Selection Using System Reselection Criteria

16 The precise process for selecting a system using system reselection criteria is left to the
17 mobile station manufacturer. The mobile station should use information received in the
18 *Extended Neighbor List Message* or the *General Neighbor List Message* to perform the system
19 reselection process as follows:

- 20 • If there are pilots in the Neighbor List on a different Frequency Assignment than
21 that of the mobile station, the mobile station may select the CDMA system
22 consisting of these neighbor pilots. If the mobile station is to use a CDMA system,
23 it shall set CDMABAND_S to the band class (see [30]) for the selected system and
24 shall set CDMACH_S to the CDMA Channel number (see 2.1.1.1 of [2]) for the
25 selected system.
- 26 • If NUM_ANALOG_NGHR_S is not equal to '000', the mobile station may select an
27 analog system as specified by ANALOG_NGHR_LIST. If the mobile station is to use
28 System A of the 800 MHz analog system, it shall set SERVSYS_S to SYS_A. If the
29 mobile station is to use System B of the 800 MHz analog system, it shall set
30 SERVSYS_S to SYS_B.

31 2.6.1.1.4 Acquiring the Selected System

32 The mobile station shall attempt to acquire the selected system as follows:

- 33 • If the selected system is an analog system, the mobile station shall enter the
34 Initialization Task (see 2.6.1 of [6]).
- 35 • If the selected system is a CDMA system, the mobile station shall enter the *Pilot*
36 *Channel Acquisition Substate*.

2.6.1.2 Pilot Channel Acquisition Substate

In this substate, the mobile station acquires the Pilot Channel of the selected CDMA system.

Upon entering the *Pilot Channel Acquisition Substate*, the mobile station shall tune to the CDMA Channel number equal to $CDMACH_S$, shall set its code channel for the Pilot Channel (see 3.1.3.1.10 of [2]) and shall search for the Pilot Channel for no longer than T_{20m} seconds (see Annex D). If the mobile station acquires the Pilot Channel, the mobile station shall enter the *Sync Channel Acquisition Substate*.

If the mobile station determines that it is unlikely to acquire the Pilot Channel within T_{20m} seconds, the mobile station may enter the *System Determination Substate* with an acquisition failure indication (see 2.6.1.1). The time, to either acquire the Pilot Channel or determine that Pilot Channel acquisition is unlikely, shall not exceed T_{20m} seconds (see Annex D), after which the mobile station shall enter the *System Determination Substate* with an acquisition failure indication (see 2.6.1.1).

2.6.1.3 Sync Channel Acquisition Substate

In this substate, the mobile station receives and processes the *Sync Channel Message* to obtain system configuration and timing information.

Upon entering the *Sync Channel Acquisition Substate*, the mobile station shall set its code channel for the Sync Channel (see [2]).

If the mobile station does not receive a valid *Sync Channel Message* within T_{21m} seconds, the mobile station shall enter the *System Determination Substate* with an acquisition failure indication.

If the mobile station receives a valid *Sync Channel Message* within T_{21m} seconds, but the protocol revision level supported by the mobile station ($MOB_P_REV_P$ of the current band class) is less than the minimum protocol revision level supported by the base station ($MIN_P_REV_P$), the mobile station shall enter the *System Determination Substate* with a protocol mismatch indication (see 2.6.1.1).

If the mobile station receives a valid *Sync Channel Message* within T_{21m} seconds, but the values of the $PRAT_P$, the $SR1_BRAT_NON_TD_P$, the $SR1_BRAT_TD_P$, or the $SR3_BRAT_P$ fields are designated as reserved by the protocol revision level supported by the mobile station ($MOB_P_REV_P$ of the current band class), the mobile station shall enter the *System Determination Substate* with a protocol mismatch indication (see 2.6.1.1).

If the mobile station receives a valid *Sync Channel Message* within T_{21m} seconds and the protocol revision level supported by the mobile station ($MOB_P_REV_P$ of the current band class) is greater than or equal to the minimum protocol revision level supported by the base station ($MIN_P_REV_P$), the mobile station shall store the following information from the message:

- Protocol revision level ($P_REV_S = P_REV_P$)

- 1 • Minimum protocol revision level ($\text{MIN_P_REV}_S = \text{MIN_P_REV}_T$)
- 2 • System identification ($\text{SID}_S = \text{SID}_T$)
- 3 • Network identification ($\text{NID}_S = \text{NID}_T$)
- 4 • Pilot PN sequence offset index ($\text{PILOT_PN}_S = \text{PILOT_PN}_T$)
- 5 • Long code state ($\text{LC_STATE}_S = \text{LC_STATE}_T$)
- 6 • System Time ($\text{SYS_TIME}_S = \text{SYS_TIME}_T$)
- 7 • Paging Channel data rate ($\text{PRAT}_S = \text{PRAT}_T$)
- 8 • Protocol revision level currently in use ($\text{P_REV_IN_USE}_S =$ the lesser value of
- 9 P_REV_S and MOB_P_REV_P of the current band class)
- 10 • SR1 BCCH support indicator ($\text{SR1_BCCH_SUPPORTED}_S = \text{SR1_BCCH_SUPPORTED}_T$)
- 11 • SR3 support indicator ($\text{SR3_INCL}_S = \text{SR3_INCL}_T$)

12 The mobile station shall ignore any fields at the end of the *Sync Channel Message* that are
 13 not defined according to the protocol revision level (MOB_P_REV_P of the current band class)
 14 being used by the mobile station.

15 The mobile station may store the following information from the message:

- 16 • Number of leap seconds that have occurred since the start of System Time
- 17 ($\text{LP_SEC}_S = \text{LP_SEC}_T$)
- 18 • Offset of local time from System Time ($\text{LTM_OFF}_S = \text{LTM_OFF}_T$)
- 19 • Daylight savings time indicator ($\text{DAYLT}_S = \text{DAYLT}_T$)

20 If REDIRECTION_S and NDSS_ORIG_S are equal to disabled, the mobile station may enter the
 21 *System Determination Substate* with a reselection indication (see 2.6.1.1).

22 If REDIRECTION_S is equal to enabled, the EXPECTED_SID field of REDIRECT_REC_S is not
 23 equal to 0, and SID_T is not equal to EXPECTED_SID , the mobile station shall enter the
 24 *System Determination Substate* with a wrong system indication (see 2.6.1.1). If
 25 REDIRECTION_S is equal to enabled, the EXPECTED_NID field of REDIRECT_REC_S is not
 26 equal to 65535, and NID_T is not equal to EXPECTED_NID , the mobile station shall enter the
 27 *System Determination Substate* with a wrong network indication.

28 If P_REV_IN_USE_S is less than 6, the mobile station shall set $\text{POTENTIAL_CDMACH}_S$ to
 29 CDMA_FREQ_T .

30 If P_REV_IN_USE_S is equal to six, and the mobile station shall perform the following:

- 31 • If the mobile station supports the Quick Paging Channel or any radio configuration
- 32 in the Radio Configuration Class 2 or 3 (see 1.1.1), the mobile station shall set
- 33 $\text{POTENTIAL_CDMACH}_S$ equal to EXT_CDMA_FREQ_T ; otherwise, the mobile station

- 1 shall set $POTENTIAL_CDMACH_S$ equal to $CDMA_FREQ_R$.
- 2 If $P_REV_IN_USE_S$ greater than six, the mobile station shall perform the following:
- 3 • If the mobile station supports Spreading Rate 3 on the common channels and
 4 $SR3_INCL_S$ is equal to '1', the mobile station shall set:
- 5 – $BRAT_S = SR3_BRAT_R$;
 - 6 – $BCCH_CODE_RATE_S = 1/3$;
 - 7 – $BCCH_S = SR3_BCCH_CODE_CHAN_R$;
 - 8 – $SR3_PRIMARY_PILOT_S = SR3_PRIMARY_PILOT_R$;
 - 9 – $SR3_PILOT_POWER1_S = SR3_PILOT_POWER1_R$;
 - 10 – $SR3_PILOT_POWER2_S = SR3_PILOT_POWER2_R$;
 - 11 – If $SR3_CENTER_FREQ_INCL_R$ is equal to '1', $POTENTIAL_CDMACH_S =$
 12 $SR3_CENTER_FREQ_R$; otherwise, $POTENTIAL_CDMACH_S = EXT_CDMA_FREQ_R$.
- 13 • If the mobile station does not support Spreading Rate 3 on the common channel or if
 14 $SR3_INCL_S$ is equal to '0', the mobile station shall perform the following:
- 15 – If $SR1_BCCH_SUPPORTED_S$ is equal to '1', the mobile station shall perform the
 16 following:
 - 17 + If $SR1_TD_INCL_R$ is equal to '1' and the mobile station supports the Transmit
 18 Diversity mode specified by $SR1_TD_MODE_R$, the mobile station shall set:
 - 19 o $SR1_TD_MODE_S = SR1_TD_MODE_R$
 - 20 o $SR1_TD_POWER_LEVEL_S = SR1_TD_POWER_LEVEL_R$
 - 21 o $BRAT_S = SR1_BRAT_TD_R$
 - 22 o $SR1_BRAT_TD_S = SR1_BRAT_TD_R$
 - 23 o $BCCH_CODE_RATE_S = SR1_CRAT_TD_R$,
 - 24 o $SR1_CRAT_TD_S = SR1_CRAT_TD_R$,
 - 25 o $BCCH_S = BCCH_CODE_CHAN_TD_R$,
 - 26 o $BCCH_CODE_CHAN_TD_S = BCCH_CODE_CHAN_TD_R$,
 - 27 o $POTENTIAL_CDMACH_S = SR1_CDMA_FREQ_TD_R$
 - 28 + If $SR1_TD_INCL_R$ is equal to '0', or if $SR1_TD_INCL_R$ is equal to '1' and the mobile
 29 station does not support the Transmit Diversity mode specified by
 30 $SR1_TD_MODE_R$, the mobile station shall set:
 - 31 o $BRAT_S = SR1_BRAT_NON_TD_R$

- o $SR1_BRAT_NON_TD_S = SR1_BRAT_NON_TD_R$
- o $BCCH_CODE_RATE_S = SR1_CRAT_NON_TD_R$,
- o $BCCH_S = BCCH_CODE_CHAN_NON_TD_R$,
- o $SR1_CRAT_NON_TD_S = SR1_CRAT_NON_TD_R$,
- o If $SR1_NON_TD_FREQ_INCL_R$ is equal to '1', $POTENTIAL_CDMACH_S = SR1_CDMA_FREQ_NON_TD_R$; otherwise, $POTENTIAL_CDMACH_S = EXT_CDMA_FREQ_R$
- If $SR1_BCCH_SUPPORTED_S$ is equal to '0', the mobile station shall perform the following:
 - + If the mobile station supports the Quick Paging Channel or any radio configuration in the Radio Configuration Class 2 or 3 (see 1.1.1), the mobile station shall set $POTENTIAL_CDMACH_S = EXT_CDMA_FREQ_R$; otherwise, the mobile station shall set $POTENTIAL_CDMACH_S = CDMA_FREQ_R$.

If $POTENTIAL_CDMACH_S$ is different from $CDMACH_S$, the mobile station shall set $CDMACH_S = POTENTIAL_CDMACH_S$ and then tune to the CDMA Channel ($CDMACH_S$).

The mobile station shall enter the *Timing Change Substate*.

2.6.1.4 Timing Change Substate

Figure 2.6.1.4-1 illustrates the mobile station timing changes that occur in this substate. The mobile station synchronizes its long code timing and system timing to those of the CDMA system, using the $PILOT_PN_S$, LC_STATE_S , and SYS_TIME_S values obtained from the received *Sync Channel Message*. SYS_TIME_S is equal to the System Time (see 1.3 of [2]) corresponding to 320 ms past the end of the last 80 ms superframe (see Figure 3.1.3.2.1-1 of [2]) of the received *Sync Channel Message* minus the pilot PN sequence offset. LC_STATE_S is equal to the system long code state (see 2.1.3.1.12 of [2]) corresponding to SYS_TIME_S .

In the *Timing Change Substate*, the mobile station shall synchronize its long code timing to the CDMA system long code timing derived from LC_STATE_S , and synchronize its system timing to the CDMA system timing derived from SYS_TIME_S .

If $SR1_BCCH_SUPPORTED_S$ is equal to '1', or if the mobile station supports Spreading Rate 3 on the common channel and $SR3_INCL_S$ is equal to '1', the mobile station shall:

- Set the stored message sequence numbers $CONFIG_MSG_SEQ_S$, $A41_SYS_PAR_MSG_SEQ_S$, $ACC_MSG_SEQ_S$, $MC_RR_PAR_MSG_SEQ_S$, $UNI_NGHBR_LST_MSG_SEQ_S$, $EXT_GLOB_SERV_REDIR_MSG_SEQ_S$, $EXT_CHAN_LST_MSG_SEQ_S$, $USER_ZONE_ID_MSG_SEQ_S$ and $PRI_NGHBR_LST_MSG_SEQ_S$ variables to NULL (see 2.6.2.2);

- 1 • Set IMSI_11_12_S and MCC_S to NULL;
- 2 • Perform registration initialization as specified in 2.6.5.5.1.3; and
- 3 • If the bits of TMSI_CODE_{S-p} are not all equal to '1' and if SYS_TIME_S exceeds
- 4 TMSI_EXP_TIME_{S-p} × 2¹², the mobile station shall set all the bits of TMSI_CODE_{S-p}
- 5 to '1'.
- 6 If SR1_BCCH_SUPPORTED_S is equal to '0' and SR3_INCL_S is equal to '0', the mobile station
- 7 shall:
- 8 • Set PAGECH_S to the Primary Paging Channel (see 3.1.3.4 of [2]);
- 9 • Set PAGE_CHAN_S to '1';
- 10 • Set the stored message sequence numbers CONFIG_MSG_SEQ_S,
- 11 SYS_PAR_MSG_SEQ_S, ACC_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
- 12 GEN_NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
- 13 CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S,
- 14 EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
- 15 USER_ZONE_ID_MSG_SEQ_S and PRI_NGHBR_LST_MSG_SEQ_S variables to NULL (see
- 16 2.6.2.2);
- 17 • Set IMSI_11_12_S and MCC_S to NULL;
- 18 • Perform registration initialization as specified in 2.6.5.5.1.3; and
- 19 • If the bits of TMSI_CODE_{S-p} are not all equal to '1' and if SYS_TIME_S exceeds
- 20 TMSI_EXP_TIME_{S-p} × 2¹², the mobile station shall set all the bits of TMSI_CODE_{S-p}
- 21 to '1'.
- 22 The mobile station shall enter the *Mobile Station Idle State*.

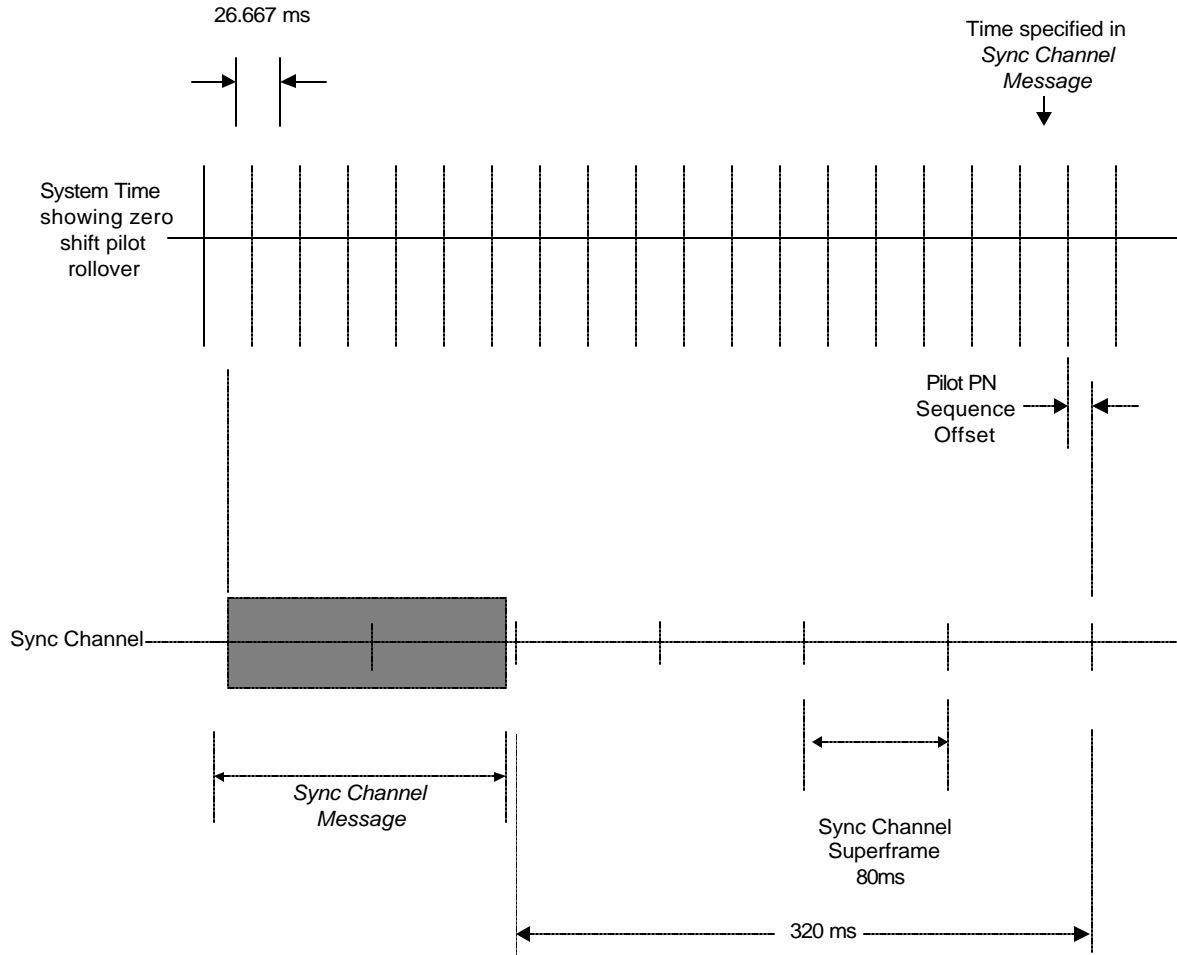


Figure 2.6.1.4-1. Mobile Station Internal Timing

2.6.2 Mobile Station Idle State

In this state, the mobile station monitors the Paging Channel or the Quick Paging Channel or Forward Common Control Channel/Broadcast Control Channel. The mobile station can receive messages, receive an incoming call (mobile station terminated call), initiate a call (mobile station originated call), cancel a PACA call, initiate a registration, or initiate a message transmission.

The mobile station may monitor the Quick Paging Channel to determine if it should receive messages from the Paging Channel or Forward Common Control Channel.

Upon entering the *Mobile Station Idle State*, if $SR1_BCCH_SUPPORTED_S$ is equal to '1', or if the mobile station supports Spreading Rate 3 on the common channel and $SR3_INCL_S$ is equal to '1', the mobile station shall perform the following:

- Set its Broadcast Control Channel code channel to $BCCH_S$,
- Set the Broadcast Control Channel data rate as determined by $BRAT_S$,
- Set $SLOTTED_S$ to YES if $T_SLOTTED_S$ is equal to '00000000' or if the mobile station does not support the slotted timer; otherwise enable the $T_{MS_Slotted}$ timer with the duration specified by $T_SLOTTED_S$, and
- Perform common channel supervision as specified in 2.6.2.1.1.4.

Upon entering the *Mobile Station Idle State*, if $SR1_BCCH_SUPPORTED_S$ is equal to '0' and $SR3_INCL_S$ is equal to '0', the mobile station shall perform the following:

- Set its code channel to $PAGECH_S$,
- Set the Paging Channel data rate as determined by $PRAT_S$,
- Set $SLOTTED_S$ to YES if $T_SLOTTED_S$ is equal to '00000000' or if the mobile station does not support the slotted timer; otherwise enable the $T_{MS_Slotted}$ timer with the duration specified by $T_SLOTTED_S$, and
- Perform Paging Channel supervision as specified in 2.6.2.1.1.4.

If $REDIRECTION_S$, $PACA_S$, and $NDSS_ORIG_S$ are equal to disabled, the mobile station may exit the *Mobile Station Idle State* at any time and enter the *System Determination Substate* of the *Mobile Station Initialization State* with a reselection indication (see 2.6.1.1).

While in the *Mobile Station Idle State*, the mobile station shall perform the following procedures:

- The mobile station shall perform Paging Channel or Forward Common Control Channel monitoring procedures as specified in 2.6.2.1.1.
- The mobile station shall perform message acknowledgment procedures as specified in 2.1.1.2 and 2.1.2.1 of [4].
- The mobile station shall perform registration procedures as specified in 2.6.2.1.3.

- 1 • The mobile station shall perform idle handoff procedures as specified in 2.6.2.1.4.
- 2 • The mobile station shall perform system reselection procedures as specified in
- 3 2.6.2.1.6.
- 4 • The mobile station shall perform the *Response to Overhead Information Operation* as
- 5 specified in 2.6.2.2 whenever the mobile station receives a system overhead
- 6 message (*ANSI-41 System Parameters Message, Enhanced Access Parameters Message,*
- 7 *Extended CDMA Channel List Message, MC-RR Parameters Message, Universal Neighbor*
- 8 *List Message, ANSI-41 RAND Message, System Parameters Message, CDMA Channel List*
- 9 *Message, Extended System Parameters Message, Neighbor List Message, Extended*
- 10 *Neighbor List Message, General Neighbor List Message, Global Service Redirection*
- 11 *Message, Extended Global Service Redirection Message, User Zone Identification*
- 12 *Message, Private Neighbor List Message, or Access Parameters Message*).
- 13 • The mobile station shall perform the *Mobile Station Page Match Operation* as
- 14 specified in 2.6.2.3 whenever it receives a mobile station-directed page.
- 15 • The mobile station shall perform the *Mobile Station Order and Message Processing*
- 16 *Operation* as specified in 2.6.2.4 whenever a message or order directed to the
- 17 mobile station is received other than a mobile station-directed page.
- 18 • The mobile station shall set NDSS_ORIG_S to disabled if directed by the user to
- 19 cancel the call origination.
- 20 • The mobile station shall perform the *Mobile Station Origination Operation* as specified
- 21 in 2.6.2.5 if directed by the user to initiate a call, or if NDSS_ORIG_S is equal to
- 22 enabled.
- 23 • The mobile station shall not send any subsequent *Origination Message* containing
- 24 the same packet data service option until the system time stored in
- 25 RETRY_DELAY_S[001]. At the system time stored in RETRY_DELAY_S[001], the mobile
- 26 station shall reset RETRY_DELAY_S[001] to 0.
- 27 • The mobile station shall perform the *Mobile Station PACA Cancel Operation* as
- 28 specified in 2.6.2.8, if PACA_S is equal to enabled and any one of the following
- 29 conditions is met:
 - 30 – PACA_CANCEL is equal to '1'; or
 - 31 – The mobile station is directed by the user to cancel the PACA call.
- 32 • If the PACA state timer expires, the mobile station shall perform the following:
 - 33 – The mobile station should enter the *Update Overhead Information Substate* of the
 - 34 *System Access State* (see 2.6.3) with an origination indication within T_{33m}
 - 35 seconds to re-originate the PACA call.
 - 36 – Otherwise, the mobile station shall perform the *Mobile Station PACA Cancel*
 - 37 *Operation* as specified in 2.6.2.8.

- 1 • If the mobile station supports *Data Burst Message* transmission, it shall perform the
2 *Mobile Station Message Transmission Operation* as specified in 2.6.2.6 if directed by
3 the user to transmit a message.
- 4 • If the mobile station supports the *Device Information Message* on the r-csch,
5 $AUTO_MSG_SUPPORTED_S$ is equal to '1', and the mobile station has detected a
6 change in hook status, the mobile station shall perform the following:
 - 7 – If the autonomous message timer has expired, the mobile station shall perform
8 the *Mobile Station Message Transmission Operation* as specified in 2.6.2.6.
 - 9 – If the autonomous message timer has not expired, the mobile station shall set
10 the autonomous message timer equal to $AUTO_MSG_INTERVAL_S$ and shall
11 restart the timer.
- 12 • The mobile station shall perform the *Mobile Station Power-Down Operation* as
13 specified in 2.6.2.7 if directed by the user to power down.
- 14 • If the bits of $TMSI_CODE_{S-p}$ are not all equal to '1' and if System Time (in 80 ms
15 units) exceeds $TMSI_EXP_TIME_{S-p} \times 2^{12}$, the mobile station shall set all the bits of
16 $TMSI_CODE_{S-p}$ to '1' within T_{66m} seconds.
- 17 • If the full-TMSI timer expires or has expired, the mobile station shall set all the bits
18 of $TMSI_CODE_{S-p}$ to '1'. The mobile station shall update the registration variables
19 as described in 2.6.5.5.2.5.

20 2.6.2.1 Idle Procedures

21 2.6.2.1.1 Forward Channel Monitoring Procedures

22 2.6.2.1.1.1 General Overview

23 The Paging Channel is divided into 80 ms slots called Paging Channel slots. Paging and
24 control messages for a mobile station operating in the non-slotted mode can be received in
25 any of the Paging Channel slots; therefore, the non-slotted mode of operation requires the
26 mobile station to monitor all slots.

27 The Forward Common Control Channel is divided into 80 ms slots called Forward Common
28 Control Channel slots. Paging and mobile directed messages for a mobile station operating
29 in the non-slotted mode can be received in any of the Forward Common Control Channel
30 slots. The overhead messages can be received on the Broadcast Control Channel.
31 Therefore, the non-slotted mode of operation requires the mobile station to continuously
32 monitor the Forward Common Control Channel/Broadcast Control Channel.

33 2.6.2.1.1.1.1 General Overview for Individually Addressed Messages

34 The Paging Channel or the Forward Common Control Channel protocol provides for
35 scheduling the transmission of messages for a specific mobile station in certain assigned
36 slots. Support of this feature is optional and may be enabled by each mobile station. A
37 mobile station that monitors the Paging Channel or the Forward Common Control Channel

only during certain assigned slots is referred to as operating in the slotted mode. During the slots in which the Paging Channel or the Forward Common Control Channel is not being monitored, the mobile station can stop or reduce its processing for power conservation. A mobile station may not operate in the slotted mode in any state except the *Mobile Station Idle State*.

A mobile station operating in the slotted mode generally monitors the Paging Channel or the Forward Common Control Channel for one or two slots per slot cycle. The mobile station can specify its preferred slot cycle using the SLOT_CYCLE_INDEX field in the *Registration Message*, *Origination Message*, or *Page Response Message*. The mobile station can also specify its preferred slot cycle using the SLOT_CYCLE_INDEX field of the *Terminal Information* record of the *Status Response Message* or the *Extended Status Response Message*. In addition, the mobile station can also specify its preferred slot cycle using the SLOT_CYCLE_INDEX field of the *Terminal Information* record of the *Status Response Message* or the *Status Message* when in the *Mobile Station Control on the Traffic Channel State*. The length of the slot cycle, T , in units of 1.28 seconds,⁴ is given by

$$T = 2^i,$$

where i is the selected slot cycle index (see 2.6.2.1.1.3).

A mobile station operating in the slotted mode may optionally monitor additional slots to receive broadcast messages and/or broadcast pages (see 2.6.2.1.1.3.3 and 2.6.2.1.1.3.4).

There are $16 \times T$ slots in a slot cycle.

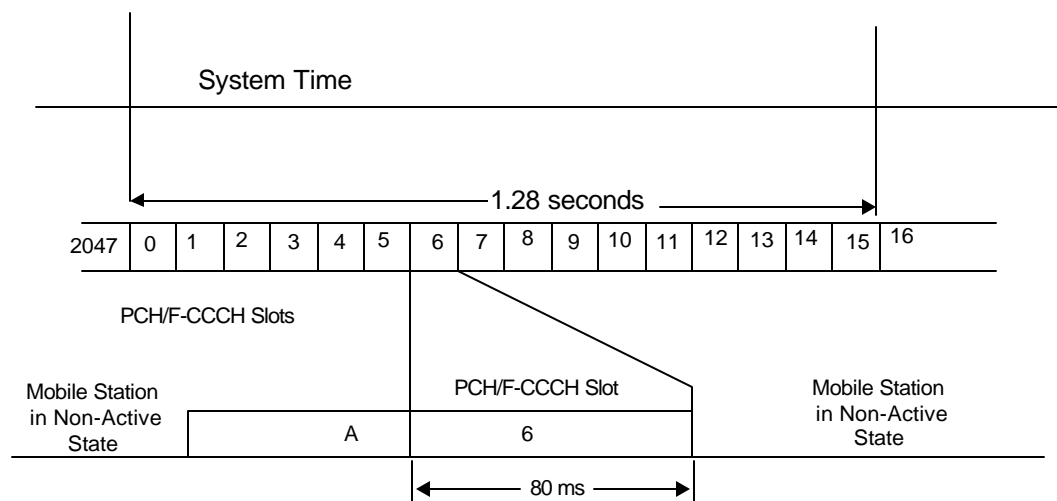
SLOT_NUM is the Paging Channel or the Forward Common Control Channel slot number, modulo the maximum length slot cycle (2048 slots). That is, the value of SLOT_NUM is

$$\text{SLOT_NUM} = \lfloor t/4 \rfloor \bmod 2048,$$

where t is the System Time in frames. For each mobile station, the starting times of its slot cycles are offset from the slot in which SLOT_NUM equals zero by a fixed, randomly selected number of slots as specified in 2.6.2.1.1.3.

Figure 2.6.2.1.1.1-1 shows an example for a slot cycle length of 1.28 seconds, in which the computed value of PGSLOT (see 2.6.2.1.1.3) is equal to 6, so that one of the mobile station's slot cycles begins when SLOT_NUM equals 6. The mobile station begins monitoring the Paging Channel or the Forward Common Control Channel at the start of the slot in which SLOT_NUM equals 6. The next slot in which the mobile station must begin monitoring the Paging Channel or the Forward Common Control Channel is 16 slots later, i.e., the slot in which SLOT_NUM is 22.

⁴ The minimum length slot cycle consists of 16 slots of 80 ms each, hence 1.28 seconds.



A - Reacquisition of CDMA System

6 - Mobile Station's Assigned PCH/F-CCCH Slot

Figure 2.6.2.1.1.1-1. Mobile Station Idle Slotted Mode Structure Example

2.6.2.1.1.1.1 Overview of Stopping Monitoring via the General Page Message

A *General Page Message* contains four fields: CLASS_0_DONE, CLASS_1_DONE, TMSI_DONE, and ORDERED_TMSIS, which indicate when a mobile station operating in the slotted mode may stop monitoring the Paging Channel or the Forward Common Control Channel.

When CLASS_0_DONE is set to '1' during a mobile station's assigned slot and the mobile station is operating in the slotted mode, no further messages or records addressed by a class 0 IMSI will be directed to the mobile station during the current slot. When CLASS_1_DONE is set to '1' during a mobile station's assigned slot and the mobile station is operating in the slotted mode, no further messages or records addressed by a class 1 IMSI will be directed to the mobile station during the current slot. Similarly, when TMSI_DONE is set to '1' during a mobile station's assigned slot and the mobile station is operating in the slotted mode, no further messages or records addressed by a TMSI will be directed to the mobile station during the current slot.

The field ORDERED_TMSIS, when set to '1' during a mobile station's assigned slot, indicates that the base station has ordered TMSI page records directed to mobile stations operating in the slotted mode so that the resulting TMSI_CODE values are in ascending order in the *General Page Messages* in the slot.

A mobile station which is operating in the slotted mode, has a class 0 IMSI assigned, and does not have a TMSI assigned (all the bits of TMSI_CODE_{s-p} are equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a *General Page Message* containing CLASS_0_DONE equal to '1'. Similarly, a mobile station

which is operating in the slotted mode, has a class 1 IMSI assigned, and does not have a TMSI assigned (all the bits of TMSI_CODE_{S-P} are equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a *General Page Message* containing CLASS_1_DONE equal to '1'.

A mobile station which is operating in the slotted mode, has a class 0 IMSI assigned, and has a TMSI assigned (the bits of TMSI_CODE_{S-P} are not all equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a *General Page Message* containing both CLASS_0_DONE equal to '1' and TMSI_DONE equal to '1'. Similarly, a mobile station which is operating in the slotted mode, has a class 1 IMSI assigned, and has a TMSI assigned (the bits of TMSI_CODE_{S-P} are not all equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a *General Page Message* containing both CLASS_1_DONE equal to '1' and TMSI_DONE equal to '1'.

If ORDERED_TMSIS is equal to '1' and CLASS_0_DONE is equal to '1', a mobile station which has a class 0 IMSI assigned, is operating in the slotted mode, and has a TMSI assigned (the bits of TMSI_CODE_{S-P} are not all equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a page record with a TMSI_CODE value of higher numerical value than TMSI_CODE_{S-P}.

If ORDERED_TMSIS is equal to '1' and CLASS_1_DONE is equal to '1', a mobile station which has a class 1 IMSI assigned, is operating in the slotted mode, and has a TMSI assigned (the bits of TMSI_CODE_{S-P} are not all equal to '1'), may stop monitoring the Paging Channel or the Forward Common Control Channel after processing a page record with a TMSI_CODE value of higher numerical value than TMSI_CODE_{S-P}.

The mobile station continues to monitor the Paging Channel or the Forward Common Control Channel for one additional slot unless, within its assigned slot, the mobile station receives a *General Page Message* containing the appropriate indicator permitting it to stop monitoring the Paging Channel or the Forward Common Control Channel (CLASS_0_DONE, CLASS_1_DONE, TMSI_DONE, or ORDERED_TMSIS equal to '1', whichever is appropriate). This allows the base station to carry over a message begun in the assigned slot into the following slot, if necessary.

2.6.2.1.1.1.2 Overview of Stopping Monitoring via the Universal Page Message

Layer 3 determines when a mobile station operating in the slotted mode may stop monitoring the Forward Common Control Channel based upon an indicator from Layer 2. When the *Universal Page Message* is used on the Forward Common Control Channel, Layer 2 is responsible for determining, based upon the address information received in a slot, when no further messages or records addressed to an individual mobile station will be present in the slot. When Layer 2 determines that no further individually addressed messages or records for the mobile station will be present in a slot, it sends an address mismatch indication to Layer 3.

The *Universal Page Message* contains the READ_NEXT_SLOT field, which, when equal to '1' and received in an assigned slot, indicates to a mobile station that it is to monitor the

Forward Common Control Channel in time to receive the first bit of the slot following the assigned slot. This allows the base station to use both an assigned slot and the following slot for pages if all of the pages for an assigned slot cannot be fit into the assigned slot. The *Universal Page Message* also contains the READ_NEXT_SLOT_BCAST field, which, when equal to '1' and received in an assigned slot or broadcast slot, indicates to a mobile station configured to receive broadcast messages that it is to monitor the Forward Common Control Channel in time to receive the first bit of the subsequent slot. This allows the base station to use the subsequent slot for enhanced broadcast pages if all of the enhanced broadcast pages for an assigned slot or broadcast slot cannot be fit into the slot.

2.6.2.1.1.1.2 Overview of Broadcast Messages on Paging Channel

The Paging Channel protocol provides two methods for the transmission of broadcast messages. Each method enables mobile stations operating in the slotted mode or in the non-slotted mode to receive broadcast messages. A broadcast message on the Paging Channel is a *Data Burst Message* that has a broadcast address type. A mobile station operating in the slotted mode has assigned slots that it monitors to receive Paging Channel messages (see 2.6.2.1.1.1). A broadcast page is a record within a *General Page Message* that has a broadcast address type. A base station may transmit a broadcast page in an assigned slot to inform mobile stations monitoring that slot that a broadcast message will be transmitted in a predetermined subsequent slot. A slot that a mobile station monitors in order to receive either a broadcast page or a broadcast message is referred to as a broadcast slot.

2.6.2.1.1.1.2.1 Method 1: Multi-Slot Broadcast Message Transmission

According to this method, a broadcast message is sent in a sufficient number of assigned slots such that it may be received by all mobile stations that are operating in the slotted mode.

Figure 2.6.2.1.1.1.2.1-1 shows an example for the case when the maximum slot cycle index is equal to 0. In this example, the broadcast message fits in a single slot. The *Data Burst Message* is transmitted in 16 consecutive slots.

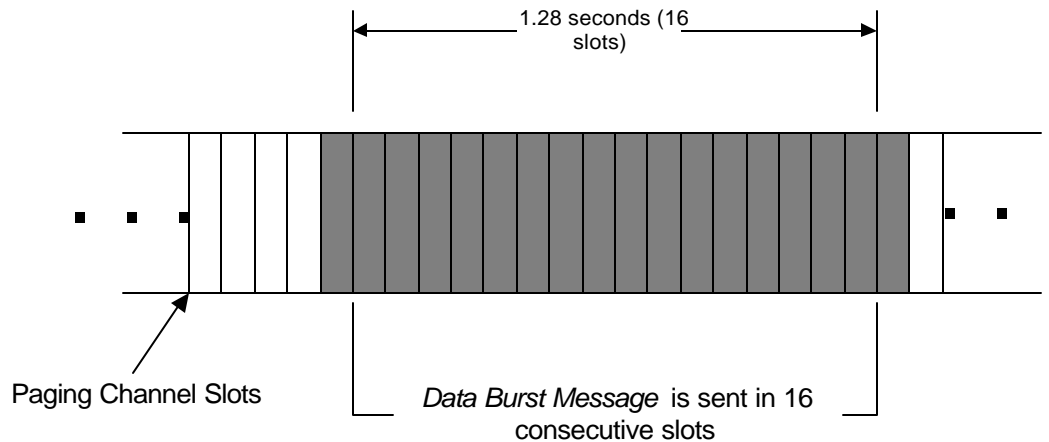


Figure 2.6.2.1.1.2.1-1. Multi-Slot Broadcast Message Transmission Example

2.6.2.1.1.2.2 Method 2: Periodic Broadcast Paging

According to this method, mobile stations configured to receive broadcast messages monitor a specific broadcast slot (the first slot of a broadcast paging cycle; see 2.6.2.1.1.3.3). There are two methods of sending broadcast messages used with Periodic Broadcast Paging.

If all of the broadcast messages to be transmitted fit within the first slot of a broadcast paging cycle, they may all be transmitted in this broadcast slot. If there is a single broadcast message to be transmitted, it may be transmitted beginning in this broadcast slot.

Alternately, one or more broadcast pages may be transmitted in the first slot of a broadcast paging cycle. Each broadcast page is associated with a subsequent broadcast slot. For each broadcast page, an associated broadcast message may be transmitted in the associated subsequent broadcast slot. The broadcast slot for the associated broadcast message is determined according to the position of the broadcast page within the *General Page Message* transmitted in the first slot of the broadcast paging cycle.

Figure 2.6.2.1.1.2.2-1 shows an example of Periodic Broadcast Paging when the broadcast index is set to 1. A *General Page Message* containing three broadcast pages is transmitted in the first slot of the broadcast paging cycle. For each of the three broadcast pages, a *Data Burst Message* is transmitted in a subsequent slot.

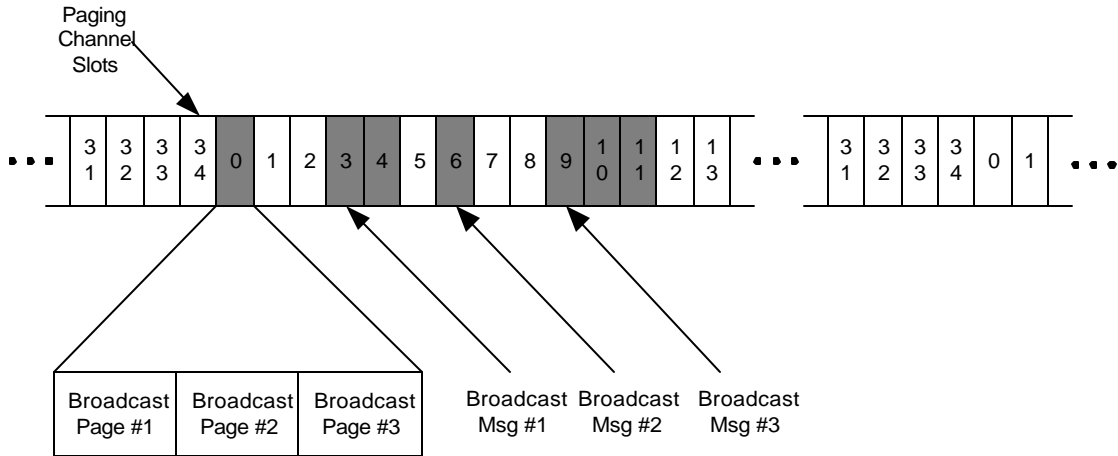


Figure 2.6.2.1.1.1.2.2-1. Periodic Broadcast Paging Example

2.6.2.1.1.1.3 Overview of Broadcast Messages on Broadcast Control Channel

The Broadcast Control Channel/Forward Common Control Channel protocol provides two methods for the transmission of broadcast messages. Each method enables mobile stations operating in the slotted mode or in the non-slotted mode to receive broadcast messages on the Broadcast Control Channel. A broadcast message on the Broadcast Control Channel is a *Data Burst Message* that has a broadcast address type. A mobile station operating in the slotted mode has assigned Forward Common Control Channel slots that it monitors to receive Forward Common Control Channel messages (see 2.6.2.1.1.1). A mobile station operating in the slotted mode and configured to receive broadcast messages may also have special assigned Forward Common Control Channel slots, called broadcast slots, that it monitors to receive enhanced broadcast pages. An enhanced broadcast page is a record within a *General Page Message* or a *Universal Page Message* that has a broadcast address type and that includes broadcast message scheduling information. A base station may transmit an enhanced broadcast page in an assigned Forward Common Control Channel slot, or in a broadcast slot, to inform mobile stations that a broadcast message will be transmitted in a specified Broadcast Control Channel slot. The enhanced broadcast page identifies the Broadcast Control Channel and the slot the mobile station is to monitor to receive the broadcast message.

2.6.2.1.1.1.3.1 Method 1: Multi-Slot Enhanced Broadcast Paging

According to this method, an enhanced broadcast page is sent in a sufficient number of assigned slots on the Forward Common Control Channel such that it may be received by all mobile stations that are operating in the slotted mode.

Figure 2.6.2.1.1.1.3.1-1 shows an example for the case when the maximum slot cycle index is equal to 0. The enhanced broadcast page is transmitted in 16 consecutive slots.

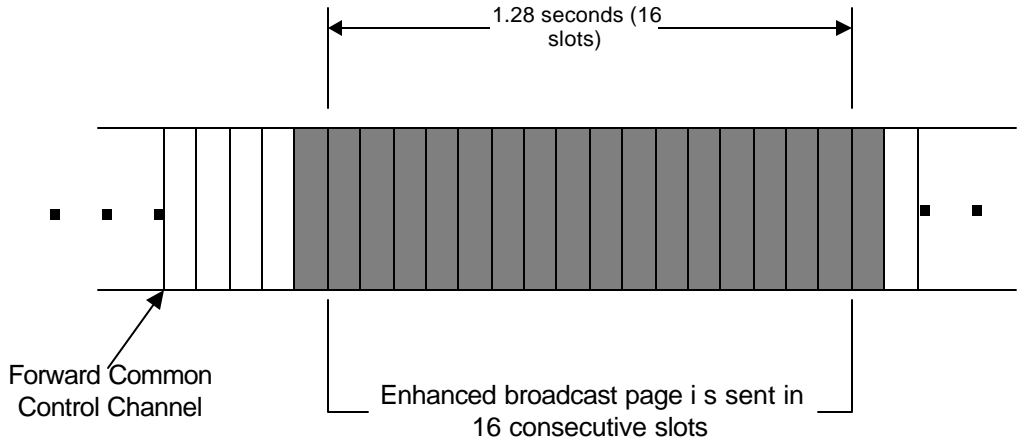


Figure 2.6.2.1.1.3.1-1. Multi-Slot Enhanced Broadcast Paging Example

2.6.2.1.1.3.2 Method 2: Periodic Enhanced Broadcast Paging

According to this method, mobile stations configured to receive broadcast messages monitor a specific broadcast slot (the first slot of a broadcast paging cycle).

One or more enhanced broadcast pages may be transmitted in the first slot of a broadcast paging cycle and/or in the subsequent slot. Each enhanced broadcast page is associated with a subsequent broadcast slot. The broadcast slot for the associated broadcast message is determined according to a time offset specified in the enhanced broadcast page. In addition, a broadcast slot for a repeat of the broadcast message can be specified via a time offset from the slot of the first broadcast message.

2.6.2.1.1.2 Non-Slotted Mode Requirements

A mobile station operating in the non-slotted mode shall monitor the Paging Channel or at least one of the Forward Common Control Channel or the Broadcast Control Channel at all times. If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel (see 2.6.2.1.1.4), the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).

When a mobile station monitors the Paging Channel or the Forward Common Control Channel in any state other than the *Mobile Station Idle State*, it shall operate in the non-slotted mode.

A mobile station monitoring the Paging Channel shall operate in the non-slotted mode when $PACA_S$ is equal to enabled.

A mobile station monitoring the Paging Channel shall operate in the non-slotted mode when $SLOTTED_S$ is equal to NO.

2.6.2.1.1.3 Slotted Mode Requirements

A mobile station monitoring the Paging Channel shall not operate in the slotted mode if any of the of the following conditions are true:

- 1 • SLOTTED_S is equal to NO,
- 2 • Bit 5 of the station class mark is set to '0' (see 2.3.3),
- 3 • PACA_S is equal to enabled, or
- 4 • The mobile station's configuration parameters are not current (see 2.6.2.2).

5 A mobile station monitoring the Forward Common Control Channel shall not operate in the
6 slotted mode if either of the of the following conditions is true:

- 7 • Bit 5 of the station class mark is set to '0' (see 2.3.3), or
- 8 • The mobile station's configuration parameters are not current (see 2.6.2.2).

9 A mobile station monitoring the Forward Common Control Channel with bit 5 of the station
10 class mark is set to '1' shall operate in the slotted mode and shall monitor all Forward
11 Common Control Channel slots if either of the of the following conditions is true:

- 12 • SLOTTED_S is equal to NO, or
- 13 • PACA_S is equal to enabled.

14 During operation in the slotted mode, the mobile station shall ensure that its stored
15 configuration parameter values are current (see 2.6.2.2).

16 If the mobile station declares a loss of the Paging Channel or the Forward Common Control
17 Channel (see 2.6.2.1.1.4), the mobile station shall enter the *System Determination Substate*
18 of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).

19 2.6.2.1.1.3.1 Monitoring Assigned Slots

20 If the mobile station does not support Quick Paging Channel operation or if
21 QPCH_SUPPORTED_S = '0', the mobile station shall monitor the Paging Channel or the
22 Forward Common Control Channel in each of its assigned slots.

23 If the mobile station supports Quick Paging Channel operation and if QPCH_SUPPORTED_S =
24 '1', for each of its assigned slots, the mobile station shall perform the following:

- 25 • The mobile station should check its assigned paging indicators in the complete
26 Quick Paging Channel slot immediately preceding its assigned Paging Channel or
27 Forward Common Control Channel slot, as specified in 2.6.2.1.2.1; the mobile
28 station shall monitor the assigned Paging Channel or Forward Common Control
29 Channel slot if the paging indicators meet the conditions specified in 2.6.2.1.2.2.
- 30 • If the mobile station does not check its assigned paging indicators, the mobile
31 station shall monitor its assigned Paging Channel or Forward Common Control
32 Channel slot.

33 If the mobile station supports Quick Paging Channel operation, the mobile station is
34 configured to receive broadcast messages, BCAST_INDEX_S is not equal to '000', and
35 QPCH_BI_SUPPORTED_S equals '1', then for each of its assigned broadcast slots on the
36 Forward Common Control Channel, the mobile station shall perform the following:

- 1 • The mobile station should check the broadcast indicators in the complete Quick
2 Paging Channel broadcast slot immediately preceding its assigned broadcast slot, as
3 specified in 2.6.2.1.1.3.3.
- 4 • The mobile station should receive its assigned broadcast slot on the Forward
5 Common Control Channel if the broadcast indicators meet the conditions specified
6 in 2.6.2.1.2.1.

7 The mobile station shall monitor each slot following an assigned slot in which the mobile
8 station received a *Universal Page Message* with READ_NEXT_SLOT equal to '1', and shall
9 begin monitoring the Forward Common Control Channel in time to receive the first bit of
10 the slot. If the mobile station is configured to receive broadcast messages, it shall monitor
11 each slot following an assigned slot in which the mobile station received a *Universal Page*
12 *Message* with READ_NEXT_SLOT_BCAST equal to '1', and shall begin monitoring the
13 Forward Common Control Channel in time to receive the first bit of the slot.

14 If SLOTTED_S is equal to NO or PACA_S is equal to enabled, the mobile station may stop
15 monitoring a Forward Common Control Channel slot when Layer 3 receives an address
16 mismatch indication from Layer 2. When the mobile station stops monitoring a Forward
17 Common Control Channel slot when SLOTTED_S is equal to NO or PACA_S is equal to
18 enabled, the mobile station shall begin monitoring the subsequent Forward Common
19 Control Channel slot in time to receive the first bit of the slot.

20 If the mobile station monitors a Paging Channel or Forward Common Control Channel slot,
21 it shall begin monitoring the Paging Channel or the Forward Common Control Channel in
22 time to receive the first bit of the slot. If the mobile station is not configured to receive
23 broadcast addresses, the mobile station shall continue to monitor the Paging Channel or
24 the Forward Common Control Channel until one of the following conditions is satisfied:

- 25 • Layer 3 receives an address mismatch indication from Layer 2; or
- 26 • The mobile station has a class 0 IMSI assigned, all the bits of TMSI_CODE_{S-p} are
27 equal to '1', and the mobile station receives a *General Page Message* with
28 CLASS_0_DONE set to '1'; or
- 29 • The mobile station has a class 1 IMSI assigned, all the bits of TMSI_CODE_{S-p} are
30 equal to '1', and the mobile station receives a *General Page Message* with
31 CLASS_1_DONE set to '1'; or
- 32 • The mobile station has a class 0 IMSI assigned, the bits of TMSI_CODE_{S-p} are not
33 all equal to '1', and the mobile station receives a *General Page Message* with
34 CLASS_0_DONE set to '1' and TMSI_DONE set to '1'; or
- 35 • The mobile station has a class 1 IMSI assigned, the bits of TMSI_CODE_{S-p} are not
36 all equal to '1', and the mobile station receives a *General Page Message* with
37 CLASS_1_DONE set to '1' and TMSI_DONE set to '1'; or

- 1 • The mobile station has a class 0 IMSI assigned, the bits of TMSI_CODE_{S-P} are not
2 all equal to '1', and the mobile station receives a *General Page Message* with
3 CLASS_0_DONE set to '1', ORDERED_TMSIS set to '1' and a record with TMSI_CODE
4 value greater than TMSI_CODE_{S-P}; or
- 5 • The mobile station has a class 1 IMSI assigned, the bits of TMSI_CODE_{S-P} are not
6 all equal to '1', and the mobile station receives a *General Page Message* with
7 CLASS_1_DONE set to '1', ORDERED_TMSIS set to '1' and a record with TMSI_CODE
8 value greater than TMSI_CODE_{S-P}; or
- 9 • The mobile station monitors the assigned slot and the slot following the assigned
10 slot, and the mobile station receives at least one valid message (see 2.2.2.3.2 of [4]).

11 If the mobile station is configured to receive broadcast addresses, the mobile station shall
12 continue to monitor the Paging Channel or the Forward Common Control Channel until
13 one of the preceding conditions is satisfied and should monitor the Paging Channel or the
14 Forward Common Control Channel until it has received a *General Page Message* with
15 BROADCAST_DONE equal to '1' or until Layer 3 receives a broadcast address mismatch
16 indication from Layer 2.

17 The mobile station shall monitor each slot following a broadcast slot in which the mobile
18 station received a *Universal Page Message* with READ_NEXT_SLOT_BCAST equal to '1', and
19 shall begin monitoring the Forward Common Control Channel in time to receive the first
20 bit of the slot.

21 For each broadcast slot monitored to receive broadcast pages or broadcast messages that is
22 not one of its assigned slots, the mobile station should begin monitoring the Paging
23 Channel or the Forward Common Control Channel in the first bit of the broadcast slot. The
24 mobile station should continue to monitor the Paging Channel or the Forward Common
25 Control Channel until one of the following conditions is satisfied:

- 26 • Layer 3 receives a broadcast address mismatch indication from Layer 2; or
- 27 • The mobile station receives a *General Page Message* with BROADCAST_DONE set to
28 '1'; or
- 29 • The mobile station monitors the Paging Channel or the Forward Common Control
30 Channel to receive all messages beginning in the broadcast slot and in the slot
31 following the broadcast slot, and the mobile station receives at least one valid
32 message (see 2.2.2.3.2 of [4]).

33 To determine its assigned slots, the mobile station shall use the hash function specified in
34 2.6.7.1 to select a number, PGSLOT, in the range 0 to 2047 (spanning the maximum slot
35 cycle length, which is 163.84 seconds). The mobile station's assigned slots shall be those
36 slots in which

$$(\lfloor t/4 \rfloor - \text{PGSLOT}) \bmod (16 \times T) = 0,$$

38 where t is the System Time in frames and T is the slot cycle length in units of 1.28
39 seconds given by

$$T = 2^i,$$

where i is the slot cycle index.

For each slot on the Broadcast Control Channel monitored to receive broadcast messages, the mobile station should begin monitoring the Broadcast Control Channel in the first bit of the slot. The mobile station should continue to monitor the Broadcast Control Channel until one of the following conditions is satisfied:

- The mobile station has monitored all frames of a Broadcast Control Channel slot and the frame quality for all of the frames of the slot was insufficient; or
- The mobile station monitors the Broadcast Control Channel slot specified by the enhanced broadcast page and the slot did not contain an SCI bit set to '1' (see [4]).
- The mobile station has received a broadcast *Data Burst Message* having the same BURST_TYPE and broadcast address as the enhanced broadcast page which announced the *Data Burst Message*.

2.6.2.1.1.3.2 Determination of the Slot Cycle Index

If the SID and NID of the current base station (SID_S and NID_S , as stored from the *System Parameters Message* or *ANSI-41 System Parameters Message*) do not match any entry of $SID_NID_LIST_S$, the mobile station shall use a slot cycle index no greater than the smaller of $MAX_SLOT_CYCLE_INDEX_S$ and 1; otherwise, the mobile station shall use a slot cycle index no greater than $SLOT_CYCLE_INDEX_S$ (see 2.6.2.2.1.6).

If the mobile station is directed by the user to modify the preferred slot cycle index ($SLOT_CYCLE_INDEX_P$), the mobile station shall perform parameter-change registration (see 2.6.5.1.6).

2.6.2.1.1.3.3 Slot Cycles for Broadcast Message Transmission

2.6.2.1.1.3.3.1 Slot Cycles for Broadcast Message Transmission on the Paging Channel

Distribution of broadcast messages relies on specially defined Paging Channel slot cycles. The definitions are as follows:

Maximum paging cycle: On the Paging Channel, a maximum paging cycle is a Paging Channel slot cycle (see 2.6.2.1.1.3.1) having a duration of M slots such that:

$$M = 2^i \times 16, 0 \leq i \leq 7$$

where $i = MAX_SLOT_CYCLE_INDEX_S$ as received in the *System Parameters Message*.

The first slot of each maximum paging cycle is any Paging Channel slot in which

$$\lfloor t/4 \rfloor \bmod M = 0,$$

where t represents system time in frames.

Broadcast paging cycle: On the Paging Channel, a broadcast paging cycle is a Paging Channel slot cycle (see 2.6.2.1.1.3.1) having a duration of $B + 3$ slots where:

$$B = 2^i \times 16, 1 \leq i \leq 7$$

where $i = \text{BCAST_INDEX}_S$ as received in the *Extended System Parameters Message*, or set by default when the *Extended System Parameters Message* is not sent.

The first slot of each broadcast paging cycle is any Paging Channel slot in which

$$\lfloor t/4 \rfloor \bmod (B + 3) = 0,$$

where t represents system time in frames.

2.6.2.1.1.3.3.2 Slot Cycles for Broadcast Message Transmission on the Forward Common Control Channel

Distribution of broadcast messages relies on specially defined Forward Common Control Channel slot cycles. The definitions are as follows:

Maximum paging cycle: On the Forward Common Control Channel, a maximum paging cycle is a Forward Common Channel slot cycle (see 2.6.2.1.1.3.1) having a duration of M slots such that:

$$M = 2^i \times 16, 0 \leq i \leq 7$$

where $i = \text{MAX_SLOT_CYCLE_INDEX}_S$ as received in the *MC-RR Parameters Message*.

The first slot of each maximum paging cycle is any Forward Common Control Channel slot in which

$$\lfloor t/4 \rfloor \bmod M = 0,$$

where t represents system time in frames.

Broadcast paging cycle: On the Forward Common Control Channel, a broadcast paging cycle is a Forward Common Control Channel slot cycle (see 2.6.2.1.1.3.1) having a duration of $B + 7$ slots where:

$$B = 2^{1+i} \times 16, 1 \leq i \leq 7$$

where $i = \text{BCAST_INDEX}_S$ as received in the *MC-RR Parameters Message*.

The first slot of each broadcast paging cycle is any Forward Common Control Channel slot in which

$$\lfloor t/4 \rfloor \bmod (B + 7) = 0,$$

where t represents system time in frames.

2.6.2.1.1.3.4 Monitoring Paging Channel Broadcasts

The following requirements apply to mobile stations monitoring the Paging Channel and supporting the reception of broadcast messages.

If $BCAST_INDEX_S$ is equal to '000', the mobile station shall monitor only its assigned Paging Channel slots (see 2.6.2.1.1.3.1).

If $BCAST_INDEX_S$ is not equal to '000', and the mobile station is configured to receive messages addressed to broadcast addresses, the mobile station should also monitor the Paging Channel beginning with the first slot of each broadcast paging cycle (see 2.6.2.1.1.3.3).

If the mobile station receives a broadcast page containing a burst type and broadcast address that the mobile station has been configured to receive (see 2.6.2.3), the mobile station should monitor the slot in which the corresponding broadcast Paging Channel message will be sent, determined as follows:

- The mobile station shall consider a broadcast page to have been received in the paging slot in which the *General Page Message* containing the broadcast page began.
- If $BCAST_INDEX_S$ is not equal to '000', the paging slot containing the broadcast page is defined as the reference slot.
- Let n represent the ordinal number of the broadcast page relative to other broadcast pages that are contained in the same *General Page Message* ($n = 1, 2, 3, \dots$). The mobile station should monitor the Paging Channel slot that occurs $n \times 3$ paging slots after the reference slot.

After receiving a broadcast message or a broadcast page and a corresponding broadcast Paging Channel message when $BCAST_INDEX_S$ is not equal to '000', the mobile station should discard all further broadcast pages and all further broadcast Paging Channel messages containing the same $BURST_TYPE$ and BC_ADDR fields that are received within $4 \times (B + 3)$ paging slots of the first paging slot in the broadcast paging cycle in which the broadcast page or broadcast message was first received. ($B + 3$ is the duration of the broadcast paging cycle as defined in 2.6.2.1.1.3.3).

2.6.2.1.1.3.5 Support of Broadcast Delivery Options on the Paging Channel

A mobile station configured to receive broadcast messages shall support reception of broadcast messages transmitted using Multi-Slot Broadcast Message Transmission (see 3.6.2.4.1.2.1.1).

A mobile station configured to receive broadcast messages shall support reception of broadcast messages transmitted using Periodic Broadcast Paging (see 3.6.2.4.1.2.1.2).

2.6.2.1.1.3.6 Monitoring the Forward Common Control Channel for the Enhanced Broadcast Page

The following requirements apply to mobile stations monitoring the Forward Common Control Channel and supporting the reception of broadcast messages.

1 If BCAST_INDEX_S is equal to '000', the mobile station shall monitor only its assigned Quick
 2 Paging Channel slots or its assigned Forward Common Control Channel slots (see 2.6.2.1.2)
 3 for enhanced broadcast pages.

4 If BCAST_INDEX_S is not equal to '000', and the mobile station is configured to receive
 5 messages addressed to broadcast addresses, the mobile station should also monitor the
 6 Quick Paging Channel broadcast slots or the Forward Common Control Channel broadcast
 7 slots (see 2.6.2.1.2) beginning with the first slot of each broadcast paging cycle.

8 If the mobile station receives an enhanced broadcast page containing a burst type and
 9 broadcast address that the mobile station has been configured to receive, the mobile
 10 station should monitor at least one Broadcast Control Channel slot in which the
 11 corresponding broadcast message will be sent, determined as follows:

- 12 • The mobile station shall monitor the Broadcast Control Channel slot which begins
 13 $40 \text{ ms} \times (1 + \text{TIME_OFFSET})$ later than the beginning of the slot in which the
 14 message containing the enhanced broadcast page began or the Broadcast Control
 15 Channel slot which begins $40 \text{ ms} \times (1 + \text{REPEAT_TIME_OFFSET})$ later than the
 16 Broadcast Control Channel slot in which the first transmission began.

17 After receiving an enhanced broadcast page and a corresponding broadcast message when
 18 BCAST_INDEX_S is not equal to '000', the mobile station should discard all further enhanced
 19 broadcast pages containing the same BURST_TYPE and having the same broadcast address
 20 that are received within $4 \times (B + 7)$ slots of the first slot in the broadcast paging cycle in
 21 which the enhanced broadcast page was received. ($B + 7$ is the duration of the broadcast
 22 paging cycle as defined in 2.6.2.1.1.3.3.1). The mobile station should ignore broadcast
 23 messages for which a corresponding enhanced broadcast page was not received.

24 If the mobile station received an enhanced broadcast page and a corresponding broadcast
 25 message, and the broadcast message announced by a pending enhanced broadcast page
 26 containing the same BURST_TYPE and having the same broadcast address has not yet
 27 been received, the mobile station shall ignore the pending enhanced broadcast page.

28 2.6.2.1.1.3.7 Support of Broadcast Delivery Options on the Forward Common Control 29 Channel/Broadcast Control Channel

30 A mobile station configured to receive broadcast messages shall support reception of
 31 broadcast messages transmitted using Multi-Slot Enhanced Broadcast Paging (see
 32 2.6.2.1.1.3.1).

33 A mobile station configured to receive broadcast messages shall support reception of
 34 broadcast messages transmitted using Periodic Enhanced Broadcast Paging (see
 35 2.6.2.1.1.3.2).

36 2.6.2.1.1.4 Common Channel Supervision

37 The mobile station shall monitor the Paging Channel, the Forward Common Control
 38 Channel, or the Broadcast Control Channel as specified in 2.6.2.1.1. The mobile station
 39 shall set a timer for T_{30m} seconds whenever it begins to monitor the Paging Channel, the

Forward Common Control Channel, or the Broadcast Control Channel. The mobile station shall reset the timer for T_{30m} seconds whenever it gets an indication that a valid message was received on the Paging Channel, the Forward Common Control Channel, or the Broadcast Control Channel, whether addressed to the mobile station or not (see 2.1.2.3.2 of [4]). The mobile station shall disable the timer when it is not monitoring the Paging Channel, the Forward Common Control Channel, or the Broadcast Control Channel. If the timer expires, the mobile station shall declare a loss of the Paging Channel, the Forward Common Control Channel, or the Broadcast Control Channel.

2.6.2.1.2 Quick Paging Channel Monitoring Procedures

2.6.2.1.2.1 Overview

The Quick Paging Channel is divided into 80 ms slots called Quick Paging Channel slots.

The Quick Paging Channel protocol provides for scheduling the transmission of paging indicators for a mobile station in Quick Paging Channel slots assigned to the mobile station. Support of this feature is optional.

The Quick Paging Channel protocol provides for scheduling the transmission of configuration change indicators for mobile stations in Quick Paging Channel slots. Support of this feature is optional.

The Quick Paging Channel protocol provides for scheduling the transmission of broadcast indicators for mobile stations in Quick Paging Channel broadcast slots. Support of this feature is optional.

If the mobile station is operating in the slotted mode and it supports the Quick Paging Channel, and $QPCH_SUPPORTED_S$ is equal to '1', the mobile station monitors paging indicators on the Quick Paging Channel as follows:

The mobile station's assigned Quick Paging Channel slots are offset from its assigned Paging Channel slots or its assigned Forward Common Control Channel slots by 100 ms, as shown in Figure 2.6.2.1.2.1-1. Two paging indicators are assigned to a mobile station in its assigned Quick Paging Channel slot. In the following, t^* is the start time of the mobile station's assigned Paging Channel or Forward Common Control Channel slot. According to the hash function specified in 2.6.7.1, paging indicators are assigned as follows:

- The first paging indicator for the mobile station is assigned between (t^*-100) ms and (t^*-80) ms (marked as 1 in Figure 2.6.2.1.2.1-1) and the second paging indicator is assigned between (t^*-60) ms and (t^*-40) ms (marked as 3 in the figure); or
- The first paging indicator for the mobile station is assigned between (t^*-80) ms and (t^*-60) ms (marked as 2 in the figure) and the second paging indicator is assigned between (t^*-40) ms and (t^*-20) ms (marked as 4 in the figure).

1 If the mobile station is operating in the slotted mode and it supports the Quick Paging
2 Channel, the mobile station can, when performing an idle handoff to a base station whose
3 Paging Channel or Forward Common Control Channel/Broadcast Control Channel has
4 recently been monitored, monitor one or more configuration change indicators.
5 Configuration change indicators are scheduled every 40 ms on the first Quick Paging
6 Channel.

7 If the mobile station is operating in the slotted mode, is configured to receive the broadcast
8 messages, supports the Quick Paging Channel, $BCAST_INDEX_S$ is not equal to '000',
9 $QPCH_SUPPORTED_S$ is equal to '1', and $QPCH_BI_SUPPORTED_S$ is equal to '1', the mobile
10 station monitors broadcast indicators on the Quick Paging Channel as follows:

- 11 • The mobile station's assigned Quick Paging Channel broadcast slots are offset from
12 its assigned Forward Common Control Channel broadcast slots by 100 ms, as shown
13 in Figure 2.6.2.1.2.1-1.
- 14 • The mobile station monitors one or more broadcast indicators in an assigned Quick
15 Paging Channel broadcast slot.

16

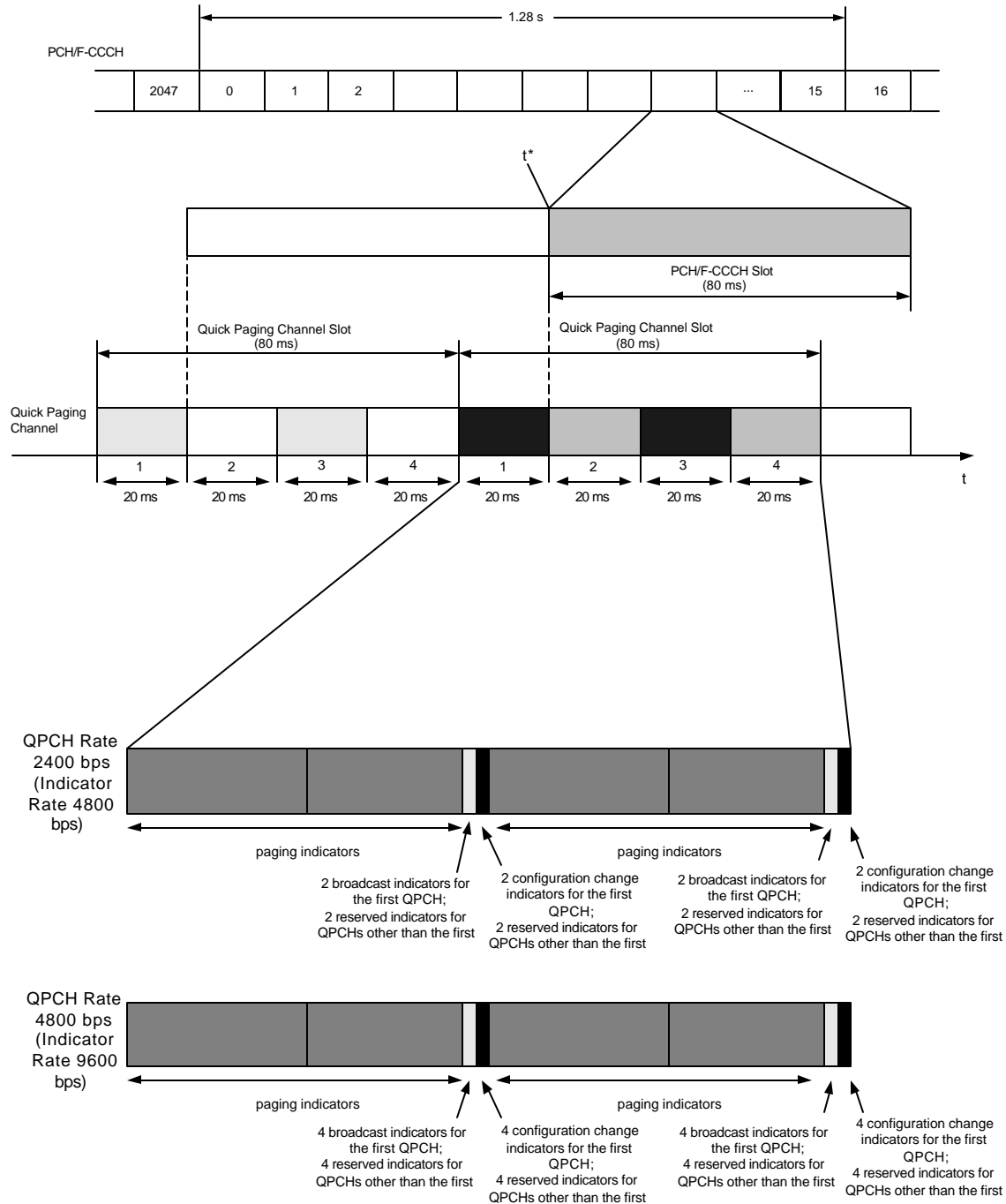


Figure 2.6.2.1.2.1-1. Quick Paging Channel Timeline

2.6.2.1.2.2 Requirements

A mobile station operating in the slotted mode should monitor the paging indicators in the mobile station's assigned Quick Paging Channel slot if all of the following conditions hold:

- The mobile station supports the Quick Paging Channel;
- $QPCH_SUPPORTED_S = '1'$; and
- The mobile station is not monitoring the Paging Channel or the Forward Common Control Channel.

The mobile station's assigned Quick Paging Channel slots shall be those slots in which

$$(\lfloor (t+5)/4 \rfloor - PGSLOT) \bmod (16 \times T) = 0.$$

where t is the System Time in frames, PGSLOT is selected in the range 0 to 2047 by using the hash function specified in 2.6.7.1, and T is the slot cycle length in units of 1.28 seconds such that

$$T = 2^i,$$

and i is the slot cycle index.

To determine the position of the mobile station's two assigned paging indicators relative to the beginning of the mobile station's assigned Quick Paging Channel slot, the mobile station shall use the hash function specified in 2.6.7.1. The R1 and R2 outputs of the hashing algorithm correspond to an indicator bit position relative to the beginning of the Quick Paging Channel slot. The hashing algorithm is so devised that two paging indicators (R1 and R2) for a mobile station will be in the first and third quarter slot or the second and fourth quarter slot.

If the mobile station checks assigned paging indicators, the mobile station shall perform the following:

- If the mobile station detects that one of the paging indicators is set to "OFF", the mobile station need not detect another paging indicator.
- If the mobile station does not detect that at least one of the paging indicators is set to "OFF", the mobile station shall monitor its assigned Paging Channel or Forward Common Control Channel slot immediately following its assigned Quick Paging Channel slot.⁵

When performing an idle handoff to a base station whose Paging Channel or Forward Common Control Channel was previously monitored, a mobile station operating in the

⁵ A case for which the mobile station may not be able to detect that at least one of the paging indicators is set to "OFF" is for a mobile station that misses a part of or its entire Quick Paging Channel slot during overhead information update. In this case, the mobile station monitors its assigned Paging Channel slot.

1 slotted mode should monitor one or more configuration change indicators on the first
2 Quick Paging Channel for the new base station if all of the following conditions hold:

- 3 • The mobile station supports the Quick Paging Channel;
- 4 • The mobile station has knowledge that the new base station supports the Quick
5 Paging Channel;
- 6 • The mobile station has knowledge that the new base station supports configuration
7 change indicators,
- 8 • The mobile station is not monitoring the Paging Channel or the Forward Common
9 Control Channel; and
- 10 • No more than T_{31m} seconds have elapsed since the mobile station last received a
11 valid message on the new Paging Channel or the new Forward Common Control
12 Channel.

13 Before monitoring a configuration change indicator, the mobile station shall perform the
14 following:

- 15 • The mobile station shall set $ASSIGNED_QPAGECH_S$ equal to $QPAGECH_S$, and
- 16 • The mobile station shall set $QPAGECH_S$ equal to 1.

17 Before monitoring a paging indicator subsequent to monitoring a configuration change
18 indicator, the mobile station shall set $QPAGECH_S$ equal to $ASSIGNED_QPAGECH_S$.

19 If the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the bit
20 positions of the mobile station's first pair of configuration change indicators shall be the
21 last two bits in the first 40 ms half of a Quick Paging Channel slot. The bit positions of the
22 mobile station's second pair of configuration change indicators shall be the last two bits in
23 a Quick Paging Channel slot.

24 If the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the bit
25 positions of the mobile station's first four configuration change indicators shall be the last
26 four bits in the first 40 ms half of a Quick Paging Channel slot. The bit positions of the
27 mobile station's second four configuration change indicators shall be the last four bits in a
28 Quick Paging Channel slot.

29 If the mobile station monitors a configuration change indicator and determines that it is
30 set to "OFF", the mobile station can enter or remain in the slotted mode after an idle
31 handoff (see 2.6.2.1.4.2).

32 If a mobile station is operating in the slotted mode and is configured to receive broadcast
33 messages, it should monitor the broadcast indicators in the mobile station's assigned
34 Quick Paging Channel broadcast slot if all of the following conditions hold:

- 35 • The mobile station supports the Quick Paging Channel;
- 36 • $BCAST_INDEX_S$ is not equal to '000'
- 37 • $QPCH_BI_SUPPORTED_S = '1'$; and

- The mobile station is not monitoring the Forward Common Control Channel or the Broadcast Control Channel.

The mobile station's assigned Quick Paging Channel broadcast slots shall be those slots in which

$$\lfloor (t+5)/4 \rfloor \bmod (B + 7) = 0.$$

where t is the System Time in frames, and B is the broadcast paging cycle such that $B = 2^{1+i} \times 16$, $1 \leq i \leq 7$ and $i = \text{BCAST_INDEX}_S$ as received in the *MC-RR Parameters Message*.

The mobile station should monitor one or more broadcast indicators on the Quick Paging Channel. If the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the bit positions of the mobile station's first pair of broadcast indicators shall be the two bits prior to the last two bits in the first 40 ms half of a Quick Paging Channel slot. The bit positions of the mobile station's second pair of broadcast indicators shall be the two bits prior to the last two bits in a Quick Paging Channel slot.

If the Quick Paging Channel data rate 4800 bps (indicator rate is 9600 bps), the bit positions of the mobile station's first four broadcast indicators shall be the four bits prior to the last four bits in the first 40 ms half of a Quick Paging Channel slot. The bit positions of the mobile station's second four broadcast indicators shall be the four bits prior to the last four bits in a Quick Paging Channel slot.

If the mobile station monitors broadcast indicators and determines that they are not set to "OFF", the mobile station should perform the following:

- The mobile station should receive its assigned broadcast slot on the Forward Common Control Channel immediately following its assigned Quick Paging Channel broadcast slot.

2.6.2.1.3 Registration

While in the *Mobile Station Idle State*, the mobile station shall perform the registration procedures specified in 2.6.5.5.2.1.

2.6.2.1.4 Idle Handoff

2.6.2.1.4.1 Pilot Search

An idle handoff occurs when a mobile station has moved from the coverage area of one base station into the coverage area of another base station during the *Mobile Station Idle State*. If the mobile station detects a Pilot Channel signal from another base station that is sufficiently stronger than that of the current base station, the mobile station determines that an idle handoff should occur. When multiple idle handoff candidates are available, the mobile station which supports BCCH should select, if any, the candidate which supports BCCH.

Pilot Channels are identified by their offsets relative to the zero offset pilot PN sequence (see 3.1.3.2.1). Pilot offsets are grouped into sets describing their status with regard to pilot searching.

The following sets of pilot offsets are defined for a mobile station in the *Mobile Station Idle State*. Each pilot offset is a member of only one set.

- Active Set: The pilot offset of the Forward CDMA Channel whose Paging Channel or Forward Common Control Channel is being monitored.
- Neighbor Set: The offsets of the Pilot Channels that are likely candidates for idle handoff. The members of the Neighbor Set are specified in the *Neighbor List Message*, *Extended Neighbor List Message*, and the *General Neighbor List Message* on the Paging Channel, and the *Universal Neighbor List Message* on the Broadcast Control Channel.
- Remaining Set: The set of all possible pilot offsets in the current system (integer multiples of PILOT_INC_S) on the current CDMA Frequency Assignment, excluding the pilots in the Neighbor Set and the Active Set.
- Private Neighbor Set: The offsets of the Pilot Channels for the private systems that are likely candidates for idle handoff. The members of the Private Neighbor Set are specified in the *Private Neighbor List Message*.

The mobile station shall support a Neighbor Set size of at least N_{8m} pilots (see Annex D).

In the *Mobile Station Idle State*, the mobile station shall continuously search for the strongest Pilot Channel signal on the corresponding CDMA Frequency Assignment whenever it monitors the Paging Channel or the Forward Common Control Channel.

The mobile station may search other frequencies and band classes. For example, if a pilot in the Neighbor Set or in the Private Neighbor Set is on a different Frequency Assignment than that of the mobile station, this frequency should be included in the search criteria. Search performance criteria are defined in [11].

This search should be governed by the following:

- Active Set: The search window size for the pilot in the Active Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to SRCH_WIN_A_S .
The mobile station should center the search window for the pilot of the Active Set around the earliest arriving usable multipath component of the pilot. If the mobile station receives a value greater than or equal to 13 for SRCH_WIN_A_R , it may store and use the value 13 in SRCH_WIN_A_S .

- Neighbor Set: The search window size for each pilot in the Neighbor Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to SRCH_WIN_NGHR_S field of the NGHR_REC for the pilot. The mobile station should center the search window for each pilot in the Neighbor Set around the pilot's PN sequence offset plus the corresponding SRCH_OFFSET_NGHR_S (see Table 2.6.6.2.1-2) using timing defined by the mobile station's time reference (see 2.1.5 of [2]). The mobile station should use the SEARCH_PRIORITY field of the NGHR_REC for the corresponding pilot to schedule its neighbor search. If ADD_PILOT_REC_INCL field of the NGHR_REC for the corresponding pilot is equal to '1', the mobile station shall use the information included in the NGHR_PILOT_REC field for searching the neighbor.

If the mobile station supports hopping pilot beacons and the TIMING_INCL field of the NGHR_REC for the corresponding pilot is equal to '1', then the mobile station shall use the information included in the NGHR_TX_OFFSET, NGHR_TX_DURATION, and NGHR_TX_PERIOD fields of the NGHR_REC for the corresponding pilot to schedule the time for searching the neighbor.

- Remaining Set: The search window size for each pilot in the Remaining Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to SRCH_WIN_R_S. The mobile station should center the search window for each pilot in the Remaining Set around the pilot's PN sequence offset using timing defined by the mobile station's time reference (see 2.1.5 of [2]). The mobile station should only search for Remaining Set pilots whose pilot PN sequence offset indices are equal to integer multiples of PILOT_INC_S.
- Private Neighbor Set: The search window size for each pilot in the Private Neighbor Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to SRCH_WIN_PRI_NGHR_S field of the PRI_NGHR_REC for the pilot. The mobile station should center the search window for each pilot in the Private Neighbor Set around the pilot's PN sequence offset using timing defined by the mobile station's time reference (see 2.1.5 of [2]).

If the mobile station determines that one of the Neighbor Set, Private Neighbor Set or Remaining Set Pilot Channel signals is sufficiently stronger (see [11]) than the Pilot Channel of the Active Set, the mobile station should perform an idle handoff as specified in 2.6.2.1.4.2.

A mobile station operating in slotted mode, which is successfully demodulating the Paging Channel or the Forward Common Control Channel, should not perform an idle handoff while it is required to monitor its assigned slot (see 2.6.2.1.1.3.1).

2.6.2.1.4.2 Idle Handoff Procedures

While performing an idle handoff, the mobile station should not begin operating in non-slotted mode after the idle handoff if all of the following conditions hold:

- The mobile station supports the Quick Paging Channel;

- 1 • The mobile station has knowledge that the new base station supports configuration
- 2 change indicators;
- 3 • The mobile station determines that the Quick Paging Channel configuration
- 4 change indicator for the new Quick Paging Channel is set to “OFF” (see 2.6.2.1.2.1);
- 5 and
- 6 • No more than T_{31m} seconds have elapsed since the mobile station last received a
- 7 valid message on the new Paging Channel or Forward Common Control
- 8 Channel/Broadcast Control Channel.

9 Otherwise, the mobile station shall operate in non-slotted mode until the mobile station
 10 has received at least one valid configuration message or mobile station-addressed page on
 11 the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel.
 12 Following the reception of this message the mobile station may resume slotted mode
 13 operation in accordance with 2.6.2.1.1.3. After performing an idle handoff, the mobile
 14 station shall discard all unprocessed messages received on the old Paging Channel or
 15 Forward Common Control Channel/Broadcast Control Channel.

16 If the new base station is listed in NGHBR_REC_LIST for the old base station (see 2.6.2.2.3,
 17 2.6.2.2.7, and 2.6.2.1.4.1), the mobile station shall use the corresponding 3-bit
 18 NGHBR_CONFIG field to determine the actions required to transition to the new base
 19 station. If the new base station is not listed in NGHBR_REC_LIST for the old base station,
 20 the mobile station shall perform the handoff operation using the same procedure as for a
 21 pilot in NGHBR_REC_LIST with the NGHBR_CONFIG field set to ‘011’.

22 If the NGHBR_CONFIG field is ‘000’, the mobile station shall perform the following:

- 23 • The mobile station shall set ACC_MSG_SEQ_S and CURR_ACC_MSG_SEQ to NULL
- 24 (see 2.6.2.2) and shall set PILOT_PN_S to the pilot offset index of the base station
- 25 transmitting the new Paging Channel or Forward Common Control
- 26 Channel/Broadcast Control Channel.
- 27 • If the mobile station has not stored configuration parameters for the new Paging
- 28 Channel or Forward Common Control Channel/Broadcast Control Channel or if the
- 29 stored information is not current, the mobile station shall perform the following:
 - 30 - If the mobile station has monitored the Paging Channel before the idle handoff,
 - 31 the mobile station shall set CONFIG_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S,
 - 32 NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
 - 33 GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S,
 - 34 EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S,
 - 35 EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
 - 36 USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.

- 1 - If the mobile station has monitored the Forward Common Control
2 Channel/Broadcast Control Channel before the idle handoff, the mobile station
3 shall set CONFIG_MSG_SEQ_S, A41_SYS_PAR_MSG_SEQ_S,
4 UNI_NGHBR_LST_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S,
5 EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
6 USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.
- 7 • Otherwise (if the stored information for the new Paging Channel or the Forward
8 Common Control Channel/Broadcast Control Channel is current), the mobile
9 station shall set CONFIG_MSG_SEQ_S to the stored information for the new Paging
10 Channel or Forward Common Control Channel/Broadcast Control Channel and the
11 mobile station shall set NGHBR_REC_LIST to the stored information for the new
12 Paging Channel or the new Forward Common Control Channel/Broadcast Control
13 Channel.
- 14 • If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in
15 NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and
16 CDMACH_S respectively, the mobile station shall set CDMABAND_S to
17 NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA Channel.
18 The mobile station shall begin monitoring the Paging Channel or the Forward
19 Common Control Channel/Broadcast Control Channel of the new base station,
20 using the same code channel.
- 21 • If PACA_S is equal to enabled, the mobile station shall enter the *Update Overhead*
22 *Information Substate of the System Access State* (see 2.6.3) with an origination
23 indication within T_{33m} seconds to re-originate the PACA call using the new base
24 station.
- 25 If the NGHBR_CONFIG field is '001', the mobile station shall perform the following:
- 26 • The mobile station shall set ACC_MSG_SEQ_S and CURR_ACC_MSG_SEQ to NULL
27 and shall set PILOT_PN_S to the pilot offset index of the base station transmitting the
28 new Paging Channel.
- 29 • If the stored information for any of the Paging Channel of the new base station is
30 current, the mobile station shall perform the following:
- 31 - The mobile station shall use the hash algorithm specified in 2.6.7.1 to select a
32 new Paging Channel number in the range 1 to PAGE_CHAN_S, where
33 PAGE_CHAN_S is the value stored for the Paging Channel whose stored
34 information is current. The mobile station shall store the new Paging Channel
35 number as PAGECH_S. The mobile station shall perform the following:

- 1 + If the mobile station has not stored configuration parameters for the new
2 Paging Channel, or if the stored parameters are not current (see 2.6.2.2),
3 the mobile station shall set CONFIG_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S,
4 NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
5 GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S,
6 EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S,
7 PRI_NGHBR_LST_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S,
8 EXT_CHAN_LST_MSG_SEQ_S, and GLOB_SERV_REDIR_MSG_SEQ_S to NULL.

- 9 + Otherwise (if the stored information for the new Paging Channel is current),
10 the mobile station shall set CONFIG_MSG_SEQ_S to the stored information for
11 the new Paging Channel and set NGHBR_REC_LIST to the stored
12 information for the new Paging Channel.

- 13 - If the mobile station has monitored the Forward Common Control
14 Channel/Broadcast Control Channel before the idle handoff, the mobile station
15 shall set Paging Channel data rate, PRAT_S = '00'.

- 16 - If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in
17 NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and
18 CDMACH_S respectively, the mobile station shall set CDMABAND_S to
19 NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA
20 Channel. The mobile station shall begin monitoring the new Paging Channel of
21 the new base station.

- 22 • Otherwise (none of the Paging Channel stored information, if any, of the new base
23 station are current), the mobile station shall perform the following:
 - 24 - The mobile station shall set CONFIG_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S,
25 NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
26 GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S,
27 EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S,
28 EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
29 USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.

 - 30 - If the mobile station has monitored the Forward Common Control
31 Channel/Broadcast Control Channel before the idle handoff, the mobile station
32 shall set Paging Channel data rate, PRAT_S = '00'.

1 - The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the Primary
 2 Paging Channel. If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new
 3 base station in NGHBR_REC_LIST of the old base station is not equal to
 4 CDMABAND_S and CDMACH_S respectively, the mobile station shall set
 5 CDMABAND_S to NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the
 6 new CDMA Channel. The mobile station shall begin monitoring the Primary
 7 Paging Channel of the new base station.

8 • If PACA_S is equal to enabled, the mobile station shall enter the *Update Overhead*
 9 *Information Substate* of the *System Access State* (see 2.6.3) with an origination
 10 indication within T_{33m} seconds to re-originate the PACA call using the new base
 11 station.

12 If the NGHBR_CONFIG field is '010', the mobile station shall perform the following:

13 • The mobile station shall set ACC_MSG_SEQ_S and CURR_ACC_MSG_SEQ to NULL
 14 and shall set PILOT_PN_S to the pilot offset index of the base station transmitting the
 15 new Paging Channel or Forward Common Control Channel/Broadcast Control
 16 Channel.

17 • If the mobile station has monitored the Paging Channel before the idle handoff, the
 18 mobile station shall perform the following:

19 - If the stored information for any of the Paging Channel of the new base station
 20 is current, the mobile station shall perform the following:

21 + The mobile station shall use the hash algorithm specified in 2.6.7.1 to
 22 select a new Paging Channel number in the range 1 to PAGE_CHAN_S, where
 23 PAGE_CHAN_S is the value stored for the Paging Channel whose stored
 24 information is current. The mobile station shall store the new Paging
 25 Channel number as PAGECH_S. The mobile station shall perform the
 26 following:

27 o If the mobile station has not stored configuration parameters for the new
 28 Paging Channel, or if the stored parameters are not current (see
 29 2.6.2.2), the mobile station shall set CONFIG_MSG_SEQ_S, SYS_PAR-
 30 _MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
 31 GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S,
 32 EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S,
 33 PRI_NGHBR_LST_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S,
 34 EXT_CHAN_LST_MSG_SEQ_S, and GLOB_SERV_REDIR_MSG_SEQ_S to
 35 NULL.

Otherwise (if the stored information for the new Paging Channel is current), the mobile station shall set CONFIG_MSG_SEQ_S to the stored information for the new Paging Channel and set NGHBR_REC_LIST to the stored information for the new Paging Channel.

+ If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and CDMACH_S of the old base station respectively, the mobile station shall set CDMABAND_S to NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA Channel. Otherwise, the mobile station shall set CDMACH_S as follows:

o If the *Extended CDMA Channel List Message* is being sent on the old base station, set CDMACH_S to the first CDMA Channel given in the *Extended CDMA Channel List Message* for the old base station.

o Otherwise, set CDMACH_S to the first CDMA Channel given in the *CDMA Channel List Message* for the old base station.

Then the mobile station shall tune to the new CDMA channel and begin monitoring the new Paging Channel of the new base station.

- Otherwise (none of the Paging Channel stored information, if any, of the new base station are current), the mobile station shall perform the following:

+ The mobile station shall set CONFIG_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.

+ The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the Primary Paging Channel. If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and CDMACH_S of the old base station respectively, the mobile station shall set CDMABAND_S to NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA Channel. Otherwise, the mobile station shall set CDMACH_S as follows:

o If the *Extended CDMA Channel List Message* is being sent on the old base station, set CDMACH_S to the first CDMA Channel given in the *Extended CDMA Channel List Message* for the old base station.

- o Otherwise, set CDMACH_S to the first CDMA Channel given in the *CDMA Channel List Message* for the old base station.

Then the mobile station shall tune to the new CDMA channel and begin monitoring the Primary Paging Channel of the new base station.

- If the mobile station has monitored the Forward Common Control Channel/Broadcast Control Channel before the idle handoff, the mobile station shall perform the following:
 - If the mobile station has not stored configuration parameters for the new Forward Common Control Channel/Broadcast Control Channel, or if the stored information is not current (see 2.6.2.2), the mobile station shall set CONFIG_MSG_SEQ_S, A41_SYS_PAR_MSG_SEQ_S, UNI_NGHBR_LST_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S, EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.
 - Otherwise (if the stored information for the new Forward Common Control Channel/Broadcast Control Channel is current), the mobile station shall set NGHBR_REC_LIST to the stored information for the new Forward Common Control Channel/Broadcast Control Channel.
 - If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and CDMACH_S of the old base station respectively, the mobile station shall set CDMABAND_S to NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA Channel. Otherwise, the mobile station shall set CDMACH_S to the first CDMA Channel given in the *Extended CDMA Channel List Message* for the old base station and tune to the new CDMA channel.
 - Then the mobile station shall begin monitoring the Broadcast Control Channel/Forward Common Control Channel of the new base station.
- If PACA_S is equal to enabled, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3) with an origination indication within T_{33m} seconds to re-originate the PACA call using the new base station.

If the NGHBR_CONFIG field is '011', the mobile station shall perform the following:

- Enter the *System Determination Substate* of the *Mobile Station Initialization State* with a new system indication (see 2.6.1.1).

If the NGHBR_CONFIG field is '100', the mobile station shall perform the following:

- 1 • The mobile station shall set ACC_MSG_SEQ_S and CURR_ACC_MSG_SEQ to NULL
2 (see 2.6.2.2) and shall set PILOT_PN_S to the pilot offset index of the base station
3 transmitting the new Forward Common Control Channel/Broadcast Control
4 Channel.
- 5 • If the mobile station has not stored configuration parameters for the new Forward
6 Common Control Channel/Broadcast Control Channel or if the stored information
7 is not current, the mobile station shall perform the following:
 - 8 - The mobile station shall set CONFIG_MSG_SEQ_S, A41_SYS_PAR_MSG_SEQ_S,
9 UNI_NGHBR_LST_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S,
10 EXT_GLOB_SERV_REDIR_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
11 USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S to NULL.
 - 12 - After performing the idle handoff to the new base station, the mobile station
13 shall monitor the new Broadcast Control Channel and update the configuration
14 parameters before attempting to monitor the new Forward Common Control
15 Channel.
- 16 • Otherwise (if the stored information for the new Forward Common Control
17 Channel/Broadcast Control Channel is current), the mobile station shall set
18 CONFIG_MSG_SEQ_S to the stored information for the new Forward Common Control
19 Channel/Broadcast Control Channel and the mobile station shall set
20 NGHBR_REC_LIST to the stored information for the new Forward Common Control
21 Channel/Broadcast Control Channel.
- 22 • If the associated NGHBR_BAND_S or NGHBR_FREQ_S of the new base station in
23 NGHBR_REC_LIST of the old base station is not equal to CDMABAND_S and
24 CDMACH_S respectively, the mobile station shall set CDMABAND_S to
25 NGHBR_BAND_S, CDMACH_S to NGHBR_FREQ_S, and tune to the new CDMA Channel.
26 The mobile station shall begin monitoring the Forward Common Control
27 Channel/Broadcast Control Channel of the new base station, using the same code
28 channel.
- 29 • If PACA_S is equal to enabled, the mobile station shall enter the *Update Overhead*
30 *Information Substate* of the *System Access State* (see 2.6.3) with an origination
31 indication within T_{33m} seconds to re-originate the PACA call using the new base
32 station.

33 2.6.2.1.5 Broadcast Control Channel Monitoring

34 2.6.2.1.5.1 General Overview

35 The Broadcast Control Channel is divided into 40, 80, or 160 ms slots called the Broadcast

Control Channel slots (see 3.1.3.5 in [2]). The Broadcast Control Channel will be used for control messages. Support for the Broadcast Control Channel is mandatory for mobile stations. The Broadcast Control Channel will operate with the Forward Common Control Channels and the Quick Paging Channels, or only with the Forward Common Control Channels.

After a mobile station acquires and synchronizes with a new base station that supports a Broadcast Control Channel, the mobile station monitors the Broadcast Control Channel to receive overhead information. Once the mobile station has received the updated overhead information from the Broadcast Control Channel, the mobile station may begin to monitor a Forward Common Control Channel or a Quick Paging Channel, if it is supported.

2.6.2.1.5.2 Requirements

If the base station supports the Broadcast Control Channel, the mobile station shall monitor the Broadcast Control Channel for overhead messages. If the mobile station determines that the CONFIG_MSG_SEQ has changed, the mobile station shall monitor the Broadcast Control Channel to receive updated overhead messages.

2.6.2.1.6 System Reselection Procedures

If the mobile station supports more than one operating mode or the Remaining Set/Neighbor Set contains pilots on frequencies different from the current frequency, the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system reselection indication (see 2.6.1.1) if all of the following are true:

- RESELECT_INCLUDED_S is equal to '1';

- The following inequality is satisfied:

$$20 \times \log_{10} (E_c/I_o) > EC_IO_THRESH_S$$

where E_c/I_o is the measured E_c/I_o of the active pilot; and

- The following inequality is satisfied:

$$pilot_power < EC_THRESH_S - 115$$

where $pilot_power$ (dBm/1.23 MHz) = $10 \times \log_{10} (PS)$ (dB) + mean input power

(dBm/1.23 MHz) and PS is the strength of the active pilot, as specified in 2.6.6.2.2.

2.6.2.1.7 Slotted Timer Expiration

Upon expiration of the slotted T_{MS} Slotted timer, the mobile station shall disable the timer and set SLOTTED_S to YES.

2.6.2.2 Response to Overhead Information Operation

The overhead messages on the Broadcast Control Channel are:

- 1 • *ANSI-41 System Parameters Message*
- 2 • *MC-RR Parameters Message*
- 3 • *Enhanced Access Parameters Message*
- 4 • *Universal Neighbor List Message*
- 5 • *User Zone Identification Message*
- 6 • *Private Neighbor List Message*
- 7 • *Extended Global Service Redirection Message*
- 8 • *Extended CDMA Channel List Message*
- 9 • *ANSI-41 RAND Message*

10 The overhead messages on the Paging Channel are:

- 11 • *System Parameters Message*
- 12 • *Access Parameters Message*
- 13 • *Neighbor List Message*
- 14 • *CDMA Channel List Message*
- 15 • *Extended System Parameters Message*
- 16 • *Global Service Redirection Message*
- 17 • *Extended Neighbor List Message*
- 18 • *General Neighbor List Message*
- 19 • *User Zone Identification Message*
- 20 • *Private Neighbor List Message*
- 21 • *Extended Global Service Redirection Message*
- 22 • *Extended CDMA Channel List Message*

23 The *Response to Overhead Information Operation* is performed whenever the mobile station
 24 receives an overhead message. The mobile station updates internally stored information
 25 from the received message's data fields.

26 Configuration parameters and access parameters are received in the configuration
 27 messages and the *Access Parameters Message* or the *Enhanced Access Parameters Message*.

28 The configuration messages on the Broadcast Control Channel are:

- 29 • *ANSI-41 System Parameters Message*
- 30 • *MC-RR Parameters Message*
- 31 • *Universal Neighbor List Message*
- 32 • *User Zone Identification Message*
- 33 • *Private Neighbor List Message*

- *Extended Global Service Redirection Message*
- *Extended CDMA Channel List Message*

The configuration messages on the Paging Channel are:

- *System Parameters Message*
- *Neighbor List Message*
- *CDMA Channel List Message*
- *Extended System Parameters Message*
- *Global Service Redirection Message*
- *Extended Neighbor List Message*
- *General Neighbor List Message*
- *User Zone Identification Message*
- *Private Neighbor List Message*
- *Extended Global Service Redirection Message*
- *Extended CDMA Channel List Message*

Associated with the set of configuration messages sent on each Paging Channel or Broadcast Control Channel is a configuration message sequence number (CONFIG_MSG_SEQ). When the contents of one or more of the configuration messages change, the configuration message sequence number is incremented. For each of the configuration messages received, the mobile station stores the configuration message sequence number contained in the configuration message (A41_SYS_PAR_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S, NGHBR_LIST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, UNI_NGHBR_LST_MSG_SEQ_S, CHAN_LIST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_GLOB_SERV_REDIR_MSG_SEQ_S, or PRI_NGHBR_LST_MSG_SEQ_S). The mobile station also stores the most recently received configuration message sequence number (CONFIG_MSG_SEQ_S) contained in any message (see 2.6.2.2.1, 2.6.2.2.3, 2.6.2.2.4, 2.6.2.2.5, 2.6.2.2.6, 2.6.2.2.7, 2.6.2.2.8, 2.6.2.2.9, 2.6.2.2.10, 2.6.2.2.11, 2.6.2.2.12, 2.6.2.2.13, 2.6.2.2.14, 2.6.2.2.17, and 2.6.2.3). The mobile station examines the stored values of the configuration message sequence numbers to determine whether the configuration parameters stored by the mobile station are current.

The field EXT_SYS_PARAMETER in the *System Parameters Message*, when set equal to '0', indicates that the base station is not sending the *Extended System Parameters Message*. When the mobile station receives the *System Parameters Message* with the EXT_SYS_PARAMETER field set equal to '0', the mobile station shall set EXT_SYS_PAR_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *Extended System Parameters Message* is current.

The field GEN_NGBR_LST in the *System Parameters Message*, when set equal to '0', indicates that the base station is not sending the *General Neighbor List Message*. When the mobile station receives the *System Parameters Message* with the GEN_NGBR_LST field set equal to '0', the mobile station shall set the GEN_NGBR_LST_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *General Neighbor List Message* is current.

The field EXT_NGBR_LST in the *System Parameters Message*, when set equal to '0', indicates that the base station is not sending the *Extended Neighbor List Message*. When the mobile station receives the *System Parameters Message* with the EXT_NGBR_LST field set equal to '0', the mobile station shall set EXT_NGBR_LST_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *Extended Neighbor List Message* is current.

The field GLOBAL_REDIRECT in the *System Parameters Message*, when set equal to '0', indicates that the base station is not sending the *Global Service Redirection Message*. When the mobile station receives the *System Parameters Message* with the GLOBAL_REDIRECT field set equal to '0', the mobile station shall set GLOB_SERV_REDIR_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *Global Service Redirection Message* is current.

The field EXT_GLOBAL_REDIRECT in the *System Parameters Message* or *MC-RR Parameters Message*, when set equal to '0', indicates that the base station is not sending the *Extended Global Service Redirection Message*. When the mobile station receives the *System Parameters Message* or *MC-RR Parameters Message* with the EXT_GLOBAL_REDIRECT field set equal to '0', the mobile station shall set EXT_GLOB_SERV_REDIR_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *Extended Global Service Redirection Message* is current.

The field USER_ZONE_ID in the *System Parameters Message* or *MC-RR Parameters Message*, when set equal to '0', indicates that the base station is not sending the *User Zone Identification Message*. When the mobile station receives the *System Parameters Message* or *MC-RR Parameters Message* with the USER_ZONE_ID field set equal to '0', the mobile station shall set USER_ZONE_ID_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *User Zone Identification Message* is current.

The field PRI_NGHBR_LIST in the *System Parameters Message* or *MC-RR Parameters Message*, when set equal to '0', indicates that the base station is not sending the *Private Neighbor List Message*. When the mobile station receives the *System Parameters Message* or *MC-RR Parameters Message* with the PRI_NGHBR_LIST field set equal to '0', the mobile station shall set PRI_NGHBR_LIST_MSG_SEQ_S to CONFIG_MSG_SEQ_S to indicate that the *Private Neighbor List Message* is current.

The configuration message sequence number is also included in the *General Page Message*. This allows the mobile station to determine whether the stored configuration parameters are current without waiting for a configuration message.

Access Parameters Messages or *Enhanced Access Parameters Messages* are independently sequence-numbered by the ACC_MSG_SEQ field. The mobile station stores the most

recently received *Access Parameters Message* or *Enhanced Access Parameters Messages* sequence number (ACC_MSG_SEQ_S).

Paging Channels, Broadcast Control Channels, and Forward Common Control Channels shall be considered different if they are transmitted by different base stations, if they are transmitted on different code channels, or if they are transmitted on different CDMA Channels. Configuration and access parameters from one Paging Channel or Broadcast Control Channel shall not be used while monitoring a different Paging Channel or Broadcast Control Channel/Forward Common Control Channel except for registration and authentication parameters while the mobile station is performing an access probe handoff or access handoff. The mobile station shall ignore any overhead message whose PILOT_PN_r field is not equal to the pilot offset index (PILOT_PN_S) of the base station whose Paging Channel or Broadcast Control Channel is being monitored.

The mobile station may store the configuration parameters from Paging Channels or Broadcast Control Channel it has recently monitored. When a mobile station starts monitoring a Paging Channel or a Broadcast Control Channel/Forward Common Control Channel that it has recently monitored, the mobile station can determine whether the stored parameters are current by examining the CONFIG_MSG_SEQ_S in a configuration message or a page message.

The mobile station shall use a special value, NULL, to be stored in place of sequence numbers for messages that have not been received or are marked as not current. The special value NULL shall be unequal to any valid message sequence number.

The mobile station shall consider the stored configuration parameters to be current only if all of the following conditions are true:

- If the mobile station is monitoring the Paging Channel, all stored configuration message sequence numbers (SYS_PAR_MSG_SEQ_S, NGHBR_LIST_MSG_SEQ_S, EXT_NGHBR_LIST_MSG_SEQ_S, CHAN_LIST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S, GEN_NGHBR_LIST_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_GLOB_SERV_REDIR_MSG_SEQ_S and GLOB_SERV_REDIR_MSG_SEQ_S) are equal to CONFIG_MSG_SEQ_S; and
- If the mobile station is monitoring the Forward Common Control Channel/Broadcast Control Channel, all stored configuration message sequence numbers (A41_SYS_PAR_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S, UNI_NGHBR_LST_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S) are equal to CONFIG_MSG_SEQ_S; and
- CONFIG_MSG_SEQ_S is not equal to NULL; and

- No more than T_{31m} seconds (see Annex D) have elapsed since the mobile station last received a valid message on the Paging Channel or the Broadcast Control Channel/Forward Common Control Channel for which the parameters were stored.

If the configuration parameters are not current, the mobile station shall process the stored parameters upon receipt of the configuration messages as described in 2.6.2.2.1, 2.6.2.2.3, 2.6.2.2.4, 2.6.2.2.5, 2.6.2.2.6, 2.6.2.2.7, 2.6.2.2.8, 2.6.2.2.9, 2.6.2.2.10, 2.6.2.2.11, 2.6.2.2.12, 2.6.2.2.13, 2.6.2.2.14, and 2.6.2.2.17.

2.6.2.2.1 System Parameters Message

Whenever a *System Parameters Message* is received on the Paging Channel, the configuration message sequence number, $CONFIG_MSG_SEQ_r$, shall be compared to that stored in $SYS_PAR_MSG_SEQ_s$. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as described in 2.6.2.2.1.1, 2.6.2.2.1.2, 2.6.2.2.1.3, 2.6.2.2.1.4, 2.6.2.2.1.5, and 2.6.2.2.1.6.

If $PAGE_CHAN$, REG_PRD , $BASE_LAT$, $BASE_LONG$, or PWR_REP_THRESH are not within the valid ranges specified in 3.7.2.3.2.1, then the mobile station shall ignore the *System Parameters Message* that contains them.

If $BAND_CLASS$ is equal to '00001' and if either $EXT_SYS_PARAMETERS_r$ is not equal to '1' or $EXT_NGHBR_LST_r$ is not equal to '1', or both, the mobile station shall ignore the *System Parameters Message* containing these fields.

2.6.2.2.1.1 Stored Parameters

The mobile station shall store the following parameters:

- Configuration message sequence number
($CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r$,
 $SYS_PAR_MSG_SEQ_s = CONFIG_MSG_SEQ_r$)
- Base station identification ($BASE_ID_s = BASE_ID_r$)
- Base station class ($BASE_CLASS_s = BASE_CLASS_r$)
- Maximum slot cycle index
($MAX_SLOT_CYCLE_INDEX_s = MAX_SLOT_CYCLE_INDEX_r$)
- Home registration indicator ($HOME_REG_s = HOME_REG_r$)
- SID roamer registration indicator ($FOR_SID_REG_s = FOR_SID_REG_r$)
- NID roamer registration indicator ($FOR_NID_REG_s = FOR_NID_REG_r$)
- Power-up registration indicator ($POWER_UP_REG_s = POWER_UP_REG_r$)
- Power-down registration indicator ($POWER_DOWN_REG_s = POWER_DOWN_REG_r$)

- 1 • Parameter-change registration indicator ($\text{PARAMETER_REG}_S = \text{PARAMETER_REG}_T$)
- 2 • Search window size for the Active Set and Candidate Set
- 3 ($\text{SRCH_WIN_A}_S = \text{SRCH_WIN_A}_T$)
- 4 • Search window size for the Neighbor Set ($\text{SRCH_WIN_N}_S = \text{SRCH_WIN_N}_T$)
- 5 • Search window size for the Remaining Set ($\text{SRCH_WIN_R}_S = \text{SRCH_WIN_R}_T$)
- 6 • Maximum age for retention of Neighbor Set members
- 7 ($\text{NGHBR_MAX_AGE}_S = \text{NGHBR_MAX_AGE}_T$)
- 8 • Power control reporting threshold ($\text{PWR_REP_THRESH}_S = \text{PWR_REP_THRESH}_T$)
- 9 • Power control reporting frame count ($\text{PWR_REP_FRAMES}_S = \text{PWR_REP_FRAMES}_T$)
- 10 • Threshold report mode indicator
- 11 ($\text{PWR_THRESH_ENABLE}_S = \text{PWR_THRESH_ENABLE}_T$)
- 12 • Periodic report mode indicator ($\text{PWR_PERIOD_ENABLE}_S = \text{PWR_PERIOD_ENABLE}_T$).
- 13 • Power report delay ($\text{PWR_REP_DELAY}_S = \text{PWR_REP_DELAY}_T$)
- 14 • Pilot detection threshold ($\text{T_ADD}_S = \text{T_ADD}_T$)
- 15 • Pilot drop threshold ($\text{T_DROP}_S = \text{T_DROP}_T$)
- 16 • Active Set versus Candidate Set comparison threshold ($\text{T_COMP}_S = \text{T_COMP}_T$)
- 17 • Drop timer value ($\text{T_TDROP}_S = \text{T_TDROP}_T$)
- 18 • *Extended System Parameters Message* sent
- 19 ($\text{EXT_SYS_PARAMETER}_S = \text{EXT_SYS_PARAMETER}_T$)
- 20 • *Global Service Redirection Message* sent ($\text{GLOBAL_REDIRECT}_S = \text{GLOBAL_REDIRECT}_T$)
- 21 • *Extended Global Service Redirection Message* sent
- 22 ($\text{EXT_GLOBAL_REDIRECT}_S = \text{EXT_GLOBAL_REDIRECT}_T$)
- 23 • *Extended Neighbor List Message* sent
- 24 ($\text{EXT_NGHBR_LST}_S = \text{EXT_NGHBR_LST}_T$)
- 25 • *General Neighbor List Message* sent
- 26 ($\text{GEN_NGHBR_LST}_S = \text{GEN_NGHBR_LST}_T$)
- 27 • *User Zone Identification Message* sent
- 28 ($\text{USER_ZONE_ID}_S = \text{USER_ZONE_ID}_T$)
- 29 • *Private Neighbor List Message* sent
- 30 ($\text{PRI_NGHBR_LST}_S = \text{PRI_NGHBR_LST}_T$)
- 31 • *Extended CDMA Channel List Message* sent
- 32 ($\text{EXT_CHAN_LIST}_S = \text{EXT_CHAN_LIST}_T$)

The mobile station shall also store the following parameters if the mobile station is not in the *Origination Attempt Substate* or *Page Response Substate*:

- System identification ($SID_S = SID_T$)
- Network identification ($NID_S = NID_T$)
- Registration zone ($REG_ZONE_S = REG_ZONE_T$)
- Number of registration zones to be retained ($TOTAL_ZONES_S = TOTAL_ZONES_T$)
- Zone timer length ($ZONE_TIMER_S = ZONE_TIMER_T$)
- Multiple SID storage indicator ($MULT_SIDS_S = MULT_SIDS_T$)
- Multiple NID storage indicator ($MULT_NIDS_S = MULT_NIDS_T$)
- Registration period ($REG_PRD_S = REG_PRD_T$)
- Base station latitude ($BASE_LAT_S = BASE_LAT_T$)
- Base station longitude ($BASE_LONG_S = BASE_LONG_T$)
- Registration distance ($REG_DIST_S = REG_DIST_T$)

If $EXT_SYS_PARAMETER_S$ is equal to '0', then the mobile station shall perform the following:

- Set $EXT_SYS_PAR_MSG_SEQ_S$ to $CONFIG_MSG_SEQ_S$,
- Set $BCAST_INDEX_S$ to $MAX_SLOT_CYCLE_INDEX_S$,
- Set $IMSI_O$ to $IMSI_M$ by setting $IMSI_O_S_S$ to $IMSI_M_S_P$ (i.e., setting $IMSI_O_S1_S$ to $IMSI_M_S1_P$ and $IMSI_O_S2_S$ to $IMSI_M_S2_P$), MCC_O_S to MCC_M_P , $IMSI_O_11_12_S$ to $IMSI_M_11_12_P$, and $IMSI_O_ADDR_NUM_S$ to $IMSI_M_ADDR_NUM_P$,
- Set $RESELECT_INCLUDED_S$ to '0',
- Set P_REV_S to '00000011' for Band Class 0 or P_REV_S to '00000001' for Band Class 1, and
- Set $P_REV_IN_USE_S$ to the lesser value of P_REV_S and $MOB_P_REV_P$ of the current band class.

If $EXT_CHAN_LIST_S$ is equal to '0', then the mobile station shall set $EXT_CHAN_LST_MSG_SEQ_S$ to $CONFIG_MSG_SEQ_S$.

If $GLOBAL_REDIRECT_S$ is equal to '0', then the mobile station shall set $GLOB_SERV_REDIR_MSG_SEQ_S$ to $CONFIG_MSG_SEQ_S$.

If $EXT_NGHBR_LST_S$ is equal to '0', then the mobile station shall set $EXT_NGHBR_LST_MSG_SEQ_S$ to $CONFIG_MSG_SEQ_S$.

1 If GEN_NGHBR_LST_S is equal to '0', then the mobile station shall perform the following:

- 2 • Set GEN_NGHBR_LST_MSG_SEQ_S to CONFIG_MSG_SEQ_S.
- 3 • Set the SRCH_WIN_NGHBR field of NGHBR_REC to SRCH_WIN_N_S for all entries.
- 4 • Set the SRCH_OFFSET_NGHBR field of NGHBR_REC to '000' for all entries.
- 5 • Set the TIMING_INCL field of NGHBR_REC to '0' for all entries.
- 6 • Set NUM_ANALOG_NGHBR_S to '000' and ANALOG_NGHBR_LIST to NULL.
- 7 • If EXT_NGHBR_LST_S is equal to '0':
 - 8 – Set the SEARCH_PRIORITY field of the NGHBR_REC to '10' (high) for all entries.
 - 9 – Set the NGHBR_BAND field of the NGHBR_REC to CDMABAND_S for all entries.
 - 10 – Set the NGHBR_FREQ field of the NGHBR_REC to CDMACH_S for all entries.

11 If GEN_NGHBR_LST_S is equal to '1', GEN_NGHBR_LST_MSG_SEQ_S is equal to
 12 CONFIG_MSG_SEQ_S, and SETTING_SEARCH_WIN is equal to '1', the mobile station shall
 13 perform the following:

- 14 • Set the SRCH_WIN_NGHBR field of each NGHBR_REC to SEARCH_WIN_N_S for all
 15 NGHBR_SET_SIZE_S entries.
- 16 • Set SETTING_SEARCH_WIN to '0'.

17 If USER_ZONE_ID_S is equal to '0', then the mobile station shall perform the following:

- 18 • Set USER_ZONE_ID_MSG_SEQ_S to CONFIG_MSG_SEQ_S.
- 19 • Set the UZID field of the UZ_REC to '0000000000000000' for all entries.
- 20 • Set the UZ_REV field of the UZ_REC to '0000' for all entries.
- 21 • Set the TEMP_SUB field of the UZ_REC to '0' for all entries.

22 If USER_ZONE_ID_S is equal to '1' and the mobile station does not support Tiered Services,
 23 then the mobile station shall set USER_ZONE_ID_MSG_SEQ_S to CONFIG_MSG_SEQ_S.

24 If PRI_NGHBR_LIST_S is equal to '0', then the mobile station shall set
 25 PRI_NGHBR_LIST_MSG_SEQ_S to CONFIG_MSG_SEQ_S.

26 If PRI_NGHBR_LIST_S is equal to '1' and the mobile station does not support Tiered Services,
 27 then the mobile station shall set PRI_NGHBR_LIST_MSG_SEQ_S to CONFIG_MSG_SEQ_S.

28 The mobile station shall ignore any fields at the end of the *System Parameters Message* that
 29 are not defined according to the protocol revision level (MOB_P_REV_p of the current band
 30 class) being used by the mobile station.

2.6.2.2.1.2 Paging Channel Assignment Change

If the number of Paging Channels specified in the *System Parameters Message* (PAGE_CHAN_r) is different from PAGE_CHAN_s, the mobile station shall use the hash algorithm specified in 2.6.7.1 to select a new Paging Channel number in the range 1 to PAGE_CHAN_r. The mobile station shall store the new Paging Channel number as PAGECH_s. The mobile station shall then set PAGE_CHAN_s to PAGE_CHAN_r. The mobile station shall set ACC_MSG_SEQ_s to NULL. If the mobile station has not stored configuration parameters for the new Paging Channel, or if the stored parameters are not current (see 2.6.2.2), the mobile station shall set CONFIG_MSG_SEQ_s, SYS_PAR_MSG_SEQ_s, NGHBR_LST_MSG_SEQ_s, EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s, CHAN_LST_MSG_SEQ_s, EXT_SYS_PAR_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s, PRI_NGHBR_LST_MSG_SEQ_s, and EXT_GLOB_SERV_REDIR_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, and GLOB_SERV_REDIR_MSG_SEQ_s to NULL. The mobile station shall then begin monitoring the new Paging Channel as specified in 2.6.2.1.1.

2.6.2.2.1.3 RESCAN Parameter

If the RESCAN_r field in the *System Parameters Message* equals '1', the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a rescan indication (see 2.6.1.1).

2.6.2.2.1.4 Roaming Status

The mobile station shall determine the roaming status for the mobile station (see 2.6.5.3). The mobile station should indicate to the user whether the mobile station is roaming.

2.6.2.2.1.5 Registration

The mobile station shall update stored variables and perform other registration procedures as specified in 2.6.5.5.2.2.

2.6.2.2.1.6 Slot Cycle Index

The mobile station shall set SLOT_CYCLE_INDEX_s to the smaller of: the preferred slot cycle index SLOT_CYCLE_INDEX_p and the maximum slot cycle index MAX_SLOT_CYCLE_INDEX_s. If the mobile station is operating in the slotted mode, it shall set its slot cycle length as described in 2.6.2.1.1.3.

2.6.2.2.1.7 PACA Disable for SID Change

If PACA_s is equal to enabled, and SID_s is not equal to PACA_SID_s, the mobile station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

2.6.2.2.1.8 Retry Delay Disable for Packet Zone ID or SID/NID Change

The mobile station shall set $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ to 0 when the mobile station determines that the Packet Zone Identification or the System Identification/Network Identification (SID/NID pair) has been changed, where RETRY_TYPE is equal to '001', '010', or '011'.

2.6.2.2.2 Access Parameters Message

Whenever an *Access Parameters Message* is received on the Paging Channel, the sequence number, ACC_MSG_SEQ_R , shall be compared to ACC_MSG_SEQ_S . If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as follows.

If PROBE_PN_RAN , MAX_REQ_SEQ , or MAX_RSP_SEQ are not within the valid ranges specified in 3.7.2.3.2.2, then the mobile station shall ignore the *Access Parameters Message* that contains them.

The mobile station shall store the following parameters:

- *Access Parameters Message* sequence number ($\text{ACC_MSG_SEQ}_S = \text{ACC_MSG_SEQ}_R$)
- Number of Access Channels ($\text{ACC_CHAN}_S = \text{ACC_CHAN}_R$)
- Nominal transmit power offset ($\text{NOM_PWR}_S = \text{NOM_PWR}_R$)
- Initial power offset for access ($\text{INIT_PWR}_S = \text{INIT_PWR}_R$)
- Power increment ($\text{PWR_STEP}_S = \text{PWR_STEP}_R$)
- Number of access probes ($\text{NUM_STEP}_S = \text{NUM_STEP}_R$)
- Maximum Access Channel message capsule size ($\text{MAX_CAP_SZ}_S = \text{MAX_CAP_SZ}_R$)
- Access Channel preamble length ($\text{PAM_SZ}_S = \text{PAM_SZ}_R$)
- Persistence modifier for Access Channel attempts for registrations which are not responses to the *Registration Request Order* ($\text{REG_PSIST}_S = \text{REG_PSIST}_R$)
- Persistence modifier for Access Channel attempts for message transmissions ($\text{MSG_PSIST}_S = \text{MSG_PSIST}_R$)
- If PSIST_EMG_INCL_R is equal to '0', the mobile station shall set the persistence modifier for emergency calls from mobile stations in access overload classes 0 to 9 (PSIST_EMG_S) to '000'; otherwise, the mobile station shall set PSIST_EMG_S equal to PSIST_EMG_R .
- Time randomization for Access Channel probes ($\text{PROBE_PN_RAN}_S = \text{PROBE_PN_RAN}_R$)
- Acknowledgment timeout ($\text{ACH_ACC_TMO}_S = \text{ACH_ACC_TMO}_R$)

- 1 • Access Channel probe backoff range ($\text{PROBE_BKOFF}_S = \text{PROBE_BKOFF}_R$)
- 2 • Access Channel probe sequence backoff range ($\text{BKOFF}_S = \text{BKOFF}_R$)
- 3 • Maximum number of probe sequences for an Access Channel request
- 4 ($\text{MAX_REQ_SEQ}_S = \text{MAX_REQ_SEQ}_R$)
- 5 • Maximum number of probe sequences for an Access Channel response
- 6 ($\text{MAX_RSP_SEQ}_S = \text{MAX_RSP_SEQ}_R$)
- 7 • If CDMABAND_S is equal to '0', the mobile station shall set extended nominal
- 8 transmit power NOM_PWR_EXT_S to '0'; otherwise, the mobile station shall store
- 9 extended nominal transmit power ($\text{NOM_PWR_EXT}_S = \text{NOM_PWR_EXT}_R$).
- 10 • IC threshold ($\text{IC_THRESH}_S = -7$)

11 The mobile station shall also store the following parameters if the mobile station is not in
12 the *Origination Attempt Substate* or *Page Response Substate*:

- 13 • Authentication mode (if AUTH_R is equal to '00' or '01', then $\text{AUTH}_S = \text{AUTH}_R$;
- 14 otherwise $\text{AUTH}_S = \text{'01'}$)
- 15 • Random challenge value ($\text{RAND}_S = \text{RAND}_R$)

16 The mobile station shall ignore any fields at the end of the *Access Parameters Message*
17 which are not defined according to the protocol revision level (MOB_P_REV_P of the current
18 band class) being used by the mobile station.

19 The mobile station shall store the persistence parameter number according to the
20 following rule: If the mobile station's access overload class is in the range 0-9, set PSIST_S
21 equal to $\text{PSIST}(0-9)_R$; otherwise set PSIST_S equal to $\text{PSIST}(n)_R$, where n is equal to the
22 mobile station access overload class.

23 The mobile station shall set CURR_ACC_MSG_SEQ equal to ACC_MSG_SEQ_S .

24 2.6.2.2.3 Neighbor List Message

25 Whenever a valid *Neighbor List Message* is received on the current Paging Channel
26 (PAGECH_S), the configuration message sequence number, CONFIG_MSG_SEQ_R , shall be
27 compared to that stored in $\text{NGHBR_LST_MSG_SEQ}_S$. If the comparison results in a match,
28 the mobile station shall ignore the message. If the comparison results in a mismatch,
29 then the mobile station shall process the remaining fields in the message as follows.

30 If the PILOT_INC field is not within the valid range specified in 3.7.2.3.2.3, then the mobile
31 station shall ignore the *Neighbor List Message* that contains it.

32 The mobile station shall store the following parameters:

- 33 • Configuration message sequence number
- 34 ($\text{CONFIG_MSG_SEQ}_S = \text{CONFIG_MSG_SEQ}_R$,
- 35 $\text{NGHBR_LST_MSG_SEQ}_S = \text{CONFIG_MSG_SEQ}_R$)

- 1 • Pilot PN sequence offset increment ($\text{PILOT_INC}_S = \text{PILOT_INC}_T$)

2 The mobile station shall set NGHBR_SET_SIZE_S to the number of neighboring base stations
3 contained in the *Neighbor List Message*.

4 For each of the neighboring base stations contained in the *Neighbor List Message*, the
5 mobile station shall do the following:

- 6 • If the i^{th} occurrence of NGHBR_CONFIG_T is equal to '000', '001', or '010', set the
7 NGHBR_CONFIG field of $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of NGHBR_CONFIG_T ;
8 otherwise, set the NGHBR_CONFIG field of $\text{NGHBR_REC}[i]$ to '011'.

- 9 • Set the NGHBR_PN field of $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of NGHBR_PN_T .

10 If $\text{GEN_NGHBR_LST_MSG_SEQ}_S$ is not equal to CONFIG_MSG_SEQ_S , the mobile station
11 shall perform the following:

- 12 • Set the SEARCH_PRIORITY field of the NGHBR_REC to '10' (high) for all
13 NGHBR_SET_SIZE_S entries.
- 14 • Set the NGHBR_BAND field of NGHBR_REC to CDMABAND_S for all
15 NGHBR_SET_SIZE_S entries.
- 16 • Set the NGHBR_FREQ field of NGHBR_REC to CDMACH_S for all NGHBR_SET_SIZE_S
17 entries.
- 18 • Set the SRCH_WIN_NGHBR field of NGHBR_REC to SRCH_WIN_N_S for all
19 NGHBR_SET_SIZE_S entries.
- 20 • Set the SRCH_OFFSET_NGHBR field of NGHBR_REC to '000' for all entries.
- 21 • Set $\text{NUM_ANALOG_NGHBR}_S$ to '000' and set ANALOG_NGHBR_LIST to NULL.

22 The mobile station shall set the ACCESS_ENTRY_HO field of the NGHBR_REC to '0' for all
23 NGHBR_SET_SIZE_S entries if any of the following conditions are met:

- 24 • $\text{EXT_SYS_PARAMETER}_S$ is equal to '0',
- 25 • $\text{NGHBR_SET_ENTRY_INFO}_S$ is equal to '0', or
- 26 • $\text{EXT_SYS_PAR_MSG_SEQ}_S$ is not equal to CONFIG_MSG_SEQ_S .

27 The mobile station shall set the ACCESS_HO_ALLOWED field of the NGHBR_REC to '0' for
28 all NGHBR_SET_SIZE_S entries if any of the following conditions are met:

- 29 • $\text{EXT_SYS_PARAMETER}_S$ is equal to '0',
- 30 • $\text{NGHBR_SET_ACCESS_INFO}_S$ is equal to '0', or
- 31 • $\text{EXT_SYS_PAR_MSG_SEQ}_S$ is not equal to CONFIG_MSG_SEQ_S .

32 The mobile station shall update the idle handoff Neighbor Set (see 2.6.2.1.4) so that it
33 consists only of pilot offsets listed in the *Neighbor List Message*. If the *Neighbor List Message*

contains more pilot offsets than the mobile station can store, the mobile station shall store the pilot offsets beginning at the start of the *Neighbor List Message*, up to the limits of the mobile station's Neighbor Set storage capacity.

2.6.2.2.4 CDMA Channel List Message

Whenever a *CDMA Channel List Message* is received on the Paging Channel, the configuration message sequence number, CONFIG_MSG_SEQ_r, shall be compared to that stored in CHAN_LST_MSG_SEQ_s. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as follows.

The mobile station shall store the following parameters:

- Configuration message sequence number
(CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r,
CHAN_LST_MSG_SEQ_s = CONFIG_MSG_SEQ_r)

The mobile station shall perform the following:

- If SYS_PAR_MSG_SEQ_s is current,
 - If EXT_CHAN_LIST_s is equal to '1', the mobile station shall ignore this message.
 - If EXT_CHAN_LIST_s is equal to '0', the mobile station shall process this message as described below.

The mobile station shall use the hash algorithm specified in 2.6.7.1 and the number of channels listed in the *CDMA Channel List Message* to determine the CDMA Channel (Frequency Assignment) for its Paging Channel. If the CDMA Frequency Assignment has changed (the computed CDMA Channel is different from CDMACH_s), the mobile station shall perform the following actions:

- Set CDMACH_s to the new CDMA Channel.
- Set PAGE_CHAN_s to '1'.
- Set PAGECH_s to the Primary Paging Channel.
- If the stored configuration parameters is not current (see 2.6.2.2) for the corresponding base station and frequency assignment, set CONFIG_MSG_SEQ_s, SYS_PAR_MSG_SEQ_s, NGHBR_LST_MSG_SEQ_s, CHAN_LST_MSG_SEQ_s, EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s, EXT_SYS_PAR_MSG_SEQ_s, GLOB_SERV_REDIR_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s, PRI_NGHBR_LST_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, EXT_GLOB_SERV_REDIR_MSG_SEQ_s, and ACC_MSG_SEQ_s to NULL.
- Tune to the new CDMA Channel.

2.6.2.2.5 Extended System Parameters Message

Whenever an *Extended System Parameters Message* is received on the Paging Channel, the configuration message sequence number, CONFIG_MSG_SEQ_r, shall be compared to that stored in EXT_SYS_PAR_MSG_SEQ_s. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as follows.

If the protocol revision level supported by the mobile station (MOB_P_REV_p) is less than the minimum protocol revision level supported by the base station (MIN_P_REV_r), the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a protocol mismatch indication (see 2.6.1.1). Otherwise, the mobile station shall store the following parameters:

- Configuration message sequence number
(CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r,
EXT_SYS_PAR_MSG_SEQ_s = CONFIG_MSG_SEQ_r)
- Preferred Access Channel MSID type (PREF_MSID_TYPE_s = PREF_MSID_TYPE_r)
- Broadcast slot cycle index (BCAST_INDEX_s = BCAST_INDEX_r)
- The mobile station shall set its operational IMSI, IMSI_O, as follows:
 - If IMSI_T_SUPPORTED_r is equal to '0', the mobile station shall set IMSI_O to IMSI_{M_p}.
 - If IMSI_T_SUPPORTED_r is equal to '1' and the mobile station's IMSI_{T_p} has been programmed, the mobile station shall set IMSI_O to IMSI_{T_p}.
 - If IMSI_T_SUPPORTED_r is equal to '1' and the mobile station's IMSI_{T_p} has not been programmed, the mobile station shall set IMSI_O to IMSI_{M_p}.
 - If IMSI_O has been changed, the mobile station shall set SYS_PAR_MSG_SEQ_s and CHAN_LST_MSG_SEQ_s and EXT_CHAN_LST_MSG_SEQ_s to NULL and set PAGE_CHAN_s to '1'.
- If MCC_r = '1111111111' and IMSI_11_12_r = '1111111', the mobile station shall set the IMSI_O to IMSI_{M_p} and store:
 - Mobile Country Code (MCC_s = MCC_{M_p}) and
 - IMSI 11th and 12th digits (IMSI_11_12_s = IMSI_M_11_12_p);
 otherwise, the mobile station shall store:
 - Mobile Country Code (MCC_s = MCC_r) and
 - IMSI 11th and 12th digits (IMSI_11_12_s = IMSI_11_12_r).
- If IMSI_O is set to the IMSI_M, the mobile station shall set:

- 1 – IMSI_O_S_S to IMSI_M_S_P (i.e., IMSI_O_S1_S to IMSI_M_S1_P and IMSI_O_S2_S to
- 2 IMSI_M_S2_P)
- 3 – IMSI_O_11_12_S to IMSI_M_11_12_P
- 4 – MCC_O_S to MCC_M_P
- 5 – IMSI_O_ADDR_NUM_S to IMSI_M_ADDR_NUM_P
- 6 • If IMSI_O is set to the IMSI_T, the mobile station shall set:
 - 7 – IMSI_O_S_S to IMSI_T_S_P (i.e., IMSI_O_S1_S to IMSI_T_S1_P and IMSI_O_S2_S to
 - 8 IMSI_T_S2_P).
 - 9 – IMSI_O_11_12_S to IMSI_T_11_12_P
 - 10 – MCC_O_S to MCC_T_P
 - 11 – IMSI_O_ADDR_NUM_S to IMSI_T_ADDR_NUM_P
- 12 • Protocol revision level (P_REV_S = P_REV_P) if included in the message; otherwise,
- 13 P_REV_S = '00000011' for Band Class 0 and P_REV_S = '00000001' for Band Class 1.
- 14 • Minimum protocol revision level (MIN_P_REV_S = MIN_P_REV_P) if included in the
- 15 message; otherwise, MIN_P_REV_S = '00000010' for Band Class 0 and MIN_P_REV_S =
- 16 '00000001' for Band Class 1.
- 17 • Protocol revision level currently in use (P_REV_IN_USE_S = the lesser value of
- 18 P_REV_S and MOB_P_REV_P of the current band class)
- 19 • Slope of the handoff add/drop criterion (SOFT_SLOPE_S = SOFT_SLOPE_P) if included
- 20 in the message; otherwise, SOFT_SLOPE_S = '000000'.
- 21 • Intercept of the handoff add criterion (ADD_INTERCEPT_S = ADD_INTERCEPT_P)
- 22 • Intercept of the handoff drop criterion (DROP_INTERCEPT_S = DROP_INTERCEPT_P)
- 23 • Delete foreign TMSI (DELETE_FOR_TMSI_S = DELETE_FOR_TMSI_P)
- 24 • Use TMSI (USE_TMSI_S = USE_TMSI_P)
- 25 • TMSI zone length (TMSI_ZONE_LEN_S = TMSI_ZONE_LEN_P)
- 26 • TMSI zone number (TMSI_ZONE_S = TMSI_ZONE_P)
- 27 • Maximum number of alternative service options (MAX_NUM_ALT_SO_S =
- 28 MAX_NUM_ALT_SO_P) if included in the message; otherwise, MAX_NUM_ALT_SO_S =
- 29 '000'.
- 30 • System reselection indicator (RESELECT_INCLUDED_S = RESELECT_INCLUDED_P) if
- 31 included in the message; otherwise, RESELECT_INCLUDED_S = '0'.
- 32 • Pilot reporting indicator (PILOT_REPORT_S = PILOT_REPORT_P)

- 1 • Neighbor Set access entry handoff information indicator
2 (NGHBR_SET_ENTRY_INFO_S = NGHBR_SET_ENTRY_INFO_T) if included in the
3 message; otherwise, NGHBR_SET_ENTRY_INFO_S = '0'.
- 4 • Neighbor Set access handoff information indicator (NGHBR_SET_ACCESS_INFO_S =
5 NGHBR_SET_ACCESS_INFO_T) if included in the message; otherwise,
6 NGHBR_SET_ACCESS_INFO_S = '0'.
- 7 • Short Data Burst supported indicator (SDB_SUPPORTED_S = SDB_SUPPORTED_T)
- 8 • Nominal reverse traffic channel output power offset relative to Reverse Pilot
9 Channel power (RLGAIN_TRAFFIC_PILOT_S = RLGAIN_TRAFFIC_PILOT_T)
- 10 • Broadcast GPS Assist Indicator (BROADCAST_GPS_ASST_S =
11 BROADCAST_GPS_ASST_T)
- 12 • Reverse Power Control Delay (REV_PWR_CNTL_DELAY_S = REV_PWR_CNTL_DELAY_T)
13 if included
- 14 • Permission for the mobile station to request QoS settings in the *Origination Message*
15 (MOB_QOS_S = MOB_QOS_T)

16 If P_REV_IN_USE_S has been changed, the mobile station shall set ACC_MSG_SEQ_S,
17 CURR_ACC_MSG_SEQ, SYS_PAR_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
18 GEN_NGHBR_LST_MSG_SEQ_S, and GLOB_SERV_REDIR_MSG_SEQ_S to NULL.

19 If NGHBR_SET_ENTRY_INFO is equal to '1', the mobile station shall store the access entry
20 handoff in order and message processing operation indicator (ACC_ENT_HO_ORDER_S =
21 ACC_ENT_HO_ORDER_T).

22 If the mobile station supports packet data service options and the PACKET_ZONE_ID field is
23 included in the message, the mobile station shall store the packet data services zone
24 identifier (PACKET_ZONE_ID_S = PACKET_ZONE_ID_T); otherwise, the mobile station shall set
25 PACKET_ZONE_ID_S to '00000000'.

26 If RESELECT_INCLUDED_S is equal to '1', the mobile station shall store:

- 27 • Pilot power threshold (EC_THRESH_S = EC_THRESH_T)
- 28 • Pilot E_c/I₀ threshold (EC_IO_THRESH_S = EC_IO_THRESH_T)

29 If NGHBR_SET_ACCESS_INFO_S is equal to '1', the mobile station shall store:

- 30 • Access handoff permitted indicator (ACCESS_HO_S = ACCESS_HO_T)
- 31 • Access probe handoff permitted indicator (ACCESS_PROBE_HO_S =
32 ACCESS_PROBE_HO_T)
- 33 • If ACCESS_PROBE_HO_S is equal to '1', access handoff list update permitted indicator
34 (ACC_HO_LIST_UPD_S = ACC_HO_LIST_UPD_T)

- 1 • Maximum number of times that the mobile station is permitted to perform an
2 access probe handoff ($\text{MAX_NUM_PROBE_HO}_S = \text{MAX_NUM_PROBE_HO}_T$)
- 3 • Access handoff permitted for message response indicator ($\text{ACCESS_HO_MSG_RSP}_S$
4 $= \text{ACCESS_HO_MSG_RSP}_T$)
- 5 • Access probe handoff permitted for other messages indicator
6 ($\text{ACC_PROBE_HO_OTHER_MSG}_S = \text{ACC_PROBE_HO_OTHER_MSG}_T$)

7 If $\text{NGHBR_SET_ENTRY_INFO}_S$ or $\text{NGHBR_SET_ACCESS_INFO}_S$ is equal to '1', the mobile
8 station shall store the size of the Neighbor Set ($\text{NGHBR_SET_SIZE}_S = \text{NGHBR_SET_SIZE}_T$).

9 If $\text{NGHBR_SET_ENTRY_INFO}_S$ is equal to '0', then for all NGHBR_SET_SIZE_S occurrences of
10 ACCESS_ENTRY_HO , the mobile station shall set the ACCESS_ENTRY_HO field of
11 $\text{NGHBR_REC}[i]$ to '0'.

12 If $\text{NGHBR_SET_ENTRY_INFO}_S$ is equal to '1', then for all NGHBR_SET_SIZE_S occurrences of
13 ACCESS_ENTRY_HO , the mobile station shall set the ACCESS_ENTRY_HO field of
14 $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of ACCESS_ENTRY_HO_T .

15 If $\text{NGHBR_SET_ACCESS_INFO}_S$ is equal to '0', then for all NGHBR_SET_SIZE_S occurrences
16 of ACCESS_HO_ALLOWED , the mobile station shall set the ACCESS_HO_ALLOWED field of
17 $\text{NGHBR_REC}[i]$ to '0'.

18 If $\text{NGHBR_SET_ACCESS_INFO}_S$ is equal to '1', then for all NGHBR_SET_SIZE_S occurrences
19 of ACCESS_HO_ALLOWED , the mobile station shall set the ACCESS_HO_ALLOWED field of
20 $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of $\text{ACCESS_HO_ALLOWED}_T$.

21 The mobile station shall set all bits of TMSI_CODE_{S-p} to '1' if all of the following conditions
22 are met:

- 23 • The bits of TMSI_CODE_{S-p} are not all equal to '1',
- 24 • DELETE_FOR_TMSI_S is equal to '1', and
- 25 • $\text{ASSIGNING_TMSI_ZONE_LEN}_{S-p}$ is not equal to TMSI_ZONE_LEN_S , or the least
26 significant $\text{ASSIGNING_TMSI_ZONE_LEN}_{S-p}$ octets of $\text{ASSIGNING_TMSI_ZONE}_{S-p}$
27 are not equal to TMSI_ZONE_S .

28 If the mobile station supports the Quick Paging Channel operation:

- 29 • The mobile station shall set QPCH_SUPPORTED_S to QPCH_SUPPORTED_T .
- 30 • If $\text{QPCH_SUPPORTED}_T = '1'$:
 - 31 – The mobile station shall set QPCH_RATE_S to QPCH_RATE_T .
 - 32 – If the number of Quick Paging Channels specified in the received message
33 (NUM_QPCH_T) is different from NUM_QPCH_S , the mobile station shall use the
34 hash algorithm specified in 2.6.7.1 to select a new Quick Paging Channel

1 number in the range 1 to NUM_QPCH_r. The mobile station shall store the new
 2 Quick Paging Channel number as QPAGECH_s and as ASSIGNED_QPAGECH_s.
 3 The mobile station shall then set NUM_QPCH_s to NUM_QPCH_r.

- 4 • The mobile station shall set QPCH_POWER_LEVEL_PAGE_s to
 5 QPCH_POWER_LEVEL_PAGE_r.
- 6 • The mobile station shall set QPCH_CCI_SUPPORTED_s to QPCH_CCI_SUPPORTED_r.
- 7 • If QPCH_CCI_SUPPORTED_r = '1', the mobile station shall set
 8 QPCH_POWER_LEVEL_CONFIG_s to QPCH_POWER_LEVEL_CONFIG_r.

9 If the mobile station supports the *Device Information Message* on the r-csch, the mobile
 10 station shall store:

- 11 • Autonomous message supported indicator
 12 (AUTO_MSG_SUPPORTED_s = AUTO_MSG_SUPPORTED_r)

13 If AUTO_MSG_SUPPORTED_r is equal to '1' and the mobile station supports the *Device*
 14 *Information Message* on the r-csch, the mobile station shall store:

- 15 • Autonomous message interval
 16 (AUTO_MSG_INTERVAL_s = AUTO_MSG_INTERVAL_r)

17 2.6.2.2.6 Global Service Redirection Message

18 Whenever a *Global Service Redirection Message* is received on the Paging Channel, the
 19 configuration message sequence number, CONFIG_MSG_SEQ_r, shall be compared to that
 20 stored in GLOB_SERV_REDIR_MSG_SEQ_s. If the comparison results in a match or if
 21 SYS_PAR_MSG_SEQ_s is not current, the mobile station may ignore the message;
 22 otherwise, the mobile station shall store the following parameters:

- 23 • Configuration message sequence number
 24 (CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r,
 25 GLOB_SERV_REDIR_MSG_SEQ_s = CONFIG_MSG_SEQ_r)
- 26 • If the P_REV_IN_USE_s is equal to or greater than 6, the mobile station shall ignore
 27 this message, if any of the following conditions is true:
 - 28 – EXT_GLOBAL_REDIRECT_s = '1'
 - 29 – EXCL_P_REV_MS_r = '1'

30 If the subfield corresponding to the access overload class, ACCOLC_p, of the mobile station
 31 is set equal to '1' in the REDIRECT_ACCOLC_r field of the received message, the mobile
 32 station shall store the following parameters and then shall enter the *System Determination*
 33 *Substate* of the *Mobile Station Initialization State* with a redirection indication (see 2.6.1.1):

- 34 • Return if fail indicator (RETURN_IF_FAIL_s = RETURN_IF_FAIL_r)

- 1 • If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
2 TMSI_CODE_{S-p} to '1'
- 3 • Redirection record (REDIRECT_REC_S = redirection record from received message)
- 4 • If RECORD_TYPE_r = '00000001', the mobile station shall:
5 – Set CDMA_MODE_S to '1'
6 – Set DIGITAL_REG_{S-p} to '00000000'
7 – Max delay upon redirection (MAX_REDIRECT_DELAY_S = MAX_REDIRECT_DELAY_r)

8 2.6.2.2.7 Extended Neighbor List Message

9 Whenever a valid *Extended Neighbor List Message* is received on the current Paging
10 Channel (PAGECH_S), the configuration message sequence number, CONFIG_MSG_SEQ_r,
11 shall be compared to that stored in EXT_NGHBR_LST_MSG_SEQ_S. If the comparison results
12 in a match, the mobile station may ignore the message. If the comparison results in a
13 mismatch, then the mobile station shall process the remaining fields in the message as
14 follows.

15 If the PILOT_INC field is not within the valid range specified in 3.7.2.3.2.14, then the
16 mobile station shall ignore the *Extended Neighbor List Message* that contains it.

17 The mobile station shall store the following parameters:

- 18 • Configuration message sequence number
19 (CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_r,
20 EXT_NGHBR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_r,
21 NGHBR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_r)
- 22 • Pilot PN sequence offset increment (PILOT_INC_S = PILOT_INC_r)

23 The mobile station shall set NGHBR_SET_SIZE_S to the number of neighboring base stations
24 contained in the *Extended Neighbor List Message*.

25 For each of the neighboring base stations contained in the *Extended Neighbor List Message*,
26 if FREQ_INCL_r equals '0', or if FREQ_INCL_r equals '1' and NGHBR_BAND_r is supported, the
27 mobile station shall do the following:

- 28 • If the i^{th} occurrence of NGHBR_CONFIG_r is equal to '000', '001', or '010', set the
29 NGHBR_CONFIG field of NGHBR_REC[i] to the i^{th} occurrence of NGHBR_CONFIG_r;
30 otherwise, set the NGHBR_CONFIG field of NGHBR_REC [i] to '011'.
- 31 • Set the NGHBR_PN field of NGHBR_REC[i] to the i^{th} occurrence of NGHBR_PN_r.
- 32 • Set the SEARCH_PRIORITY field of NGHBR_REC[i] to the i^{th} occurrence of
33 SEARCH_PRIORITY_r.

For each of the neighboring base stations contained in the *Extended Neighbor List Message*, if FREQ_INCL_r equals '1' and NGHBR_BAND_r is supported, the mobile station shall also do the following:

- Set the NGHBR_BAND field of $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of NGHBR_BAND_r .
- Set the NGHBR_FREQ field of $\text{NGHBR_REC}[i]$ to the i^{th} occurrence of NGHBR_FREQ_r .

For each of the neighboring base stations contained in the *Extended Neighbor List Message*, if FREQ_INCL_r equals '0', the mobile station shall also do the following:

- Set the NGHBR_BAND field of $\text{NGHBR_REC}[i]$ to CDMABAND_s .
- Set the NGHBR_FREQ field of $\text{NGHBR_REC}[i]$ to CDMACH_s .

If $\text{GEN_NGHBR_LST_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_s , the mobile station shall do the following:

- Set the SRCH_WIN_NGHBR field of NGHBR_REC to SRCH_WIN_N_s for all NGHBR_SET_SIZE_s entries.
- Set the SRCH_OFFSET_NGHBR field of NGHBR_REC to '000' for all entries.
- Set $\text{NUM_ANALOG_NGHBR}_s$ to '000' and set ANALOG_NGHBR_LIST to NULL.

The mobile station shall set the ACCESS_ENTRY_HO field of the NGHBR_REC to '0' for all NGHBR_SET_SIZE_s entries if any of the following conditions are met:

- $\text{EXT_SYS_PARAMETER}_s$ is equal to '0',
- $\text{NGHBR_SET_ENTRY_INFO}_s$ is equal to '0', or
- $\text{EXT_SYS_PAR_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_s .

The mobile station shall set the ACCESS_HO_ALLOWED field of the NGHBR_REC to '0' for all NGHBR_SET_SIZE_s entries if any of the following conditions are met:

- $\text{EXT_SYS_PARAMETER}_s$ is equal to '0',
- $\text{NGHBR_SET_ACCESS_INFO}_s$ is equal to '0', or
- $\text{EXT_SYS_PAR_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_s .

The mobile station shall update the idle handoff Neighbor Set (see 2.6.2.1.4) so that it consists only of pilot offsets listed in the *Extended Neighbor List Message*. If the *Extended Neighbor List Message* contains more pilot offsets than the mobile station can store, the mobile station shall store the pilot offsets beginning at the start of the *Extended Neighbor List Message*, up to the limits of the mobile station's Neighbor Set storage capacity.

2.6.2.2.8 General Neighbor List Message

Whenever a valid *General Neighbor List Message* is received on the current Paging Channel (PAGECH_S), the configuration message sequence number, CONFIG_MSG_SEQ_R shall be compared to that stored in GEN_NGHR_LST_MSG_SEQ_S. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as follows.

If the PILOT_INC field is not within the valid range specified in 3.7.2.3.2.22, then the mobile station shall ignore the *General Neighbor List Message* that contains it.

The mobile station shall store the following parameters:

- Configuration message sequence number
(CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_R,
GEN_NGHR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R).
- Pilot PN sequence offset increment (PILOT_INC_S = PILOT_INC_R).

If NGHR_CONFIG_PN_INCL_R is equal to '1' and FREQ_FIELDS_INCL_R is equal to '1', the mobile station shall store the following parameters:

- Configuration message sequence number
(EXT_NGHR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R,
NGHR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R).

The mobile station shall set NGHR_SET_SIZE_S to the number of neighboring base stations contained in the *General Neighbor List Message*.

For each of the neighboring base stations contained in the *General Neighbor List Message*, if FREQ_INCL_R equal '0', or if FREQ_INCL_R equal '1' and NGHR_BAND_R is supported, the mobile station shall do the following:

- If NGHR_CONFIG_PN_INCL_R is equal to '1', set the NGHR_CONFIG and NGHR_PN fields as follows:
 - If the *i*th occurrence of NGHR_CONFIG_R is equal to '000', '001', or '010', set the NGHR_CONFIG field of NGHR_REC[i] to the *i*th occurrence of NGHR_CONFIG_R; otherwise, set the NGHR_CONFIG field of NGHR_REC[i] to '011'.
 - Set the NGHR_PN field of NGHR_REC[i] to the *i*th occurrence of NGHR_PN_R.
- If NGHR_SRCH_MODE_R = '00' or '10' and EXT_NGHR_LST_MSG_SEQ_S is not equal to CONFIG_MSG_SEQ_R, set SEARCH_PRIORITY field of each NGHR_REC to '10' (high) for all NGHR_SET_SIZE_S entries.
- If NGHR_SRCH_MODE_R = '01' or '11', set the SEARCH_PRIORITY field of NGHR_REC[i] to the *i*th occurrence of SEARCH_PRIORITY_R.

- 1 • If NGHBR_SRCH_MODE_r = '00' or '01', set the SRCH_WIN_NGHBR field of each
2 NGHBR_REC to SEARCH_WIN_s for all NGHBR_SET_SIZE_s entries if
3 SYS_PAR_MSG_SEQ_s is equal to CONFIG_MSG_SEQ_s; otherwise, set
4 SETTING_SEARCH_WIN to '1'.
- 5 • If NGHBR_SRCH_MODE_r = '00' or '01', set the SRCH_OFFSET_NGHBR field of each
6 NGHBR_REC to '000'.
- 7 • If NGHBR_SRCH_MODE_r = '10' or '11':
 - 8 – set the SRCH_WIN_NGHBR field of NGHBR_REC[i] to the ith occurrence of
9 SRCH_WIN_NGHBR_r
 - 10 – if SRCH_OFFSET_INCL_r equals to '1', set the SRCH_OFFSET_NGHBR field of
11 NGHBR_REC[i] to the ith occurrence of SRCH_OFFSET_NGHBR_r, and
 - 12 – if SRCH_OFFSET_INCL_r equals to '0', set the SRCH_OFFSET_NGHBR field of
13 each NGHBR_REC to '000'.
- 14 • If USE_TIMING_r is equal to '1', set the TIMING_INCL field of NGHBR_REC[i] to the ith
15 occurrence of TIMING_INCL_r; otherwise, set the TIMING_INCL field of NGHBR_REC
16 to '0' for all entries.

17 For each of the neighboring base stations contained in the *General Neighbor List Message*, if
18 FREQ_FIELDS_INCL_r equals '1', FREQ_INCL_r equals '1', and NGHBR_BAND_r is supported, the
19 mobile station shall also perform the following:

- 20 • Set the NGHBR_BAND field of NGHBR_REC[i] to the ith occurrence of
21 NGHBR_BAND_r.
- 22 • Set the NGHBR_FREQ field of NGHBR_REC[i] to the ith occurrence of NGHBR_FREQ_r.

23 For each of the neighboring base stations contained in the *General Neighbor List Message*, if
24 USE_TIMING_r is equal to '1' and TIMING_INCL_r equals '1', the mobile station shall also
25 perform the following:

- 26 • Set the NGHBR_TX_OFFSET field of NGHBR_REC[i] to the ith occurrence of
27 NGHBR_TX_OFFSET_r.
- 28 • If GLOBAL_TIMING_INCL_r is equal to '1', then the mobile station shall:
 - 29 – Set the NGHBR_TX_DURATION field of NGHBR_REC to GLOBAL_TX_DURATION_r
30 for all entries.
 - 31 – Set the NGHBR_TX_PERIOD field of NGHBR_REC to GLOBAL_TX_PERIOD_r for all
32 entries.
- 33 • If GLOBAL_TIMING_INCL_r is equal to '0', then the mobile station shall:

- 1 – Set the NGHBR_TX_DURATION field of NGHBR_REC[i] to the i^{th} occurrence of
- 2 NGHBR_TX_DURATION_r.
- 3 – Set the NGHBR_TX_PERIOD field of NGHBR_REC[i] to the i^{th} occurrence of
- 4 NGHBR_TX_PERIOD_r.

5 For each of the neighboring base stations contained in the *General Neighbor List Message*, if
 6 $\text{FREQ_FIELDS_INCL}_r$ equals '1' and FREQ_INCL_r equals '0', or if $\text{FREQ_FIELDS_INCL}_r$ equals
 7 '0' and $\text{EXT_NGHBR_LST_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_r , the mobile station
 8 shall also do the following:

- 9 • Set the NGHBR_BAND field of NGHBR_REC[i] to CDMABAND_s .
- 10 • Set the NGHBR_FREQ field of NGHBR_REC[i] to CDMACH_s .

11 The mobile station shall set the ACCESS_ENTRY_HO field of the NGHBR_REC to '0' for all
 12 NGHBR_SET_SIZE_s entries if any of the following conditions are met:

- 13 • $\text{EXT_SYS_PARAMETER}_s$ is equal to '0'
- 14 • $\text{NGHBR_SET_ENTRY_INFO}_s$ is equal to '0', or
- 15 • $\text{EXT_SYS_PAR_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_s .

16 The mobile station shall set the ACCESS_HO_ALLOWED field of the NGHBR_REC to '0' for
 17 all NGHBR_SET_SIZE_s entries if any of the following conditions are met:

- 18 • $\text{EXT_SYS_PARAMETER}_s$ is equal to '0'
- 19 • $\text{NGHBR_SET_ACCESS_INFO}_s$ is equal to '0', or
- 20 • $\text{EXT_SYS_PAR_MSG_SEQ}_s$ is not equal to CONFIG_MSG_SEQ_s .

21 The mobile station shall update the idle handoff Neighbor Set (see 2.6.2.1.4) so that it
 22 consists only of pilot offsets listed in the *General Neighbor List Message*. If the *General*
 23 *Neighbor List Message* contains more pilot offsets than the mobile station can store, the
 24 mobile station shall store the pilot offsets beginning at the start of the *General Neighbor List*
 25 *Message*, up to the limits of the mobile station's Neighbor Set storage capacity.

26 The mobile station shall set $\text{NUM_ANALOG_NGHBR}_s$ to $\text{NUM_ANALOG_NGHBR}_r$, the
 27 number of neighboring analog systems contained in the *General Neighbor List Message*. For
 28 each of the neighboring analog systems contained in the *General Neighbor List Message*,
 29 the mobile station shall perform the following:

- 30 • Set the BAND_CLASS field of $\text{ANALOG_NGHBR_LIST}[i]$ to the i^{th} occurrence of
- 31 BAND_CLASS_r .
- 32 • Set the SYS_A_B field of $\text{ANALOG_NGHBR_LIST}[i]$ to the i^{th} occurrence of SYS_A_B_r .

33 For each of the neighboring base stations contained in the *General Neighbor List Message*,
 34 the mobile station shall set the ADD_PILOT_REC_INCL field of $\text{NGHBR_REC}[i]$ to the i^{th}

occurrence of ADD_PILOT_REC_INCL_r. If ADD_PILOT_REC_INCL_r equals '1', for each pilot included in the message, the mobile station shall also perform the following:

- Set the NGHBR_PILOT_REC_TYPE field of NGHBR_PILOT_REC to NGHBR_PILOT_REC_TYPE_r.
- If NGHBR_PILOT_REC_TYPE_r is equal to '000'. The mobile station shall:
 - Set the TD_POWER_LEVEL field of NGHBR_PILOT_REC to TD_POWER_LEVEL_r.
 - Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
- If NGHBR_PILOT_REC_TYPE_r is equal to '001', the mobile station shall:
 - Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
 - Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- If NGHBR_PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
 - Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
 - Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
 - Set the AUX_TD_POWER_LEVEL field of NGHBR_PILOT_REC to AUX_TD_POWER_LEVEL_r.
 - Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
- If NGHBR_PILOT_REC_TYPE_r is equal to '011', the mobile station shall:
 - Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to SR3_PRIMARY_PILOT_r.
 - Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to SR3_PILOT_POWER1_r.
 - Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to SR3_PILOT_POWER2_r.
- If NGHBR_PILOT_REC_TYPE_r is equal to '100', the mobile station shall:
 - Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to SR3_PRIMARY_PILOT_r.
 - Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to SR3_PILOT_POWER1_r.
 - Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to SR3_PILOT_POWER2_r.
 - Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.

- 1 – Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
2 AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- 3 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of
4 NGHBR_PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1 field of
5 NGHBR_PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code length
6 specified by WALSH_LENGTH1_r.
- 7 – Otherwise, set the AUX_PILOT_QOF1 field of NGHBR_PILOT_REC to QOF_r and set
8 the AUX_PILOT_WALSH_CODE1 field of NGHBR_PILOT_REC to
9 AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- 10 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of
11 NGHBR_PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2 field of
12 NGHBR_PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code length
13 specified by WALSH_LENGTH2_r.
- 14 – Otherwise, set the AUX_PILOT_QOF2 field of NGHBR_PILOT_REC to QOF_r and set
15 the AUX_PILOT_WALSH_CODE2 field of NGHBR_PILOT_REC to
16 AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

17 2.6.2.2.9 User Zone Identification Message

18 Whenever a *User Zone Identification Message* is received on the Paging Channel or
19 Broadcast Control Channel, and if the mobile station supports Tiered Services, the mobile
20 station shall compare the configuration message sequence number, CONFIG_MSG_SEQ_r,
21 to that stored in USER_ZONE_ID_MSG_SEQ_s. If the comparison results in a match, the
22 mobile station may ignore the message. If the comparison results in a mismatch, then
23 the mobile station shall process the remaining fields in the message as follows.

24 The mobile station shall store the following parameters:

- 25 • Configuration message sequence number
26 (CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r,
27 USER_ZONE_ID_MSG_SEQ_s = CONFIG_MSG_SEQ_r)
- 28 • UZ_EXIT_RCVD_s = UZ_EXIT_r

29 The mobile station shall set NUM_UZID_s to the number of User Zones contained in the
30 *User Zone Identification Message*.

31 For each User Zone contained in the *User Zone Identification Message*, the mobile station
32 shall do the following:

- 33 • Set the UZID field of UZ_REC(i) to the ith occurrence of UZID_r.
- 34 • Set the UZ_REV field of the UZ_REC(i) to the ith occurrence of UZ_REV_r.
- 35 • Set the TEMP_SUB field of the UZ_REC(i) to the ith occurrence of TEMP_SUB_r.

2.6.2.2.10 Private Neighbor List Message

Whenever a *Private Neighbor List Message* is received on the Paging Channel or Broadcast Control Channel, and if the mobile station supports Tiered Services, the mobile station shall compare the configuration message sequence number, $CONFIG_MSG_SEQ_R$, to that stored in $PRI_NGHBR_LST_MSG_SEQ_S$. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as follows.

The mobile station shall store the following parameters:

- Configuration message sequence number
($CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_R$,
 $PRI_NGHBR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R$)
- Common configuration included indicator ($COMMON_INCL_S = COMMON_INCL_R$)

The mobile station shall set $NUM_PRI_NGHBR_S$ to the number of Private Neighbor base stations contained in the *Private Neighbor List Message*.

For each Private Neighbor base station contained in the *Private Neighbor List Message* the mobile station shall do the following:

- Set the $SRCH_WIN_PRI_NGHBR$ field of $PRI_NGHBR_REC(i)$ to $SRCH_WIN_PN_R$.
- Set the SID field of $PRI_NGHBR_REC(i)$ to the i^{th} occurrence SID_R .
- Set the NID field of $PRI_NGHBR_REC(i)$ to the i^{th} occurrence NID_R .
- Set the PRI_NGHBR_PN field of $PRI_NGHBR_REC(i)$ to the i^{th} occurrence $PRI_NGHBR_PN_R$.
- If $COMMON_INCL_R$ is equal to '1', then the mobile station shall:
 - Set the $BAND_CLASS$ field of $PRI_NGHBR_REC(i)$ to $COMMON_BAND_CLASS_R$.
 - Set the $NGHBR_FREQ$ field of $PRI_NGHBR_REC(i)$ to $COMMON_NGHBR_FREQ_R$.
- If $COMMON_INCL_R$ is equal to '0', then the mobile station shall:
 - Set the $BAND_CLASS$ field of $PRI_NGHBR_REC(i)$ to the i^{th} occurrence of $BAND_CLASS_R$.
 - Set the $NGHBR_FREQ$ field of $PRI_NGHBR_REC(i)$ to the i^{th} occurrence of $NGHBR_FREQ_R$.
- If i^{th} occurrence of $UZID_INCL_R$ is equal to '0', then the mobile station shall set the PS_NUM_UZID field of $PRI_NGHBR_REC(i)$ to '0000'.
- If i^{th} occurrence of $UZID_INCL_R$ is equal to '1', then the mobile station shall set the PS_NUM_UZID field of $PRI_NGHBR_REC(i)$ to the NUM_UZID_R associated with the i^{th} occurrence of $UZID_INCL_R$.

- For each User Zone supported by the i^{th} private system, the mobile station shall do the following:
 - Set the PS_UZID(j) field of PRI_NGHBR_REC(i) to the j^{th} occurrence of UZID_r.
 - Set the PS_UZ_REV(j) field of PRI_NGHBR_REC(i) to the j^{th} occurrence of UZ_REV_r.
 - Set the PS_TEMP_SUB(j) field of PRI_NGHBR_REC(i) to the j^{th} occurrence of TEMP_SUB_r.

2.6.2.2.11 Extended Global Service Redirection Message

Whenever an *Extended Global Service Redirection Message* is received on the Paging Channel or Broadcast Control Channel, the configuration message sequence number, CONFIG_MSG_SEQ_r, shall be compared to that stored in EXT_GLOB_SERV_REDIREC_MSG_SEQ_s. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, the mobile station shall store the following parameters:

- Configuration message sequence number
(CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r,
GLOB_SERV_REDIREC_MSG_SEQ_s = CONFIG_MSG_SEQ_r)

The mobile station shall ignore the rest of the message if any of the following conditions is satisfied:

- The subfield corresponding to the access overload class, ACCOLC_p, of the mobile station is set equal to '0' in the REDIRECT_ACCOLC_r field of the received message,
- MOB_P_REV_p is not in the redirection mobile protocol revision range (i.e., REDIRECT_P_REV_INCL_r = '1' and EXCL_P_REV_IND_r = '0', and MOB_P_REV_p < REDIRECT_P_MIN_r or MOB_P_REV_p > REDIRECT_P_MAX_r), or
- MOB_P_REV_p is in the excluded mobile protocol revision range (i.e., REDIRECT_P_REV_INCL_r = '1' and EXCL_P_REV_IND_r = '1' and (REDIRECT_P_MIN_r ≤ MOB_P_REV_p ≤ REDIRECT_P_MAX_r)).

Otherwise, the mobile station shall store the following parameters and then shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a redirection indication (see 2.6.1.1):

- If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of TMSI_CODE_{s-p} to '1'.
- Return if fail indicator (RETURN_IF_FAIL_s = RETURN_IF_FAIL_r).
- Redirection record (REDIRECT_REC_s = redirection record from received message)
- If RECORD_TYPE_r = '00000001', the mobile station shall:

- 1 – Set CDMA_MODE_S to '1'
- 2 – Set DIGITAL_REG_{S-p} to '00000000'
- 3 – Max delay upon redirection (MAX_REDIRECT_DELAY_S = MAX_REDIRECT_DELAY_P)

4 2.6.2.2.12 Extended CDMA Channel List Message Overview

5 The mobile station may receive the *Extended CDMA Channel List Message* from the Paging
6 Channel or from the Primary Broadcast Control Channel. The mobile station shall follow
7 requirements defined in 2.6.2.2.12.1 or 2.6.2.2.12.2 to process the *Extended CDMA Channel*
8 *List Message*.

9 2.6.2.2.12.1 Extended CDMA Channel List Message on Paging Channel

10 Whenever an *Extended CDMA Channel List Message* is received on the Paging Channel, the
11 mobile station shall compare the configuration message sequence number,
12 CONFIG_MSG_SEQ_R, to that stored in EXT_CHAN_LST_MSG_SEQ_S. If the comparison
13 results in a match, the mobile station may ignore the message. If the comparison results
14 in a mismatch, then the mobile station shall process the remaining fields in the message
15 as follows:

16 The mobile station shall store the following parameters:

- 17 • Configuration message sequence number
18 (CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_R,
19 EXT_CHAN_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R,
20 CHAN_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R).

21 The mobile station shall determine the CDMA Channel (Frequency Assignment) for its
22 Paging Channel as follows:

- 23 • If RC_QPCH_SEL_INCL_R is equal to '1' and the mobile station is capable of RC
24 greater than 2 or capable of supporting Quick Paging Channel, the mobile station
25 shall eliminate those channels with RC_QPCH_HASH_IND_R equal to '0' from the
26 CDMA channel list and use the hash algorithm specified in 2.6.7.1 and the number
27 of channels whose RC_QPCH_HASH_IND_R is equal to '1' in the *Extended CDMA*
28 *Channel List Message* to determine the CDMA Channel (Frequency Assignment) for
29 its Paging Channel or Broadcast Control Channel.
- 30 • If RC_QPCH_SEL_INCL_R is equal to '0', the mobile station shall use the hash
31 algorithm specified in 2.6.7.1 and the number of channels in the *Extended CDMA*
32 *Channel List Message* to determine the CDMA Channel (Frequency Assignment) for
33 its Paging Channel.

34 If the CDMA Frequency Assignment has changed (the computed CDMA Channel is
35 different from CDMACH_S), the mobile station shall perform the following actions:

- 36 • Set CDMACH_S to the new CDMA Channel.

- 1 • Set PAGE_CHAN_S to '1'.
- 2 • Set PAGECH_S to the Primary Paging Channel.
- 3 • Set CONFIG_MSG_SEQ_S, SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
4 CHAN_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S,
5 GEN_NGHBR_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S,
6 GLOB_SERV_REDIR_MSG_SEQ_S, EXT_GLOB_SERV_REDIR_MSG_SEQ_S,
7 USER_ZONE_IDMSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S, and ACC_MSG_SEQ_S to
8 NULL.
- 9 • Tune to the new CDMA Channel.

10 2.6.2.2.12.2 Extended CDMA Channel List Message on Broadcast Control Channel

11 Whenever the *Extended CDMA Channel List Message* is received on the Primary Broadcast
12 Control Channel, the mobile station shall compare the configuration message sequence
13 number, CONFIG_MSG_SEQ_R, to that stored in CONFIG_MSG_SEQ_S. If the comparison
14 results in a match, the mobile station may ignore the message. If the comparison results
15 in a mismatch, the mobile station shall process the remaining fields in the message as
16 follows:

17 The mobile station shall store the following parameters:

- 18 • Configuration message sequence number
19 (CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_R,
20 EXT_CHAN_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R).

21 To determine the CDMA Channel (Frequency Assignment) for its Broadcast Control
22 Channel, the mobile station shall first select a subset of CDMA channels from the
23 *Extended CDMA Channel List Message* that will be used for channel hashing. The attributes
24 for channel selection are support for Quick Paging Channel and transmit diversity. The
25 preferred order of channel selection is specified by CHAN_SEL_PREF_S in the *MC-RR*
26 *Parameters Message*.

27 The mobile station shall first select the entire CDMA channel list for channel hashing.

28 If support for the Quick Paging Channel is preferred for CDMA channel selection over
29 transmit diversity (CHAN_SEL_PREF_S = 0], the mobile station shall perform the following:

- 30 • If the mobile station supports Quick Paging Channel, the mobile station shall select
31 those CDMA channels for further channel selection with the following rules:
 - 32 – If RC_QPCH_SEL_INCL_R is equal to '1', the mobile station shall select those
33 CDMA channels with RC_QPCH_HASH_IND_R set to '1'.
 - 34 – If RC_QPCH_SEL_INCL_R is equal to '0', the mobile station shall select all CDMA
35 channels in the *Extended CDMA Channel List Message* for further channel
36 selection processing.

- 1 – If TD_SEL_INCL_r is equal to '1' and the mobile station is capable of supporting
- 2 the transmit diversity mode specified by TD_MODE_r, the mobile station shall
- 3 select those channels with TD_HASH_IND_r set to '1' from the previously
- 4 selected channel subset of the CDMA channel list.
- 5 – If TD_SEL_INCL_r is equal to '1' and the mobile station's transmit diversity
- 6 support is different than the transmit diversity mode specified by TD_MODE_r,
- 7 the mobile station shall select those channels with TD_HASH_IND_r set to '0'
- 8 from the previously selected channel subset of the CDMA channel list.
- 9 • If the mobile station does not support Quick Paging Channel, the mobile station
- 10 shall determine the CDMA Channel [frequency assignment] for its Broadcast
- 11 Control Channel as specified below:
- 12 – If TD_SEL_INCL_r is equal to '1' and the mobile station is capable of supporting
- 13 transmit diversity mode specified by TD_MODE_r, the mobile station shall select
- 14 from the CDMA channel list those CDMA channels that have TD_HASH_IND_r
- 15 set to '1'.
- 16 – If TD_SEL_INCL_r is equal to '1' and the mobile station's transmit diversity
- 17 support is different than that specified by TD_MODE_r, the mobile station shall
- 18 select from the CDMA channel list those channels with TD_HASH_IND_r set to
- 19 '0'.

20 If support for transmit diversity is preferred for CDMA channel selection over support for
 21 the QPCH (i.e., CHAN_SEL_PREF_s = 1), the mobile station shall perform the following:

- 22 • If TD_SEL_INCL_r is equal to '1' and the mobile station is capable of supporting the
- 23 transmit diversity mode specified by TD_MODE_r, the mobile station shall select
- 24 those CDMA channels that have TD_HASH_IND_r set to '1' from the CDMA channel
- 25 list. The mobile station shall continue channel selection from the previous selected
- 26 subset of the CDMA channel list in the message as follows:
- 27 – If RC_QPCH_SEL_INCL_r is equal to '1' and the mobile station is capable of
- 28 supporting QPCH, the mobile station shall select those CDMA channels with
- 29 RC_QPCH_HASH_IND_r set to '1'.
- 30 – Otherwise, the mobile station shall use the entire previously selected channel
- 31 subset for CDMA channel hashing.

32 After the channel subset is selected, the mobile station shall use the hash algorithm
 33 specified in 2.6.7.1 with the number of channels in the selected channel subset of the
 34 CDMA channel list to determine the CDMA Channel (Frequency Assignment) for its
 35 Broadcast Control Channel.

36 If the CDMA Frequency Assignment has changed (the computed CDMA Channel is
 37 different from CDMACH_s), the mobile station shall perform the following:

- 1 • Set CDMACH_S to the new CDMA Channel.
- 2 • Set CONFIG_MSG_SEQ_S, A41_SYS_PAR_MSG_SEQ_S, MC_RR_PAR_MSG_SEQ_S,
3 UNI_NGHBR_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
4 USER_ZONE_ID_MSG_SEQ_S, and PRI_NGHBR_LST_MSG_SEQ_S and ACC_MSG_SEQ_S
5 to NULL
- 6 • If the assigned CDMA channel supports transmit diversity, the mobile station shall
7 set the following fields corresponding to the assigned CDMA channel:
 - 8 – SR1_TD_POWER_LEVEL_S = TD_POWER_LEVEL_r.
 - 9 – SR1_TD_MODE_S = TD_MODE_r.
 - 10 – BRAT_S = SR1_BRAT_TD_S.
 - 11 – BCCH_CODE_RATE_S = SR1_CRAT_TD_S.
 - 12 – BCCH_S = BCCH_CODE_CHAN_TD_S.
- 13 • Otherwise, the mobile station shall set the following fields corresponding to the
14 assigned CDMA channel:
 - 15 – BRAT_S = SR1_BRAT_NON_TD_S,
 - 16 – BCCH_CODE_RATE_S = SR1_CRAT_NON_TD_S,
 - 17 – BCCH_S = BCCH_CODE_CHAN_NON_TD_S,
- 18 • Tune to the new CDMA Channel

19 2.6.2.2.13 ANSI-41 System Parameters Message

20 Whenever an *ANSI-41 System Parameters Message* is received, the configuration message
21 sequence number, CONFIG_MSG_SEQ_r, shall be compared to that stored in
22 A41_SYS_PAR_MSG_SEQ_S. If the comparison results in a match, the mobile station may
23 ignore the message. If the comparison results in a mismatch, then the mobile station
24 shall process the remaining fields in the message as described in 2.6.2.2.13.1,
25 2.6.2.2.13.2, 2.6.2.2.13.3, and 2.6.2.2.13.4.

26 If REG_PRD is not within the valid range specified in 3.7.2.3.2.1, then the mobile station
27 shall ignore the *ANSI-41 System Parameters Message* that contains it.

28 2.6.2.2.13.1 Stored Parameters

29 The mobile station shall store the following parameters:

- 30 • Configuration message sequence number
31 (CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_r,
32 A41_SYS_PAR_MSG_SEQ_S = CONFIG_MSG_SEQ_r)
- 33 • Home registration indicator (HOME_REG_S = HOME_REG_r)

- 1 • SID roamer registration indicator ($\text{FOR_SID_REG}_S = \text{FOR_SID_REG}_T$)
- 2 • NID roamer registration indicator ($\text{FOR_NID_REG}_S = \text{FOR_NID_REG}_T$)
- 3 • Power-up registration indicator ($\text{POWER_UP_REG}_S = \text{POWER_UP_REG}_T$)
- 4 • Power-down registration indicator ($\text{POWER_DOWN_REG}_S = \text{POWER_DOWN_REG}_T$)
- 5 • Parameter-change registration indicator ($\text{PARAMETER_REG}_S = \text{PARAMETER_REG}_T$)
- 6 • Preferred Enhanced Access Channel MSID type
- 7 ($\text{PREF_MSID_TYPE}_S = \text{PREF_MSID_TYPE}_T$)
- 8 • The mobile station shall set its operational IMSI, IMSI_O , as follows:
 - 9 – If $\text{IMSI_T_SUPPORTED}_T$ is equal to '0', the mobile station shall set IMSI_O to
 - 10 IMSI_M .
 - 11 – If $\text{IMSI_T_SUPPORTED}_T$ is equal to '1' and the mobile station's IMSI_T has been
 - 12 programmed, the mobile station shall set IMSI_O to IMSI_T .
 - 13 – If $\text{IMSI_T_SUPPORTED}_T$ is equal to '1' and the mobile station's IMSI_T has not
 - 14 been programmed, the mobile station shall set IMSI_O to IMSI_M .
 - 15 – If IMSI_O has been changed, the mobile station shall set
 - 16 $\text{A41_SYS_PAR_MSG_SEQ}_S$ and $\text{EXT_CHAN_LST_MSG_SEQ}_S$ to NULL.
- 17 • If OTHER_INFO_INCL_T is set to '1', the mobile station shall store:
 - 18 – Base station identification ($\text{BASE_ID}_S = \text{BASE_ID}_T$)
 - 19 – If $\text{MCC}_T = '111111111'$ and $\text{IMSI}_{11_12}_T = '1111111'$, the mobile station shall
 - 20 set the IMSI_O to IMSI_M and store:
 - 21 Mobile Country Code ($\text{MCC}_S = \text{MCC}_M$) and
 - 22 IMSI 11th and 12th digits ($\text{IMSI}_{11_12}_S = \text{IMSI}_{M_11_12}$);
 - 23 – Otherwise, the mobile station shall store:
 - 24 Mobile Country Code ($\text{MCC}_S = \text{MCC}_T$) and
 - 25 IMSI 11th and 12th digits ($\text{IMSI}_{11_12}_S = \text{IMSI}_{11_12}_T$).
 - 26 – Broadcast GPS assist indicator ($\text{BROADCAST_GPS_ASST}_S =$
 - 27 $\text{BROADCAST_GPS_ASST}_T$)
 - 28 – Signaling encryption supported indicator ($\text{SIG_ENCRYPT_SUP}_S =$
 - 29 SIG_ENCRYPT_SUP_T)
 - 30 – Store encryption key indicator ($\text{STORE_KEY}_S = \text{STORE_KEY}_T$)
- 31 • If IMSI_O is set to the IMSI_M , the mobile station shall set:

- 1 – IMSI_O_S_s to IMSI_M_S_p (i.e., IMSI_O_S1_s to IMSI_M_S1_p and IMSI_O_S2_s to
- 2 IMSI_M_S2_p)
- 3 – IMSI_O_11_12_s to IMSI_M_11_12_p
- 4 – MCC_O_s to MCC_M_p
- 5 – IMSI_O_ADDR_NUM_s to IMSI_M_ADDR_NUM_p
- 6 • If IMSI_O is set to the IMSI_T, the mobile station shall set:
 - 7 – IMSI_O_S_s to IMSI_T_S_p (i.e., IMSI_O_S1_s to IMSI_T_S1_p and IMSI_O_S2_s to
 - 8 IMSI_T_S2_p).
 - 9 – IMSI_O_11_12_s to IMSI_T_11_12_p
 - 10 – MCC_O_s to MCC_T_p
 - 11 – IMSI_O_ADDR_NUM_s to IMSI_T_ADDR_NUM_p
 - 12 • Delete foreign TMSI (DELETE_FOR_TMSI_s = DELETE_FOR_TMSI_p)
 - 13 • Use TMSI (USE_TMSI_s = USE_TMSI_p)
 - 14 • TMSI zone length (TMSI_ZONE_LEN_s = TMSI_ZONE_LEN_p)
 - 15 • TMSI zone number (TMSI_ZONE_s = TMSI_ZONE_p)
 - 16 • Maximum number of alternative service options (MAX_NUM_ALT_SO_s =
 - 17 MAX_NUM_ALT_SO_p) if included in the message; otherwise, MAX_NUM_ALT_SO_s =
 - 18 '000'.
 - 19 • The mobile station shall set all bits of TMSI_CODE_{s-p} to '1' if all of the following
 - 20 conditions are met:
 - 21 – The bits of TMSI_CODE_{s-p} are not all equal to '1',
 - 22 – DELETE_FOR_TMSI_s is equal to '1', and
 - 23 – ASSIGNING_TMSI_ZONE_LEN_{s-p} is not equal to TMSI_ZONE_LEN_s, or the least
 - 24 significant ASSIGNING_TMSI_ZONE_LEN_{s-p} octets of ASSIGNING_TMSI_ZONE_{s-}
 - 25 _p are not equal to TMSI_ZONE_s.
- 26 If the mobile station supports packet data service, the mobile station shall store the packet
- 27 data services zone identifier (PACKET_ZONE_ID_s = PACKET_ZONE_ID_p); otherwise, the
- 28 mobile station shall set PACKET_ZONE_ID_s to '00000000'.
- 29 If the mobile station supports the *Device Information Message* on the r-csch, the mobile
- 30 station shall store:
 - 31 • Autonomous message supported indicator
 - 32 (AUTO_MSG_SUPPORTED_s = AUTO_MSG_SUPPORTED_p)

If $\text{AUTO_MSG_SUPPORTED}_r$ is equal to '1' and the mobile station supports *the Device Information Message* on the r-csch, the mobile station shall store:

- Autonomous message interval
($\text{AUTO_MSG_INTERVAL}_s = \text{AUTO_MSG_INTERVAL}_r$)

The mobile station shall also store the following parameters if the mobile station is not in the *Origination Attempt Substate* or *Page Response Substate*:

- System identification ($\text{SID}_s = \text{SID}_r$)
- Network identification ($\text{NID}_s = \text{NID}_r$)
- Registration zone ($\text{REG_ZONE}_s = \text{REG_ZONE}_r$)
- Number of registration zones to be retained ($\text{TOTAL_ZONES}_s = \text{TOTAL_ZONES}_r$)
- Zone timer length ($\text{ZONE_TIMER}_s = \text{ZONE_TIMER}_r$)
- Multiple SID storage indicator ($\text{MULT_SIDS}_s = \text{MULT_SIDS}_r$)
- Multiple NID storage indicator ($\text{MULT_NIDS}_s = \text{MULT_NIDS}_r$)
- Registration period ($\text{REG_PRD}_s = \text{REG_PRD}_r$)
- If DIST_REG_INCL is equal to '1', the mobile station shall store:
 - Registration distance ($\text{REG_DIST}_s = \text{REG_DIST}_r$)
- If DIST_REG_INCL is equal to '0', then the mobile station shall set REG_DIST equal to '000000000000'.

The mobile station shall ignore any fields at the end of the *ANSI-41 System Parameters Message* that are not defined according to the protocol revision level (MOB_P_REV_p of the current band class) being used by the mobile station.

2.6.2.2.13.2 Roaming Status

The mobile station shall determine the roaming status for the mobile station (see 2.6.5.3).
The mobile station should indicate to the user whether the mobile station is roaming.

2.6.2.2.13.3 Registration

The mobile station shall update stored variables and perform other registration procedures as specified in 2.6.5.5.2.2.

2.6.2.2.13.4 PACA Disable for SID Change

If PACA_s is equal to enabled, and SID_s is not equal to PACA_SID_s , the mobile station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

2.6.2.2.14 MC-RR Parameters Message

Whenever an *MC-RR Parameters Message* is received, the configuration message sequence number, $CONFIG_MSG_SEQ_r$, shall be compared to that stored in $MC_RR_PAR_MSG_SEQ_s$. If the comparison results in a match, the mobile station may ignore the message. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as described in 2.6.2.2.14.1, 2.6.2.2.14.2, and 2.6.2.2.14.3.

If the protocol revision level supported by the mobile station ($MOB_P_REV_p$) is less than the minimum protocol revision level supported by the base station ($MIN_P_REV_r$), the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a protocol mismatch indication (see 2.6.1.1).

If PWR_REP_THRESH is not within the valid ranges specified in 3.7.2.3.2.1, then the mobile station shall ignore the *MC-RR Parameters Message* that contains them.

If the mobile station supports Spreading Rate 3 on the common channel and $SR3_INCL_s$ is equal to '1', the mobile station shall set:

- $BRAT_s = SR3_BRAT_r$,
- $BCCH_s = SR3_BCCH_CODE_CHAN_r$;
- $SR3_PRIMARY_PILOT_s = SR3_PRIMARY_PILOT_r$;
- $SR3_PILOT_POWER1_s = SR3_PILOT_POWER1_r$;
- $SR3_PILOT_POWER2_s = SR3_PILOT_POWER2_r$;
- If $SR3_CENTER_FREQ_INCL_r$ is equal to '1', $POTENTIAL_CDMACH_s = SR3_CENTER_FREQ_r$.

If $POTENTIAL_CDMACH_s$ is different from $CDMACH_s$, the mobile station shall set $CDMACH_s = POTENTIAL_CDMACH_s$ and then tune to the CDMA Channel ($CDMACH_s$).

2.6.2.2.14.1 Stored Parameters

The mobile station shall store the following parameters:

- Configuration message sequence number
($CONFIG_MSG_SEQ_s = CONFIG_MSG_SEQ_r$,
 $MC_RR_PAR_MSG_SEQ_s = CONFIG_MSG_SEQ_r$)
- Base station identification ($BASE_ID_s = BASE_ID_r$)
- Protocol revision level ($P_REV_s = P_REV_r$)
- Protocol revision level currently in use ($P_REV_IN_USE_s =$ the lesser value of P_REV_s and $MOB_P_REV_p$ of the current band class)

- 1 • Minimum protocol revision level ($\text{MIN_P_REV}_S = \text{MIN_P_REV}_r$) if included in the
- 2 message; otherwise, $\text{MIN_P_REV}_S = '00000010'$ for Band Class 0 and $\text{MIN_P_REV}_S =$
- 3 $'00000001'$ for Band Class 1.

- 4 • Search window size for the Active Set and Candidate Set
- 5 ($\text{SRCH_WIN_A}_S = \text{SRCH_WIN_A}_r$)

- 6 • Search window size for the Remaining Set ($\text{SRCH_WIN_R}_S = \text{SRCH_WIN_R}_r$)

- 7 • Pilot detection threshold ($\text{T_ADD}_S = \text{T_ADD}_r$)

- 8 • Pilot drop threshold ($\text{T_DROP}_S = \text{T_DROP}_r$)

- 9 • Active Set versus Candidate Set comparison threshold ($\text{T_COMP}_S = \text{T_COMP}_r$)

- 10 • Drop timer value ($\text{T_TDROP}_S = \text{T_TDROP}_r$)

- 11 • Maximum age for retention of Neighbor Set members
- 12 ($\text{NGHBR_MAX_AGE}_S = \text{NGHBR_MAX_AGE}_r$)

- 13 • Slope of the handoff add/drop criterion ($\text{SOFT_SLOPE}_S = \text{SOFT_SLOPE}_r$) if included
- 14 in the message; otherwise, $\text{SOFT_SLOPE}_S = '000000'$.

- 15 • Intercept of the handoff add criterion ($\text{ADD_INTERCEPT}_S = \text{ADD_INTERCEPT}_r$)

- 16 • Intercept of the handoff drop criterion ($\text{DROP_INTERCEPT}_S = \text{DROP_INTERCEPT}_r$)

- 17 • If ENC_SUPPORTED_r is equal to '1', the mobile station shall store:
- 18 – Signaling encryption supported indicator ($\text{SIG_ENCRYPT_SUP}_S =$
- 19 SIG_ENCRYPT_SUP_r)
- 20 – User information encryption supported indicator ($\text{UI_ENCRYPT_SUP}_S =$
- 21 UI_ENCRYPT_SUP_r)
- 22 – Store encryption key indicator ($\text{STORE_KEY}_S = \text{STORE_KEY}_r$)

- 23 If P_REV_IN_USE_S has been changed, the mobile station shall set ACC_MSG_SEQ_S ,
- 24 CURR_ACC_MSG_SEQ , $\text{A41_SYS_PAR_MSG_SEQ}_S$, $\text{UNI_NGHBR_LST_MSG_SEQ}_S$, and
- 25 $\text{EXT_GLOB_SERV_REDIR_MSG_SEQ}_S$ to NULL.

- 26 If CCH_INFO_INCL_r is equal to '1', the mobile station shall store:

- 27 • If $\text{MCC}_r = '111111111'$ and $\text{IMSI}_{11_12}_r = '1111111'$, the mobile station shall set
- 28 the IMSI_O to IMSI_M and store:
- 29 – Mobile Country Code ($\text{MCC}_S = \text{MCC}_M$) and
- 30 – IMSI 11th and 12th digits ($\text{IMSI}_{11_12}_S = \text{IMSI}_{M_11_12}_p$);

- 31 • Otherwise, the mobile station shall store:
- 32 – Mobile Country Code ($\text{MCC}_S = \text{MCC}_r$) and

- 1 – IMSI 11th and 12th digits ($\text{IMSI_11_12}_S = \text{IMSI_11_12}_T$).
- 2 • *Extended Global Service Redirection Message* sent
- 3 ($\text{EXT_GLOBAL_REDIRECT}_S = \text{EXT_GLOBAL_REDIRECT}_T$) if included; otherwise,
- 4 $\text{EXT_GLOBAL_REDIRECT}_S = '0'$
- 5 • *User Zone Identification Message* sent
- 6 ($\text{USER_ZONE_ID}_S = \text{USER_ZONE_ID}_T$) if included; otherwise, $\text{USER_ZONE_ID}_S = '0'$
- 7 • *Private Neighbor List Message* sent
- 8 ($\text{PRI_NGHBR_LST}_S = \text{PRI_NGHBR_LST}_T$) if included; otherwise,
- 9 $\text{PRI_NGHBR_LST}_S = '0'$
- 10 • *ANSI-41 RAND Message* sent
- 11 ($\text{SENDING_RAND}_S = \text{SENDING_RAND}_T$) if included; otherwise, $\text{SENDING_RAND}_S = '0'$
- 12 • Maximum slot cycle index
- 13 ($\text{MAX_SLOT_CYCLE_INDEX}_S = \text{MAX_SLOT_CYCLE_INDEX}_T$)
- 14 • Power control reporting threshold ($\text{PWR_REP_THRESH}_S = \text{PWR_REP_THRESH}_T$)
- 15 • Power control reporting frame count ($\text{PWR_REP_FRAMES}_S = \text{PWR_REP_FRAMES}_T$)
- 16 • Threshold report mode indicator
- 17 ($\text{PWR_THRESH_ENABLE}_S = \text{PWR_THRESH_ENABLE}_T$)
- 18 • Periodic report mode indicator ($\text{PWR_PERIOD_ENABLE}_S = \text{PWR_PERIOD_ENABLE}_T$).
- 19 • Power report delay ($\text{PWR_REP_DELAY}_S = \text{PWR_REP_DELAY}_T$)
- 20 • System reselection indicator ($\text{RESELECT_INCLUDED}_S = \text{RESELECT_INCLUDED}_T$).
- 21 • Base station latitude ($\text{BASE_LAT}_S = \text{BASE_LAT}_T$)
- 22 • Base station longitude ($\text{BASE_LONG}_S = \text{BASE_LONG}_T$)
- 23 • Pilot reporting indicator ($\text{PILOT_REPORT}_S = \text{PILOT_REPORT}_T$)
- 24 • Short Data Burst supported indicator ($\text{SDB_SUPPORTED}_S = \text{SDB_SUPPORTED}_T$)
- 25 • Broadcast GPS Assist Indicator ($\text{BROADCAST_GPS_ASST}_S =$
- 26 $\text{BROADCAST_GPS_ASST}_T$)
- 27 • Nominal reverse traffic channel output power offset relative to Reverse Pilot
- 28 Channel power ($\text{RLGAIN_TRAFFIC_PILOT}_S = \text{RLGAIN_TRAFFIC_PILOT}_T$)
- 29 • Data rate for the Forward Common Control Channels ($\text{FCCCH_RATE}_S =$
- 30 FCCCH_RATE_T)
- 31 • Code rate for the Forward Common Control Channels ($\text{FCCCH_CODE_RATE}_S =$
- 32 FCCCH_CODE_RATE_T)

- 1 • For $i = 0$ to $\text{NUM_FCCCH}_S - 1$, store the channel code index for each Forward
2 Common Control Channel ($\text{FCCCH_CODE_CHAN}_S[i] = \text{FCCCH_CODE_CHAN}_T$)
- 3 • Broadcast index ($\text{BCAST_INDEX}_S = \text{BCAST_INDEX}_T$)
- 4 • If NUM_BCCH_BCAST_T is greater than '000', i occurrences of the following fields,
5 where i ranges from 1 to NUM_BCCH_BCAST_T :
 - 6 – BCCH walsh code index ($\text{BCCH_CODE_CHAN}[i]_S = \text{BCCH_CODE_CHAN}[i]_T$)
 - 7 – BCCH data rate ($\text{BRAT}[i]_S = \text{BRAT}[i]_T$)
 - 8 – BCCH code rate ($\text{BCCH_CODE_RATE}[i]_S = \text{BCCH_CODE_RATE}[i]_T$)
- 9 • Sync ID supported indicator ($\text{USE_SYNC_ID}_S = \text{USE_SYNC_ID}_T$)
- 10 • Access entry handoff in order and message processing operation indicator
11 ($\text{ACC_ENT_HO_ORDER}_S = \text{ACC_ENT_HO_ORDER}_T$).
- 12 • If $\text{REV_PWR_CNTL_DELAY_INCL}$ is equal to '1', reverse power control delay
13 ($\text{REV_PWR_CNTL_DELAY}_S = \text{REV_PWR_CNTL_DELAY}_T$)
- 14 • Permission indicator for the mobile station to request QoS settings in the
15 *Origination Message* ($\text{MOB_QOS}_S = \text{MOB_QOS}_T$)
- 16 • If $\text{RESELECT_INCLUDED}_S$ is equal to '1', the mobile station shall store:
 - 17 – Pilot power threshold ($\text{EC_THRESH}_S = \text{EC_THRESH}_T$)
 - 18 – Pilot E_c/I_o threshold ($\text{EC_IO_THRESH}_S = \text{EC_IO_THRESH}_T$)
- 19 • Access handoff permitted indicator ($\text{ACCESS_HO}_S = \text{ACCESS_HO}_T$)
- 20 • Access probe handoff permitted indicator ($\text{ACCESS_PROBE_HO}_S =$
21 ACCESS_PROBE_HO_T)
- 22 • If ACCESS_PROBE_HO_S is equal to '1', access handoff list update permitted indicator
23 ($\text{ACC_HO_LIST_UPD}_S = \text{ACC_HO_LIST_UPD}_T$)
- 24 • Maximum number of times that the mobile station is permitted to perform an
25 access probe handoff ($\text{MAX_NUM_PROBE_HO}_S = \text{MAX_NUM_PROBE_HO}_T$)
- 26 • Access handoff permitted for message response indicator ($\text{ACCESS_HO_MSG_RSP}_S$
27 $= \text{ACCESS_HO_MSG_RSP}_T$)
- 28 • Access probe handoff permitted for other messages indicator
29 ($\text{ACC_PROBE_HO_OTHER_MSG}_S = \text{ACC_PROBE_HO_OTHER_MSG}_T$)
- 30 • If USER_ZONE_ID_S is equal to '0', then the mobile station shall perform the
31 following:
 - 32 – Set $\text{USER_ZONE_ID_MSG_SEQ}_S$ to CONFIG_MSG_SEQ_S .

- 1 – Set the UZID field of the UZ_REC to '0000000000000000' for all entries.
- 2 – Set the UZ_REV field of the UZ_REC to '0000' for all entries.
- 3 – Set the TEMP_SUB field of the UZ_REC to '0' for all entries.
- 4 • If USER_ZONE_ID_S is equal to '1' and the mobile station does not support Tiered
- 5 Services, then the mobile station shall set USER_ZONE_ID_MSG_SEQ_S to
- 6 CONFIG_MSG_SEQ_S.
- 7 • If PRI_NGHBR_LIST_S is equal to '0', then the mobile station shall set
- 8 PRI_NGHBR_LIST_MSG_SEQ_S to CONFIG_MSG_SEQ_S.
- 9 • If PRI_NGHBR_LIST_S is equal to '1' and the mobile station does not support Tiered
- 10 Services, then the mobile station shall set PRI_NGHBR_LIST_MSG_SEQ_S to
- 11 CONFIG_MSG_SEQ_S.
- 12 • If SENDING_RAND_S is equal to '1' and the mobile station is not in the *Origination*
- 13 *Attempt Substate* or *Page Response Substate*, then the mobile station shall set AUTH_S
- 14 to '01'. Otherwise, the mobile station shall set AUTH_S to '00'.

15 If CCH_INFO_INCL_r is equal to '1' and the mobile station supports the Quick Paging
16 Channel operation:

- 17 • The mobile station shall set QPCH_SUPPORTED_S to QPCH_SUPPORTED_r.
- 18 • If QPCH_SUPPORTED_r = '1':
- 19 – The mobile station shall set QPCH_RATE_S to QPCH_RATE_r.
- 20 – If the mobile station is monitoring the Broadcast Control Channel in Spreading
- 21 Rate 1 and the number of Quick Paging Channels specified in the received
- 22 message (NUM_QPCH_r) is different from NUM_QPCH_S, the mobile station shall
- 23 use the hash algorithm specified in 2.6.7.1 to select a new Quick Paging
- 24 Channel number in the range 1 to NUM_QPCH_r. The mobile station shall store
- 25 the new Quick Paging Channel number as QPAGECH_S and as
- 26 ASSIGNED_QPAGECH_S. The mobile station shall then set NUM_QPCH_S to
- 27 NUM_QPCH_r.
- 28 – If the mobile station is monitoring the Broadcast Control Channel in Spreading
- 29 Rate 3 and the number of Quick Paging Channels specified in the received
- 30 message (NUM_QPCH_r) is different from NUM_QPCH_S, the mobile station shall
- 31 perform the following:
- 32 The mobile station shall use the hash algorithm specified in 2.6.7.1 to select a
- 33 new Quick Paging Channel number in the range 1 to NUM_QPCH_r.
- 34 The mobile station shall store the new Quick Paging Channel number as
- 35 QPAGECH_S and as ASSIGNED_QPAGECH_S.

1 For $i = 0$ to $\text{NUM_QPCH}_S - 1$, store the channel code index for each Quick Paging
 2 Channel ($\text{QPCH_CODE_CHAN}_S[i] = \text{QPCH_CODE_CHAN}_R$).

- 3 • The mobile station shall set $\text{QPCH_POWER_LEVEL_PAGE}_S$ to
 4 $\text{QPCH_POWER_LEVEL_PAGE}_R$.
- 5 • The mobile station shall set $\text{QPCH_CCI_SUPPORTED}_S$ to $\text{QPCH_CCI_SUPPORTED}_R$.
- 6 • If $\text{QPCH_CCI_SUPPORTED}_R = '1'$, the mobile station shall set
 7 $\text{QPCH_POWER_LEVEL_CONFIG}_S$ to $\text{QPCH_POWER_LEVEL_CONFIG}_R$.
- 8 • The mobile station shall set $\text{QPCH_BI_SUPPORTED}_S$ to $\text{QPCH_BI_SUPPORTED}_R$.
- 9 • If $\text{QPCH_BI_SUPPORTED}_R = '1'$, the mobile station shall set
 10 $\text{QPCH_POWER_LEVEL_BCAST}_S$ to $\text{QPCH_POWER_LEVEL_BCAST}_R$.

11 The mobile station shall ignore any fields at the end of the *MC-RR Parameters Message* that
 12 are not defined according to the protocol revision level (MOB_P_REV_P of the current band
 13 class) being used by the mobile station.

14 2.6.2.2.14.2 Slot Cycle Index

15 The mobile station shall set $\text{SLOT_CYCLE_INDEX}_S$ to the smaller of: the preferred slot cycle
 16 index $\text{SLOT_CYCLE_INDEX}_P$ and the maximum slot cycle index
 17 $\text{MAX_SLOT_CYCLE_INDEX}_S$. If the mobile station is operating in the slotted mode, it shall
 18 set its slot cycle length as described in 2.6.2.1.1.3.

19 2.6.2.2.14.3 Forward Common Control Channel Assignment Change

20 If the number of Forward Common Control Channels specified in the *MC-RR Parameters*
 21 *Message* (NUM_FCCCH_P) is different from NUM_FCCCH_S , the mobile station shall use the
 22 hash algorithm specified in 2.6.7.1 to select a new Forward Common Control Channel
 23 number in the range 1 to NUM_FCCCH_R and shall store this value as FCCCH_ID_S , store
 24 FCCCH_CODE_RATE_R and FCCCH_CODE_CHAN_R of the corresponding Forward Common
 25 Control Channel as FCCCH_CODE_RATE_S and FCCCH_CODE_CHAN_S . The mobile station
 26 shall then set NUM_FCCCH_S to NUM_FCCCH_R .

27 The mobile station shall set ACC_MSG_SEQ_S to NULL.

28 2.6.2.2.15 Enhanced Access Parameters Message

29 Whenever an *Enhanced Access Parameters Message* is received on the f-csch, the sequence
 30 number, ACC_MSG_SEQ_R , shall be compared to ACC_MSG_SEQ_S . If the comparison results
 31 in a match, the mobile station may ignore the message. If the comparison results in a
 32 mismatch, then the mobile station shall process the remaining fields in the message as
 33 follows:

34 If PROBE_PN_RAN , MAX_REQ_SEQ , or MAX_RSP_SEQ are not within the valid ranges
 35 specified in 3.7.2.3.2.2, then the mobile station shall ignore the *Enhanced Access*

1 *Parameters Message* that contains them.

2 The mobile station shall store the following parameters:

- 3 • *Enhanced Access Parameters Message* sequence number
4 (ACC_MSG_SEQ_S = ACC_MSG_SEQ_R)
- 5 • Persistence related parameters:
 - 6 – If PSIST_PARMS_INCL is equal to '1', store the following:
 - 7 + Persistence parameter number according to the following rule: If the mobile
8 station's access overload class is in the range 0-9 inclusive, set
9 PSIST_EACH_S equal to PSIST(0-9)_EACH_R; otherwise set PSIST_EACH_S equal
10 to PSIST(n)_EACH_R, where n is equal to the mobile station access overload
11 class.
 - 12 + Persistence modifier for Enhanced Access Channel attempts for
13 registrations which are not responses to the *Registration Request Order*
14 (REG_PSIST_EACH_S = REG_PSIST_EACH_R).
 - 15 + Persistence modifier for Enhanced Access Channel attempts for message
16 transmissions (MSG_PSIST_EACH_S = MSG_PSIST_EACH_R).
 - 17 + Persistence modifier for emergency calls by the mobile stations in access
18 overload classes 0 to 9 (PSIST_EMG_S = PSIST_EMG_R).
 - 19 – If PSIST_PARMS_INCL_R is equal to '0', store the following:
 - 20 + Set PSIST_S to '0'.
 - 21 + Persistence modifier for emergency calls by a mobile station in access
22 overload classes 0 to 9 (PSIST_EMG_S = '0').
 - 23 + Persistence modifier for Access Channel attempts for message
24 transmissions (MSG_PSIST_S = '0').
 - 25 + Persistence modifier for Enhanced Access Channel attempts for
26 registrations which are not responses to the *Registration Request Order*
27 (REG_PSIST_S = '0').
- 28 • Link Access Control related parameters:
 - 29 – Acknowledgment timeout (EACH_ACC_TMO_S = ACC_TMO_R)
 - 30 – Time randomization for Enhanced Access Channel probes
31 (PROBE_PN_RAN_S = PROBE_PN_RAN_R)
 - 32 – Maximum number of probe sequences for an Enhanced Access Channel request
33 (MAX_REQ_SEQ_S = MAX_REQ_SEQ_R)
 - 34 – Maximum number of probe sequences for an Enhanced Access Channel
35 response (MAX_RSP_SEQ_S = MAX_RSP_SEQ_R)

- 1 • Mode Selection Table:
- 2 For i = 1 to NUM_MODE_SELECTION_ENTRIES + 1:
- 3 – MODE_SELECTION_S[i].ACCESS_MODE = ACCESS_MODE field of the ith
- 4 occurrence of the record
- 5 – MODE_SELECTION_S[i].MIN_DURATION = ACCESS_MODE_MIN_DURATION field
- 6 of the ith occurrence of the record
- 7 – MODE_SELECTION_S[i].MAX_DURATION = ACCESS_MODE_MAX_DURATION field
- 8 of the ith occurrence of the record
- 9 • Reverse gain adjustment of the Enhanced Access Channel or Reverse Common
- 10 Control Channel relative to the Reverse Pilot Channel (RLGAIN_COMMON_PILOT_S
- 11 = RLGAIN_COMMON_PILOT_P)
- 12 • The threshold level at which the interference correction begins to be applied
- 13 (IC_THRESH_S = IC_THRESH_P)
- 14 • The maximum interference correction that can be applied (IC_MAX_S = IC_MAX_P)
- 15 • Mode-specific parameters for the Enhanced Access Channel:
- 16 For i = 1 to NUM_MODE_PARM_REC + 1:
- 17 For j = 0 to 7:
- 18 If the (j+1)th subfield of APPLICABLE_MODES is equal to '1', store the
- 19 following parameters:
- 20 – Nominal transmit power offset on the Enhanced Access Channel
- 21 (MODE_PARMS_S[j].EACH_NOM_PWR = EACH_NOM_PWR field of the ith
- 22 occurrence of the record)
- 23 – Initial power offset for access on the Enhanced Access Channel
- 24 (MODE_PARMS_S[j].EACH_INIT_PWR = EACH_INIT_PWR field of the ith
- 25 occurrence of the record)
- 26 – Power increment on the Enhanced Access Channel
- 27 (MODE_PARMS_S[j].EACH_PWR_STEP = EACH_PWR_STEP field of the ith
- 28 occurrence of the record)
- 29 – Number of access probes on the Enhanced Access Channel
- 30 (MODE_PARMS_S[j].EACH_NUM_STEP = EACH_NUM_STEP field of the ith
- 31 occurrence of the record)
- 32 – Preamble enabled indicator on the Enhanced Access Channel
- 33 (MODE_PARMS_S[j].EACH_PREAMBLE_ENABLED = EACH_PREAMBLE_ENAB
- 34 LED field of the ith occurrence of the record)
- 35 – Number of preamble fractions sent on the Enhanced Access Channel if

- 1 MODE_PARMS_S[j].EACH_PREAMBLE_ENABLED is equal to '1'
2 (MODE_PARMS_S[j].EACH_PREAMBLE_NUM_FRAC =
3 EACH_PREAMBLE_NUM_FRAC field of the *i*th occurrence of the record)
- 4 – Fractional preamble duration on the Enhanced Access Channel if
5 MODE_PARMS_S[j].EACH_PREAMBLE_ENABLED is equal to '1'
6 (MODE_PARMS_S[j].EACH_PREAMBLE_FRAC_DURATION = EACH_PREAMB
7 LE_FRAC_DURATION field of the *i*th occurrence of the record)
- 8 – Preamble gated-off duration on the Enhanced Access Channel if
9 MODE_PARMS_S[j].EACH_PREAMBLE_ENABLED is equal to '1'
10 (MODE_PARMS_S[j].EACH_PREAMBLE_OFF_DURATION = EACH_PREAMBLE
11 _OFF_DURATION field of the *i*th occurrence of the record)
- 12 – Additional preamble duration on the Enhanced Access Channel if
13 MODE_PARMS_S[j].EACH_PREAMBLE_ENABLED is equal to '1'
14 (MODE_PARMS_S[j].EACH_PREAMBLE_ADD_DURATION =
15 EACH_PREAMBLE_ADD_DURATION field of the *i*th occurrence of the
16 record)
- 17 – Access threshold on the Enhanced Access Channel
18 (MODE_PARMS_S[j].EACH_ACCESS_THRESH = EACH_ACCESS_THRESH
19 field of the *i*th occurrence of the record)
- 20 – Enhanced Access Channel probe backoff range
21 (MODE_PARMS_S[j].EACH_PROBE_BKOFF = EACH_PROBE_BKOFF field of
22 the *i*th occurrence of the record)
- 23 – Enhanced Access Channel probe sequence backoff range
24 (MODE_PARMS_S[j].EACH_BKOFF = EACH_BKOFF field of the *i*th
25 occurrence of the record)
- 26 – Enhanced Access Channel slot
27 (MODE_PARMS_S[j].EACH_SLOT = EACH_SLOT field of the *i*th occurrence
28 of the record)
- 29 – Enhanced Access Channel first slot offset
30 (MODE_PARMS_S[j].EACH_SLOT_OFFSET1 = EACH_SLOT_OFFSET1 field
31 of the *i*th occurrence of the record)
- 32 – Enhanced Access Channel second slot offset
33 (MODE_PARMS_S[j].EACH_SLOT_OFFSET2 = EACH_SLOT_OFFSET2 field of
34 the *i*th occurrence of the record)
- 35 • Additional parameters for the Basic Access Mode:
- 36 If BA_PARMS_LEN is equal to '0', set the Basic Access Mode supported indicator,
37 BA_SUPPORTED_S, to '0'; otherwise store the following parameters:

- 1 – Basic Access Mode supported indicator ($BA_SUPPORTED_S = '1'$)
- 2 – Number of Enhanced Access Channels ($NUM_EACH_BA_S = NUM_EACH_BA_T$)
- 3 – Rate words supported on the Enhanced Access Channels
- 4 ($EACH_BA_RATES_SUPPORTED_S = EACH_BA_RATES_SUPPORTED_T$)
- 5 • Additional parameters for the Reservation Access Mode:
 - 6 If RA_PARMS_LEN is equal to '0', set the Reservation Access Mode supported
 - 7 indicator, $RA_SUPPORTED_S$, to '0'; otherwise store the following parameters:
 - 8 – Reservation Access Mode supported indicator ($RA_SUPPORTED_S = '1'$)
 - 9 – Number of Enhanced Access Channels ($NUM_EACH_RA_S = NUM_EACH_RA_T$)
 - 10 – Rate words supported on the Enhanced Access Channels
 - 11 ($EACH_RA_RATES_SUPPORTED_S = EACH_RA_RATES_SUPPORTED_T$)
 - 12 – Number of Common Assignment Channels ($NUM_CACH_S = NUM_CACH_T$)
 - 13 – Code rate of Common Assignment Channels ($CACH_CODE_RATE_S =$
 - 14 $CACH_CODE_RATE_T$)
 - 15 – For $i = 0$ to $NUM_CACH_S - 1$, store the channel code index for each Common
 - 16 Assignment Channel ($CACH_CODE_CHAN_S[i] = CACH_CODE_CHAN_T$).
 - 17 – Number of Reverse Common Control Channels ($NUM_RCCCH_S = NUM_RCCCH_T$)
 - 18 – Rate words supported on the Reverse Common Control Channels
 - 19 ($RCCCH_RATES_SUPPORTED_S = RCCCH_RATES_SUPPORTED_T$)
 - 20 – Preamble enabled indicator on the Reverse Common Control Channels
 - 21 ($RCCCH_PREAMBLE_ENABLED_S = RCCCH_PREAMBLE_ENABLED_T$)
 - 22 – Number of preamble fractions sent on the Reverse Common Control Channel if
 - 23 $RCCCH_PREAMBLE_ENABLED_T$ is equal to '1'
 - 24 ($RCCCH_PREAMBLE_NUM_FRAC_S = RCCCH_PREAMBLE_NUM_FRAC_T$)
 - 25 – Fractional preamble duration on the Reverse Common Control Channel if
 - 26 $RCCCH_PREAMBLE_ENABLED_T$ is equal to '1'
 - 27 ($RCCCH_PREAMBLE_FRAC_DURATION_S =$
 - 28 $RCCCH_PREAMBLE_FRAC_DURATION_T$)
 - 29 – Preamble gated-off duration on the Reverse Common Control Channel if
 - 30 $RCCCH_PREAMBLE_ENABLED_T$ is equal to '1'
 - 31 ($RCCCH_PREAMBLE_OFF_DURATION_S = RCCCH_PREAMBLE_OFF_DURATION_T$)
 - 32 – Additional preamble duration on the Reverse Common Control Channel if
 - 33 $RCCCH_PREAMBLE_ENABLED_T$ is equal to '1'
 - 34 ($RCCCH_PREAMBLE_ADD_DURATION_S = RCCCH_PREAMBLE_ADD_DURATION_T$)

- 1 – Slot duration on the Reverse Common Control Channel ($RCCCH_SLOT_S =$
2 $RCCCH_SLOT_T$)
- 3 – First slot offset of the Reverse Common Control Channel
4 ($RCCCH_SLOT_OFFSET1_S = RCCCH_SLOT_OFFSET1_T$)
- 5 – Second slot offset of the Reverse Common Control Channel
6 ($RCCCH_SLOT_OFFSET2_S = RCCCH_SLOT_OFFSET2_T$)
- 7 – Nominal transmit power offset on the Reverse Common Control Channel
8 ($RCCCH_NOM_PWR_S = RCCCH_NOM_PWR_T$)
- 9 – Initial power offset for access on the Reverse Common Control Channel
10 ($RCCCH_INIT_PWR_S = RCCCH_INIT_PWR_T$)
- 11 – Power Control delay for the Reservation Access Mode
12 ($RA_PC_DELAY_S = RA_PC_DELAY_T$)
- 13 – Maximum delay to receive the *Early Acknowledgment Channel Assignment*
14 *Message* on the Common Assignment Channel
15 ($EACAM_CACH_DELAY_S = EACAM_CACH_DELAY_T$)
- 16 – Indicator for handoff supported on the Reverse Common Control Channels
17 ($RCCCH_HO_SUPPORTED_S = RCCCH_HO_SUPPORTED_T$)
- 18 – Threshold for handoff on the Reverse Common Control Channels
19 ($RCCCH_HO_THRESH_S = RCCCH_HO_THRESH_T$)
- 20 – Maximum delay to receive the *Early Acknowledgment Channel Assignment*
21 *Message* and the *Power Control Channel Assignment Message*
22 ($EACAM_PCCAM_DELAY_S = EACAM_PCCAM_DELAY_T$)
- 23 – Number of Common Power Control Channels ($NUM_CPCCH_S = NUM_CPCCH_T$)
- 24 – Power control rate for the Common Power Control Channels
25 ($CPCCH_RATE_S = CPCCH_RATE_T$)
- 26 – For $i = 0$ to $NUM_CPCCH_S - 1$, store the channel code index for each Common
27 Power Control Channel ($CPCCH_CODE_CHAN_S[i] = CPCCH_CODE_CHAN_T$).
- 28 – Threshold for ignoring the power control bits in Reservation Access Mode
29 ($RA_DROP_THRESH_S = RA_DROP_THRESH_T$)
- 30 – Time after which mobile station aborts transmission if pilot E_c/I_o remains
31 below RA_DROP_THRESH
32 ($RA_DROP_THRESH_TIME_S = RA_DROP_THRESH_TIME_T$)
- 33 – Power up step size on the Common Power Control Channel for the Reservation
34 Access Mode ($RA_CPCCH_STEP_UP_S = RA_CPCCH_STEP_UP_T$)
- 35 – Power down step size on the Common Power Control Channel for the

Reservation Access Mode ($RA_CPCCH_STEP_DN_S = RA_CPCCH_STEP_DN_R$)

- Number of Power Control Subchannels for the Reservation Access Mode
($NUM_PCSCH_RA_S = NUM_PCSCH_RA_R$)

2.6.2.2.16 ANSI-41 RAND Message

Whenever an *ANSI-41 RAND Message* is received, the mobile station shall process the fields in the message as follows.

The mobile station shall store the following parameter if the mobile station is not in the *Origination Attempt Substate* or *Page Response Substate*:

- Random challenge value ($RAND_S = RAND_R$)
- Pilot PN sequence offset increment ($PILOT_PN_S = PILOT_PN_R$)

The mobile station shall ignore any fields at the end of the *ANSI-41 RAND Message* which are not defined according to the protocol revision level ($MOB_P_REV_P$ of the current band class) being used by the mobile station.

2.6.2.2.17 Universal Neighbor List Message

Whenever a valid *Universal Neighbor List Message* is received on the Primary Broadcast Control Channel, the configuration message sequence number, $CONFIG_MSG_SEQ_R$ shall be compared to that stored in $UNIV_NGHBR_LST_MSG_SEQ_S$. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as described below.

The mobile station shall store the following parameters:

- Configuration message sequence number
($CONFIG_MSG_SEQ_S = CONFIG_MSG_SEQ_R$,
 $UNIV_NGHBR_LST_MSG_SEQ_S = CONFIG_MSG_SEQ_R$).

If $RADIO_INTERFACE_TYPE_R$ is equal to '0000' but the $PILOT_INC$ field is not within the valid range specified in 3.7.2.3.2.33, then the mobile station shall ignore the entire record that contains it.

If $RADIO_INTERFACE_TYPE_R$ is equal to '0000' and the $PILOT_INC$ field is within the valid range specified in 3.7.2.3.2.33, the mobile station shall perform the following:

The mobile station shall store the Pilot PN sequence offset increment ($PILOT_INC_S = PILOT_INC_R$).

The mobile station shall set $NGHBR_SET_SIZE_S$ to NUM_NGHBR_R .

For each of the neighboring base stations contained in the *Universal Neighbor List Message*, if $FREQ_INCL_R$ is equal to '0', or if $FREQ_INCL_R$ is equal to '1' and $NGHBR_BAND_R$ is supported, the mobile station shall do the following:

- 1 • If the i^{th} occurrence of NGHBR_CONFIG_r is equal to '000', '001', '010', or '100', set
2 the NGHBR_CONFIG field of NGHBR_REC[i] to the i^{th} occurrence of
3 NGHBR_CONFIG_r; otherwise, set the NGHBR_CONFIG field of NGHBR_REC[i] to '011'.
- 4 • Set the NGHBR_PN field of NGHBR_REC[i] to the i^{th} occurrence of NGHBR_PN_r.
- 5 • Set the BCCH_SUPPORT field of NGHBR_REC[i] to the i^{th} occurrence of
6 BCCH_SUPPORT_r.
- 7 • Set the ADD_PILOT_REC_INCL field of NGHBR_REC[i] to the i^{th} occurrence of
8 ADD_PILOT_REC_INCL_r. If ADD_PILOT_REC_INCL_r equals '1', for each pilot
9 included in the message, the mobile station shall also perform the following:
 - 10 – Set the NGHBR_PILOT_REC_TYPE field of NGHBR_PILOT_REC to
11 NGHBR_PILOT_REC_TYPE_r.
 - 12 – If NGHBR_PILOT_REC_TYPE_r is equal to '000'. The mobile station shall:
 - 13 + Set the TD_POWER_LEVEL field of NGHBR_PILOT_REC to TD_POWER_LEVEL_r.
 - 14 + Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
 - 15 – If NGHBR_PILOT_REC_TYPE_r is equal to '001', the mobile station shall:
 - 16 + Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
 - 17 + Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
18 AUX_PILOT_WALSH_r with the Walsh Code length specified by
19 WALSH_LENGTH_r.
 - 20 – If NGHBR_PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
 - 21 + Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
 - 22 + Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
23 AUX_TD_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
 - 24 + Set the AUX_TD_POWER_LEVEL field of NGHBR_PILOT_REC to
25 AUX_TD_POWER_LEVEL_r.
 - 26 + Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
 - 27 – If NGHBR_PILOT_REC_TYPE_r is equal to '011', the mobile station shall:
 - 28 + Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to
29 SR3_PRIMARY_PILOT_r.
 - 30 + Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to
31 SR3_PILOT_POWER1_r.
 - 32 + Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to
33 SR3_PILOT_POWER2_r.

- 1 – If NGHBR_PILOT_REC_TYPE_r is equal to '100', the mobile station shall:
 - 2 + Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to
 - 3 SR3_PRIMARY_PILOT_r.
 - 4 + Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to
 - 5 SR3_PILOT_POWER1_r.
 - 6 + Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to
 - 7 SR3_PILOT_POWER2_r.
 - 8 + Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
 - 9 + Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
 - 10 AUX_PILOT_WALSH_r with the Walsh Code length specified by
 - 11 WALSH_LENGTH_r.
 - 12 + If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of
 - 13 NGHBR_PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1 field of
 - 14 NGHBR_PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code length
 - 15 specified by WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field of
 - 16 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of
 - 17 NGHBR_PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length
 - 18 specified by WALSH_LENGTH_r.
 - 19 + If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of
 - 20 NGHBR_PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2 field of
 - 21 NGHBR_PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code length
 - 22 specified by WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field of
 - 23 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of
 - 24 NGHBR_PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length
 - 25 specified by WALSH_LENGTH_r.
- 26 • If NGHBR_SRCH_MODE_r = '00' or '10', set the SEARCH_PRIORITY field of each
- 27 NGHBR_REC to '10' (high) for all NGHBR_SET_SIZE_s entries.
- 28 • If NGHBR_SRCH_MODE_r = '01' or '11', set the SEARCH_PRIORITY field of
- 29 NGHBR_REC[i] to the ith occurrence of SEARCH_PRIORITY_r.
- 30 • If NGHBR_SRCH_MODE_r = '00' or '01', set the SRCH_WIN_NGHBR field of each
- 31 NGHBR_REC to SRCH_WIN_N_r for all NGHBR_SET_SIZE_s entries.
- 32 • If NGHBR_SRCH_MODE_r = '00' or '01', set the SRCH_OFFSET_NGHBR field of each
- 33 NGHBR_REC to '000'.
- 34 • If NGHBR_SRCH_MODE_r = '10' or '11':

- 1 – set the SRCH_WIN_NGHR field of NGHBR_REC[i] to the i^{th} occurrence of
- 2 SRCH_WIN_NGHR_r
- 3 – if SRCH_OFFSET_INCL_r equals to '1', set the SRCH_OFFSET_NGHR field of
- 4 NGHBR_REC[i] to the i^{th} occurrence of SRCH_OFFSET_NGHR_r, and
- 5 – if SRCH_OFFSET_INCL_r equals to '0', set the SRCH_OFFSET_NGHR field of
- 6 each NGHBR_REC to '000'.
- 7 • If USE_TIMING_r is equal to '1', set the TIMING_INCL field of NGHBR_REC[i] to the i^{th}
- 8 occurrence of TIMING_INCL_r; otherwise, set the TIMING_INCL field of NGHBR_REC
- 9 to '0' for all entries.

10 For each of the neighboring base stations contained in the *Universal Neighbor List Message*,
 11 if FREQ_FIELDS_INCL_r equals '1', FREQ_INCL_r equals '1', and NGHBR_BAND_r is supported,
 12 the mobile station shall also perform the following:

- 13 • Set the NGHBR_BAND field of NGHBR_REC[i] to the i^{th} occurrence of
- 14 NGHBR_BAND_r.
- 15 • Set the NGHBR_FREQ field of NGHBR_REC[i] to the i^{th} occurrence of NGHBR_FREQ_r.

16 For each of the neighboring base stations contained in the *Universal Neighbor List Message*,
 17 if USE_TIMING_r is equal to '1' and TIMING_INCL_r equals '1', the mobile station shall also
 18 perform the following:

- 19 • Set the NGHBR_TX_OFFSET field of NGHBR_REC[i] to the i^{th} occurrence of
- 20 NGHBR_TX_OFFSET_r.
- 21 • If GLOBAL_TIMING_INCL_r is equal to '1', then the mobile station shall:
- 22 – Set the NGHBR_TX_DURATION field of NGHBR_REC to GLOBAL_TX_DURATION_r
- 23 for all entries.
- 24 – Set the NGHBR_TX_PERIOD field of NGHBR_REC to GLOBAL_TX_PERIOD_r for all
- 25 entries.
- 26 • If GLOBAL_TIMING_INCL_r is equal to '0', then the mobile station shall:
- 27 – Set the NGHBR_TX_DURATION field of NGHBR_REC[i] to the i^{th} occurrence of
- 28 NGHBR_TX_DURATION_r.
- 29 – Set the NGHBR_TX_PERIOD field of NGHBR_REC[i] to the i^{th} occurrence of
- 30 NGHBR_TX_PERIOD_r.

31 For each of the neighboring base stations contained in the *Universal Neighbor List Message*,
 32 if FREQ_FIELDS_INCL_r equals '1' and FREQ_INCL_r equals '0' the mobile station shall also do
 33 the following:

- 34 • Set the NGHBR_BAND field of NGHBR_REC[i] to CDMABAND_s.

- Set the NGHBR_FREQ field of NGHBR_REC[i] to CDMACH_S.

If NGHBR_SET_ENTRY_INFO_r is equal to '0', then for all NGHBR_SET_SIZE_S occurrences of ACCESS_ENTRY_HO, the mobile station shall set the ACCESS_ENTRY_HO field of NGHBR_REC[i] to '0'.

If NGHBR_SET_ENTRY_INFO_r is equal to '1', then for all NGHBR_SET_SIZE_S occurrences of ACCESS_ENTRY_HO, the mobile station shall set the ACCESS_ENTRY_HO field of NGHBR_REC[i] to the ith occurrence of ACCESS_ENTRY_HO_r.

If NGHBR_SET_ACCESS_INFO_r is equal to '0', then for all NGHBR_SET_SIZE_S occurrences of ACCESS_HO_ALLOWED, the mobile station shall set the ACCESS_HO_ALLOWED field of NGHBR_REC[i] to '0'.

If NGHBR_SET_ACCESS_INFO_r is equal to '1', then for all NGHBR_SET_SIZE_S occurrences of ACCESS_HO_ALLOWED, the mobile station shall set the ACCESS_HO_ALLOWED field of NGHBR_REC[i] to the ith occurrence of ACCESS_HO_ALLOWED_r.

The mobile station shall update the idle handoff Neighbor Set (see 2.6.2.1.4) so that it consists only of pilot offsets listed in the *Universal Neighbor List Message*. If the *Universal Neighbor List Message* contains more pilot offsets than the mobile station can store, the mobile station shall store the pilot offsets beginning at the start of the *Universal Neighbor List Message*, up to the limits of the mobile station's Neighbor Set storage capacity.

If RADIO_INTERFACE_TYPE_r is equal to '0001', the mobile station shall process the fields contained in the record as follows:

The mobile station shall set NUM_ANALOG_NGHR_S to NUM_ANALOG_NGHR_r, the number of neighboring analog systems contained in the *Universal Neighbor List Message*. For each of the neighboring analog systems contained in the *Universal Neighbor List Message*, the mobile station shall perform the following:

- Set the BAND_CLASS field of ANALOG_NGHR_LIST[i] to the ith occurrence of BAND_CLASS_r.
- Set the SYS_A_B field of ANALOG_NGHR_LIST[i] to the ith occurrence of SYS_A_B_r.

2.6.2.3 Mobile Station Page Match Operation

The *Mobile Station Page Match Operation* is performed whenever the mobile station receives a mobile-station-addressed page or a broadcast page. If the mobile station receives a mobile-station-addressed page that contains the IMSI or TMSI assigned to the mobile station (see 2.1.2.2.2.1 of [4]) on the Paging Channel, the mobile station transmits a *Page Response Message* on the Access Channel. If the mobile station receives a mobile-station-addressed page that contains the IMSI or TMSI assigned to the mobile station (see 2.1.2.2.2.1 of [4]) on the Forward Common Control Channel, the mobile station transmits a *Page Response Message* on the rcsch. If the mobile station is configured to receive broadcast messages and it receives a *General Page Message* that contains a burst type and broadcast address that the mobile station has been configured to receive (see 2.1.2.2.2.1 of

[4]), the mobile station performs the broadcast page procedures as described in 2.6.2.1.1.3.4.

When the mobile station receives a page message, it shall compare the configuration message sequence number, CONFIG_MSG_SEQ_r, to CONFIG_MSG_SEQ_s. If the comparison results in a mismatch, then the mobile station shall set CONFIG_MSG_SEQ_s to CONFIG_MSG_SEQ_r. The mobile station shall also compare the *Access Parameters Message* or the *Enhanced Access Parameters Message* sequence number, ACC_MSG_SEQ_r, with that stored in ACC_MSG_SEQ_s. If the comparison results in a mismatch, then the mobile station shall set ACC_MSG_SEQ_s to NULL (see 2.6.2.2). The mobile station shall set CURR_ACC_MSG_SEQ to ACC_MSG_SEQ_s.

The mobile station shall process each record for which it declares a page match (see 2.1.2.2.2.1 of [4]).

If the mobile station receives a broadcast page that contains a burst type and broadcast address that the mobile station has been configured to receive, the mobile station should perform the broadcast page procedures described in 2.6.2.1.1.3.4.

If a page match is declared, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3.2) with a page response indication within T_{33m} seconds after the page message is received.

If a page match is declared and the mobile station determines that it should be monitoring a neighboring base station, the mobile station may perform an access entry handoff to the neighboring base station, if all of the following conditions hold:

- The neighboring base station is listed in NGHBR_REC.
- The ACCESS_ENTRY_HO field of the NGHBR_REC corresponding to the neighboring base station is equal to '1'.
- If the mobile station performs an access entry handoff on the Access Channel, none of CONFIG_MSG_SEQ_s, SYS_PAR_MSG_SEQ_s, NGHBR_LST_MSG_SEQ_s, EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s, CHAN_LST_MSG_SEQ_s, EXT_SYS_PAR_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s, and PRI_NGHBR_LST_MSG_SEQ_s are equal to NULL.
- If the mobile station performs an access entry handoff on the Enhanced Access Channel, none of CONFIG_MSG_SEQ_s, A41_SYS_PAR_MSG_SEQ_s, MC_RR_PAR_MSG_SEQ_s, UNI_NGHBR_LST_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s, and PRI_NGHBR_LST_MSG_SEQ_s are equal to NULL.

Otherwise, the mobile station shall not perform an access entry handoff to the neighboring base station.

The mobile station need not perform an access entry handoff to a base station operating on another frequency.

1 If the mobile station performs an access entry handoff, it shall follow the procedures
 2 specified in 2.6.2.1.4.2 and shall perform the access entry handoff before entering the
 3 *Update Overhead Information Substate* of the *System Access State* (see 2.6.3.2).

4 If PACA is enabled, and if the mobile station performs an access entry handoff, the mobile
 5 station shall respond to the mobile-station-addressed page first and shall then re-originate
 6 the PACA call on the new base station.

7 2.6.2.4 Mobile Station Order and Message Processing Operation

8 During the *Mobile Station Order and Message Processing Operation*, the mobile station
 9 processes all messages except overhead messages (see 2.6.2.2) and page messages (see
 10 2.6.2.3).

11 The mobile station shall set CURR_ACC_MSG_SEQ to NULL.

12 The mobile station shall perform address matching as described in 2.1.2.2 of [4].

13 If Layer 3 receives a message that requires acknowledgement, the mobile station shall
 14 enter the *Update Overhead Information Substate* of the *System Access State* with an
 15 order/message response indication within T_{33m} seconds, unless otherwise specified for a
 16 particular message.

17 If Layer 3 receives a message that does not require acknowledgement, the mobile station
 18 shall transmit a response only if it is required by the message or order. If a response is
 19 required, the mobile station shall enter the *Update Overhead Information Substate* of the
 20 *System Access State* with an order/message response indication within T_{33m} seconds,
 21 unless otherwise specified for a particular message.

22 If the mobile station is to enter the *Update Overhead Information Substate* of the *System*
 23 *Access State* with an order/message response indication and the mobile station
 24 determines that it should be monitoring a neighboring base station, the mobile station
 25 may perform an access entry handoff to the neighboring base station, if all of the following
 26 conditions hold:

- 27 • The neighboring base station is listed in NGHBR_REC.
- 28 • The ACCESS_ENTRY_HO field of the NGHBR_REC corresponding to the neighboring
 29 base station is equal to '1'.
- 30 • ACC_ENT_HO_ORDER_s is equal to '1'.
- 31 • If the mobile station performs an access entry handoff on the Access Channel, none
 32 of CONFIG_MSG_SEQ_s, SYS_PAR_MSG_SEQ_s, NGHBR_LST_MSG_SEQ_s,
 33 EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s,
 34 CHAN_LST_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s,
 35 PRI_NGHBR_LST_MSG_SEQ_s, and EXT_SYS_PAR_MSG_SEQ_s are equal to NULL.

- If the mobile station performs an access entry handoff on the Enhanced Access Channel, none of CONFIG_MSG_SEQ_s, A41_SYS_PAR_MSG_SEQ_s, MC_RR_PAR_MSG_SEQ_s, UNI_NGHRBR_LST_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s, and PRI_NGHRBR_LST_MSG_SEQ_s are equal to NULL.

Otherwise, the mobile station shall not perform an access entry handoff to the neighboring base station.

The mobile station need not perform an access entry handoff to a base station operating on another frequency.

If the mobile station performs an access entry handoff, it shall follow the procedures specified in 2.6.2.1.4.2 and shall perform the access entry handoff before entering the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3.2). If PACA is enabled and the mobile station performs an access entry handoff, the mobile station shall respond to the order/message first and then re-originate the PACA call in the new base station.

The following directed messages and orders can be received. If any field value of the message or order is outside its permissible range, the mobile station shall send a *Mobile Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

1. *Abbreviated Alert Order*: The mobile station may alert the user.
2. *Audit Order*
3. *Authentication Challenge Message*: The mobile station shall process the message and shall respond with an *Authentication Challenge Response Message* as specified in 2.3.12.1.4, regardless of the value of AUTH_s. The mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{32m} seconds.
4. *Base Station Challenge Confirmation Order*: The mobile station shall process the message and shall respond with an *SSD Update Confirmation Order* or *SSD Update Rejection Order* as specified in 2.3.12.1.5. The mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{32m} seconds.
5. *Channel Assignment Message*: The mobile station shall process the message as follows:
 - If ASSIGN_MODE_r equals '001', the mobile station shall perform the following actions:
 - If the message requires acknowledgement, the mobile station shall wait until Layer 3 receives an indication from Layer 2 that the acknowledgement to the message has been sent and acknowledged.

- 1 - If a CDMA channel (CDMA_FREQ) is specified in the assignment, the mobile
2 station shall set CDMACH_S = CDMA_FREQ_r, tune to the new Frequency
3 Assignment, and measure the strength of each pilot listed in the
4 assignment using the Neighbor Set search procedures specified in 2.6.6.2.1
5 and 2.6.6.2.2.
- 6 - The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to
7 NULL (see 2.6.2.2) and shall set PILOT_PN_S to the pilot PN sequence offset of
8 the strongest pilot in the list (PILOT_PN_r).
- 9 - If the mobile station has not stored configuration parameters for the
10 Primary Paging Channel of the new base station, or if the stored information
11 is not current (see 2.6.2.2), the mobile station shall set
12 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
13 EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST-
14 _MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S,
15 USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S,
16 GLOB_SERV_REDIR_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S to
17 NULL. The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
18 Primary Paging Channel. The mobile station shall then begin monitoring
19 the Primary Paging Channel of the selected base station.
- 20 • If ASSIGN_MODE_r equals '101' and FREQ_INCL_r equals '0', the mobile station
21 shall perform the following actions:
 - 22 - If the message requires acknowledgement, the mobile station shall wait
23 until Layer 3 receives an indication from Layer 2 that the acknowledgement
24 to the message has been sent and acknowledged.
 - 25 - The mobile station shall measure the strength of each pilot listed in the
26 assignment using the Neighbor Set search procedures specified in 2.6.6.2.1
27 and 2.6.6.2.2, set PILOT_PN_S to the pilot PN sequence offset of the strongest
28 pilot in the list (PILOT_PN_r), and set CONFIG_MSG_SEQ_S and
29 ACC_MSG_SEQ_S to NULL (see 2.6.2.2).

- If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set
 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
 EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST-
 _MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S,
 USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S,
 GLOB_SERV_REDIR_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S to
 NULL. The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
 Primary Paging Channel. The mobile station shall then begin monitoring
 the Primary Paging Channel of the selected base station.
- If ASSIGN_MODE_T equals '101', FREQ_INCL_T equals '1', and the band class is not
 supported by the mobile station, the mobile station shall enter the *Update
 Overhead Information Substate* of the *System Access State* with an order/message
 response indication within T_{33m} seconds and send a *Mobile Station Reject Order*
 with ORDQ field set to '00000110' (capability not supported by the mobile
 station).
- If ASSIGN_MODE_T equals '101', FREQ_INCL_T equals '1', and the band class is
 supported by the mobile station, the mobile station shall perform the following
 actions:
 - If the message requires acknowledgment, the mobile station shall wait until
 Layer 3 receives an indication from Layer 2 that the acknowledgment to the
 message has been sent and acknowledged.
 - The mobile station shall set CDMACH_S = CDMA_FREQ_T and CDMABAND_S =
 BAND_CLASS_T. Then the mobile station shall tune to the new Frequency
 Assignment, measure the strength of each pilot listed in the assignment
 using the Neighbor Set search procedures specified in 2.6.6.2.1 and
 2.6.6.2.2, set PILOT_PN_S to the pilot PN sequence offset of the strongest pilot
 in the list (PILOT_PN_T), and set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to
 NULL (see 2.6.2.2).

- 1 - If the mobile station has not stored configuration parameters for the
2 Primary Paging Channel of the new base station, or if the stored information
3 is not current (see 2.6.2.2), the mobile station shall set
4 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST-
5 _MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S,
6 EXT_CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S,
7 USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S,
8 GLOB_SERV_REDIR_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S to
9 NULL. The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
10 Primary Paging Channel. The mobile station shall then begin monitoring
11 the Primary Paging Channel of the selected base station.
- 12 • If ASSIGN_MODE_r is not equal to '001' or '101', the mobile station shall enter
13 the *Update Overhead Information Substate* of the *System Access State* with an
14 order/message response indication within T_{33m} seconds and send a *Mobile*
15 *Station Reject Order* with ORDQ field set to '00000010' (message not accepted in
16 this state).
- 17 6. *Data Burst Message*
- 18 7. *Extended Channel Assignment Message*: The mobile station shall process the
19 message as follows:
- 20 • If ASSIGN_MODE_r equals '001', FREQ_INCL_r equals '0', the mobile station shall
21 perform the following actions:
- 22 - If the message requires acknowledgement, the mobile station shall wait
23 until Layer 3 receives an indication from Layer 2 that the acknowledgement
24 to the message has been sent and acknowledged.
- 25 - The mobile station shall measure the strength of each pilot listed in the
26 assignment using the Neighbor Set search procedures specified in 2.6.6.2.1
27 and 2.6.6.2.2 set PILOT_PN_S to the pilot PN sequence offset of the strongest
28 pilot in the list (PILOT_PN_r), and set CONFIG_MSG_SEQ_S and
29 ACC_MSG_SEQ_S to NULL (see 2.6.2.2).

- If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set
 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
 EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S,
 EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S,
 PRI_NGHBR_LST_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, and
 EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL. The mobile station shall set
 PAGE_CHAN_S to '1' and PAGECH_S to the Primary Paging Channel. The
 mobile station shall then begin monitoring the Primary Paging Channel of
 the selected base station.
- If ASSIGN_MODE_T equals '001', FREQ_INCL_T equals '1', and the band class is not supported by the mobile station, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{33m} seconds and send a *Mobile Station Reject Order* with ORDQ field set to '00000110' (capability not supported by the mobile station).
- If ASSIGN_MODE_T equals '001', FREQ_INCL_T equals '1', and the band class is supported by the mobile station, the mobile station shall perform the following actions:
 - If the message requires acknowledgement, the mobile station shall wait until Layer 3 receives an indication from Layer 2 that the acknowledgement to the message has been sent and acknowledged.
 - The mobile station shall set CDMACH_S = CDMA_FREQ_T and CDMABAND_S = BAND_CLASS_T. The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL (see 2.6.2.2). Then the mobile station shall tune to the new Frequency Assignment, measure the strength of each pilot listed in the assignment using the Neighbor Set search procedures specified in 2.6.6.2.1 and 2.6.6.2.2, and set PILOT_PN_S to the pilot PN sequence offset of the strongest pilot in the list (PILOT_PN_T).

- If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set
 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
 EXT_NGHRBR_LST_MSG_SEQ_S, GEN_NGHRBR_LST_MSG_SEQ_S,
 CHAN_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
 EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S,
 PRI_NGHRBR_LST_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, and
 EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL. The mobile station shall set
 PAGE_CHAN_S to '1' and PAGECH_S to the Primary Paging Channel. The
 mobile station shall then begin monitoring the Primary Paging Channel of
 the selected base station.
- If ASSIGN_MODE_r is not equal to '001', the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{33m} seconds and send a *Mobile Station Reject Order* with ORDQ field set to '00000010' (message not accepted in this state).

8. Feature Notification Message

14. Local Control Order

15. *Lock Until Power-Cycled Order*: The mobile station shall record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-permanent memory (LCKRSN_P_{S-p} equals the least significant four bits of ORDQ_r). After a mobile station receives this order, it shall not enter the *System Access State* (see 2.6.3) until it has received an *Unlock Order* or until after power-cycling the mobile station (i.e., after the next mobile station power-up). This requirement shall take precedence over any other mobile station requirement specifying entry to the *System Access State*. The mobile station should notify the user of the locked condition. The mobile station shall exit the *Mobile Station Idle State* and enter the *System Determination Substate* of the *Mobile Station Initialization State* with a lock indication (see 2.6.1.1). This allows the mobile station to operate in an alternate operating mode while locked.

16. *Maintenance Required Order*: The mobile station shall record the reason for the *Maintenance Required Order* in the mobile station's semi-permanent memory (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_r). If the mobile station has previously received a *Lock Until Power-Cycled Order*, it shall remain in the locked condition; otherwise the mobile station shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.

17. *PACA Message*: If P_REV_IN_USE_S is less than or equal to four, and if the mobile station does not support PACA capability, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (message requires a capability that is not supported by the mobile station); otherwise, the mobile

station shall process the message as follows:

- If PACA_S is equal to disabled, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{33m} seconds and shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
- If PACA_S is equal to enabled, the mobile station shall perform the following:
 - If the purpose of the message is to respond to an *Origination Message* (PURPOSE_r is equal to '0000'), the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication within T_{33m} seconds and send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
 - If the purpose of the message is to provide the queue position of the PACA call (PURPOSE_r is equal to '0001'), the mobile station shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2, corresponding to the value of PACA_TIMEOUT_S, should indicate to the user that the PACA call is still queued, and should indicate the current queue position (Q_POS_r) of the call.
 - If the purpose of the message is to instruct the mobile station to re-originate the PACA call (PURPOSE_r is equal to '0010'), the mobile station shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_S, and the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3) with a PACA response indication within T_{33m} seconds to re-originate the PACA call.
 - If the purpose of the message is to cancel the PACA call (PURPOSE_r is equal to '0011'), the mobile station shall set PACA_S to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

18. Registration Accepted Order:

- If ORDQ_r = '00000101', the mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_r} and should display the roaming condition.
- If ORDQ_r = '00000111', the mobile station shall perform the following
 - The mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_r} and should display the roaming condition.

- 1 - The mobile station shall set $SIG_ENCRYPT_MODE_S = SIG_ENCRYPT_MODE_R$
2 and start encrypting the signaling messages sent on r-dsch and r-csch
3 using the encryption algorithm specified by $SIG_ENCRYPT_MODE_R$ (see
4 Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_R (see Table 3.7.4.5-
5 2).
 - 6 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key
7 generated at the most recent registration for encryption of signaling and
8 user information. The mobile station shall store the session key in
9 $KEY_S[KEY_SEQ_NEW_{S-p}]$. The mobile station shall increment the variable
10 $KEY_SEQ_NEW_{S-p}$ by one (modulo 16).
 - 11 - If USE_NEW_KEY is set to '0' then the mobile station shall use
12 $KEY[KEY_SEQ_R]$ as the session key.
- 13 19. *Registration Rejected Order*: This order indicates that normal service is not
14 available on this system. The mobile station shall disable the full-TMSI timer. If
15 the received order specifies to delete the TMSI ($ORDQ = '00000100'$), the mobile
16 station shall set all the bits of the $TMSI_CODE_{S-p}$ to '1'. The mobile station shall
17 enter the *System Determination Substate* of the *Mobile Station Initialization State* with
18 a registration rejected indication (see 2.6.1.1).
- 19 20. *Registration Request Order*: The mobile station shall process the message and
20 perform registration procedures as specified in 2.6.5.5.2.3.
- 21 21. *Security Mode Command Message*: The mobile station shall process the message as
22 follows:
- 23 • The mobile station shall set $SIG_ENCRYPT_MODE_S$ to $SIG_ENCRYPT_MODE_R$.
 - 24 • If USE_NEW_KEY is set to '1' the mobile station shall use the session key
25 generated at the most recent registration for encryption of signaling and user
26 information. The mobile station shall store the session key in
27 $KEY_S[KEY_SEQ_NEW_{S-p}]$. The mobile station shall then increment the variable
28 $KEY_SEQ_NEW_{S-p}$ by one (modulo 16).
 - 29 • If USE_NEW_KEY is set to '0' then the mobile station shall use $KEY[KEY_SEQ_R]$ as
30 the session key.
- 31 22. *Service Redirection Message*: The mobile station shall process the message as
32 follows:
- 33 • If the mobile station is directed to an unsupported operation mode or band class,
34 the mobile station shall respond with a *Mobile Station Reject Order* with $ORDQ$
35 equal to '00000110' (message requires a capability that is not supported by the
36 mobile station).
 - 37 • If $DELETE_TMSI_R$ is equal to '1', the mobile station shall set all the bits of
38 $TMSI_CODE_{S-p}$ to '1'. The mobile station shall disable the full-TMSI timer.

- 1 • The mobile station shall set $\text{RETURN_IF_FAIL}_S = \text{RETURN_IF_FAIL}_R$.
- 2 • If RECORD_TYPE_R is equal to '00000000', the mobile station shall enter the
- 3 *System Determination Substate* of the *Mobile Station Initialization State* with an
- 4 NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the
- 5 redirection record received in the message as REDIRECT_REC_S and shall enter
- 6 the *System Determination Substate* of the *Mobile Station Initialization State* with a
- 7 redirection indication (see 2.6.1.1).

8 23. *Retry Order*: The mobile station shall process the message as follows:

- 9 • If RETRY_TYPE_R is equal to '000', the mobile station shall set
- 10 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ to 0, where RETRY_TYPE is equal to '001', '010', or
- 11 '011'.
- 12 • If RETRY_TYPE_R is equal to '001', the mobile station shall perform the following:
 - 13 – If RETRY_DELAY_R is equal to '00000000', then the mobile station shall set
 - 14 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}_R]$ to 0.
 - 15 – If RETRY_DELAY_R is not equal to '00000000', the mobile station shall set
 - 16 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}_R]$ as follows:
 - 17 + If the most significant bit of the RETRY_DELAY_R is '0', set
 - 18 $\text{RETRY_DELAY_UNIT}_S$ to 1000ms. If the most significant bit of the
 - 19 RETRY_DELAY_R is '1', set $\text{RETRY_DELAY_UNIT}_S$ to 60000ms.
 - 20 + The mobile station shall set $\text{RETRY_DELAY_VALUE}_S$ to the seven least
 - 21 significant bits of RETRY_DELAY_R .
 - 22 + The mobile station shall store the next system time 80 ms boundary +
 - 23 $\text{RETRY_DELAY_VALUE}_S \times \text{RETRY_DELAY_UNIT}_S$ ms as
 - 24 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}_R]$.

25 24. *Slotted Mode Order*: After receiving this order, the mobile station shall set

26 SLOTTED_S to YES. The mobile station shall disable the $\text{T}_{\text{MS_Slotted}}$ timer.

27 25. *SSD Update Message*: The mobile station shall process the message and shall

28 respond with a *Base Station Challenge Order* as specified in 2.3.12.1.5. The mobile

29 station shall enter the *Update Overhead Information Substate* of the *System Access*

30 *State* with an order/message response indication within $\text{T}_{32\text{m}}$ seconds.

31 26. *Status Request Message*: The mobile station shall process the message. If

32 P_REV_IN_USE_S is less than or equal to three, the mobile station shall respond

33 with a *Status Response Message*. If P_REV_IN_USE_S is greater than three, the

34 mobile station shall respond with an *Extended Status Response Message*. The

35 mobile station shall enter the *Update Overhead Information Substate* of the *System*

36 *Access State* with an order/message response indication within $\text{T}_{33\text{m}}$ seconds. If

the message does not specify any qualification information (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall include the requested information records in the response. If the message specifies a band class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) in the response. If the message specifies a band class and an operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) and operating mode (OP_MODE_r) in the response. If the message specifies a band class or a band class and an operating mode which is not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00000110' (message requires a capability that is not supported by the mobile station). If the response to this message exceeds the allowable length, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001000' (response message would exceed the allowable length). If the message specifies an information record which is not supported by the mobile station for the specified band class and operating mode, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is not supported for the specified band class and operating mode).

27. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code as follows:

- The mobile station shall store the length of the TMSI zone field by setting ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r.
- The mobile station shall store the assigning TMSI zone number by setting the ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.

The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

28. *Unlock Order*: After receiving this order, the mobile station is no longer locked. The mobile station should notify the user that the locked condition has been removed. The mobile station shall enter the *System Determination Substate of the Mobile Station Initialization State* with an *unlock indication* (see 2.6.1.1).

29. *User Zone Reject Message*

The mobile station shall ignore all other messages and orders.

2.6.2.5 Mobile Station Origination Operation

The *Mobile Station Origination Operation* is performed when the mobile station is directed by the user to initiate a call, or if the *Mobile Station Idle State* is entered with NDSS_ORIG_S enabled.

If the mobile station is directed by the user to initiate a call, the mobile station shall perform the following:

- If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.
- The mobile station shall set CURR_ACC_MSG_SEQ to NULL.

The mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3) with an origination indication within T_{33m} seconds.

2.6.2.6 Mobile Station Message Transmission Operation

Support of this operation is optional. If the mobile station supports the *Mobile Station Message Transmission Operation*, the operation is performed when the user directs the mobile station to transmit a *Data Burst Message*, or when the mobile station detects a change in hook status and the mobile station supports the *Device Information Message* on the r-csch.

If the mobile station supports this operation, the mobile station shall set CURR_ACC_MSG_SEQ to NULL.

If the mobile station supports this operation and the operation is performed when the user directs the mobile station to transmit a *Data Burst Message*, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3.2) with a message transmission indication within T_{33m} seconds.

If the mobile station supports this operation and the operation is performed when the mobile station detects a change in hook status the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3.2) with a hook status indication within T_{33m} seconds.

2.6.2.7 Mobile Station Power-Down Operation

The *Mobile Station Power-Down Operation* is performed when the user directs the mobile station to power down.

The mobile station shall update stored parameters and perform other registration procedures as specified in 2.6.5.5.2.4.

If no power-down registration is performed (see 2.6.5.5.2.4), the mobile station may power down.

2.6.2.8 Mobile Station PACA Cancel Operation

The *Mobile Station PACA Cancel Operation* is performed when the user directs the mobile station to cancel a PACA call.

If PACA_S is equal to enabled, the mobile station shall perform the following:

- The mobile station shall set PACA_S to disabled.
- The mobile station shall set PACA_CANCEL to '0', if PACA_CANCEL is equal to '1'.
- The mobile station shall disable the PACA state timer.
- The mobile station should indicate to the user that the PACA call has been canceled.
- The mobile station shall set CURR_ACC_MSG_SEQ to NULL.
- The mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3) with a PACA cancel indication within T_{33m} seconds.

2.6.3 System Access State

In this state, the mobile station sends messages to the base station on the r-csch and receives messages from the base station on the f-csch.

As illustrated in Figure 2.6.3-1, the *System Access State* consists of the following substates:

- *Update Overhead Information Substate* - In this substate, if the mobile station supports the Broadcast Control Channel for Spreading Rate 1 or Spreading Rate 3 and if the protocol revision level in use is greater than six, the mobile station will monitor the Broadcast Control Channel until it has received a current set of overhead messages; otherwise, the mobile station will monitor the Paging Channel until it has a current set of overhead messages.
- *Mobile Station Origination Attempt Substate* - In this substate, the mobile station sends an *Origination Message* to the base station.
- *Page Response Substate* - In this substate, the mobile station sends a *Page Response Message* to the base station.
- *Mobile Station Order/Message Response Substate* - In this substate, the mobile station sends a response to a message received from the base station.
- *Registration Access Substate* - In this substate, the mobile station sends a *Registration Message* to the base station.
- *Mobile Station Message Transmission Substate* - In this substate, the mobile station sends a *Data Burst Message* or a *Device Information Message* to the base station.
- *PACA Cancel Substate* - In this substate, the mobile station sends a *PACA Cancel Message* to the base station.

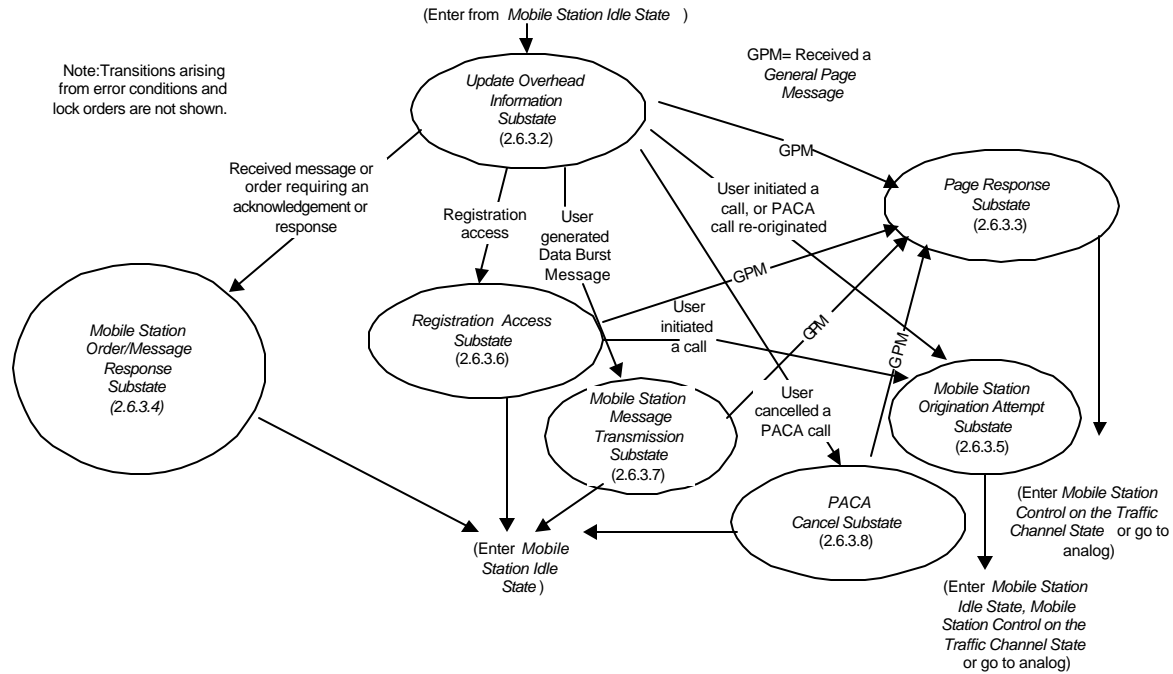


Figure 2.6.3-1. System Access State

2.6.3.1 Access Procedures

2.6.3.1.1 Access Attempts

If the mobile station monitors the Paging Channel, the mobile station transmits on the Access Channel using a random access procedure. Many parameters of the random access procedure are supplied by the base station in the *Access Parameters Message*. The random access procedure is described in [4] and [3].

If the mobile station monitors the Forward Common Control Channel/Broadcast Control Channel, the mobile station transmits on the Enhanced Access Channel using a random access procedure. Many parameters of the random access procedure are supplied by the base station in the *Enhanced Access Parameters Message*.

2.6.3.1.2 Reserved

2.6.3.1.3 Handoffs

While in the *System Access State*, the mobile station shall continue its pilot search (see 2.6.3.1.3.1), and may perform access handoffs (see 2.6.3.1.3.2) and/or access probe handoffs (see 2.6.3.1.3.3).

If the mobile station performs access handoffs and/or access probe handoffs, the mobile station shall maintain the following variables:

- CURRENT_ACTIVE_PILOT_S
- PREVIOUS_ACTIVE_PILOT_S

- FIRST_ACTIVE_PILOT_S

Upon entering the *System Access State* the mobile station shall set CURRENT_ACTIVE_PILOT_S, PREVIOUS_ACTIVE_PILOT_S and FIRST_ACTIVE_PILOT_S to NULL. Prior to starting an access attempt, the mobile station shall set CURRENT_ACTIVE_PILOT_S and PREVIOUS_ACTIVE_PILOT_S to NULL. When the mobile station selects a base station for transmission of an access probe, the mobile station shall proceed as follows:

- If CURRENT_ACTIVE_PILOT_S is not the same as the pilot of the selected base station, the mobile station shall set PREVIOUS_ACTIVE_PILOT_S to the value of CURRENT_ACTIVE_PILOT_S.
- The mobile station shall set CURRENT_ACTIVE_PILOT_S to the identity of the pilot corresponding to the selected base station.
- If FIRST_ACTIVE_PILOT_S is NULL, the mobile station shall set FIRST_ACTIVE_PILOT_S to the value of CURRENT_ACTIVE_PILOT_S.

Before the mobile station transmits an access probe to a new base station on the Access Channel, the mobile station shall update parameters based on the *System Parameters Message*, the *Access Parameters Message* and the *Extended System Parameters Message* on the associated new Paging Channel and process parameters from the messages (see 2.6.2.2.1, 2.6.2.2.2, and 2.6.2.2.5).

Before the mobile station transmits an access probe to a new base station on the Enhanced Access Channel, the mobile station shall update parameters based on the *ANSI-41 System Parameters Message*, the *Enhanced Access Parameters Message*, and the *MC-RR System Parameters Message* on the associated new Broadcast Control Channel and process parameters from the messages (see 2.6.2.2.13, 2.6.2.2.14, and 2.6.2.2.15).

If the mobile station monitors the Paging Channel, the mobile station shall update parameters based on the *Neighbor List Message*, the *Extended Neighbor List Message*, or the *General Neighbor List Message* on the associated new Paging Channel and process parameters from the message (see 2.6.2.2.3, 2.6.2.2.7, and 2.6.2.2.8).

If the mobile station monitors the Forward Common Control Channel/Broadcast Control Channel, the mobile station shall update parameters based on the *Universal Neighbor List Message* on the associated new Broadcast Control Channel and process parameters from the message (see 2.6.2.2.17).

If the mobile station receives the *User Zone Identification Message* or the *Private Neighbor List Message*, the mobile station shall update parameters based on these messages on the associated new Paging Channel or Broadcast Control Channel and process parameters from the messages (see 2.6.2.2.9 and 2.6.2.2.10). If the mobile station receives a *Global Service Redirection Message* (see 2.6.2.2.6) which directs the mobile station away from the new base station, the mobile station shall not access the new base station. If the mobile station receives an *Extended Global Service Redirection Message* (see 2.6.2.2.11) which directs the mobile station away from the new base station, the mobile station shall not

access the new base station. The mobile station shall process these messages only once after each access handoff.

2.6.3.1.3.1 Pilot Search

The following sets of pilot offsets are defined for a mobile station in the *System Access State*. Each pilot offset is a member of only one set.

- Active Set: The pilot offset of the Forward CDMA Channel whose Paging Channel or Forward Common Control Channel/Broadcast Control Channel is being monitored.
- Neighbor Set: The pilots that are not currently in the Active Set and are likely candidates for access handoff or access probe handoff. The members of the Neighbor Set are specified in the *Neighbor List Message*, the *Extended Neighbor List Message*, and the *General Neighbor List Message on the Paging Channel*. The members of the Neighbor Set are specified in the *Universal Neighbor List Message on the Broadcast Control Channel*.
- Remaining Set: The set of all possible pilot offsets in the current system (integer multiples of PILOT_INC_S) on the current CDMA Frequency Assignment, excluding the pilots in the Neighbor Set and the Active Set.

2.6.3.1.3.2 Access Handoff

The mobile station is permitted to perform an access handoff to use the Paging Channel with the best pilot strength and an associated Access Channel. The mobile station is permitted to perform an access handoff to use the Forward Common Control Channel with the best pilot strength and an associated Enhanced Access Channel. The mobile station is permitted to perform an access handoff when waiting for a response from the base station or before sending a response to the base station. An access handoff is permitted after an access attempt while the mobile station is in the *Page Response Substate* or the *Mobile Station Origination Attempt Substate*.

When the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel while waiting for a response from the base station in the *Page Response Substate* or in the *Mobile Station Origination Attempt Substate*, the mobile station shall perform an access handoff, if all of the following conditions hold:

- The pilot corresponding to the new base station is in the list ACCESS_HO_LIST ,
- ACCESS_HO_S is equal to '1', and
- The mobile station is not already in the process of performing an access attempt.

When the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel, after receiving a message but before responding to that message while in the *Page Response Substate* or in the *Mobile Station Origination Attempt Substate*, the mobile station shall perform an access handoff if the following conditions hold:

- The pilot corresponding to the new base station is in the list ACCESS_HO_LIST ,
- ACCESS_HO_S is equal to '1',

- ACCESS_HO_MSG_RSP_S is equal to '1', and
- The mobile station is not already in the process of performing an access attempt.

When the mobile station declares an insufficiency of the Paging Channel⁶ or the Forward Common Control Channel, while waiting for a response from the base station in the *Page Response Substate* or in the *Mobile Station Origination Attempt Substate*, the mobile station may perform an access handoff if all of the following conditions hold:

- The pilot corresponding to the new base station is in the list ACCESS_HO_LIST,
- ACCESS_HO_S is equal to '1', and
- The mobile station is not already in the process of performing an access attempt.

When the mobile station declares an insufficiency of the Paging Channel⁷ or the Forward Common Control Channel, after receiving a message but before responding to that message while in the *Page Response Substate* or in the *Mobile Station Origination Attempt Substate*, the mobile station may perform an access handoff if all of the following conditions hold:

- The pilot corresponding to the new base station is in the list ACCESS_HO_LIST,
- ACCESS_HO_S is equal to '1',
- ACCESS_HO_MSG_RSP_S is equal to '1', and
- The mobile station is not already in the process of performing an access attempt.

If ACCESS_PROBE_HO_S is equal to '0' and ACCESS_HO_S is equal to '1', and the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel during an access attempt, after sending at least one complete access probe, the mobile station may monitor other Paging Channels or the Forward Common Control Channels which are in ACCESS_HO_LIST for T_{42m} seconds after the loss of the Paging Channel or the Forward Common Control Channel on which the access attempt was made⁸.

2.6.3.1.3.3 Access Probe Handoff

The mobile station is permitted to perform an access probe handoff when the mobile station is in the *Page Response Substate* or the *Mobile Station Origination Attempt Substate*.

⁶ Insufficiency of the Paging Channel and the Forward Common Control Channel is implementor-defined.

⁷ Insufficiency of the Paging Channel and the Forward Common Control Channel is implementor-defined.

⁸ The mobile station would be waiting for a response to the message transmitted in the access probe.

The mobile station may perform an access probe handoff during an access attempt to a pilot in ACCESS_HO_LIST when the message being sent is the *Origination Message* or the *Page Response Message*, if all of the following conditions hold:

- ACCESS_PROBE_HO_S is equal to '1',
- The mobile station is in the *Page Response Substate* or the *Mobile Station Origination Attempt Substate*, and
- The mobile station has performed fewer than (MAX_NUM_PROBE_HO_S + 1) access probe handoffs during the current access attempt.

The mobile station may also perform an access probe handoff during an access attempt to a pilot in ACCESS_HO_LIST when the message being sent is a message other than the *Origination Message* or the *Page Response Message*, if all of the preceding conditions hold and ACC_PROBE_HO_OTHER_MSG_S is equal to '1'.

The mobile station may also perform an access probe handoff during an access attempt to a pilot not in ACCESS_HO_LIST when the message being sent is the *Origination Message* or the *Page Response Message*, if all of the following conditions hold:

- ACC_HO_LIST_UPD_S is equal to '1',
- ACCESS_PROBE_HO_S is equal to '1',
- The new pilot is stronger than any pilot in ACCESS_HO_LIST,
- The new pilot has the corresponding ACCESS_HO_ALLOWED field in the NGHBR_REC equal to '1',
- Inclusion of the new pilot in ACCESS_HO_LIST does not cause the Access Channel or Enhanced Access Channel message to exceed the maximum capsule size,
- Inclusion of the new pilot in ACCESS_HO_LIST does not cause the number of members to exceed N_{13m}.
- The mobile station is in the *Page Response Substate* or the *Mobile Station Origination Attempt Substate*, and
- The mobile station has performed fewer than (MAX_NUM_PROBE_HO_S + 1) access probe handoffs during the current access attempt.

The mobile station may also perform an access probe handoff during an access attempt to a pilot not in ACCESS_HO_LIST when the message being sent is a message other than the *Origination Message* or the *Page Response Message*, if all of the preceding conditions hold and ACC_PROBE_HO_OTHER_MSG_S is equal to '1'.

If the above conditions are met, the mobile station may perform an access probe handoff when the mobile station declares a loss of the Paging Channel or Forward Common Control Channel (see 2.6.2.1.1.4); the mobile station may also perform an access probe handoff after getting an indication that the TA timer expired (see 2.1.1.2.2 of [4]) and the mobile

station declares an insufficiency of the Paging Channel⁹ or the Forward Common Control Channel.

If the mobile station performs an access probe handoff, the mobile station shall suspend the access attempt on the old pilot and shall restart the access attempt on the new pilot (i.e. starting with the first probe of the first probe sequence of the access sub-attempt), as specified in 2.1.1.2.2 of [4]. The mobile station shall record the identity of the pilots to which access probes have been transmitted within the current access attempt.

The mobile station shall not reset its access probe handoff count until the access attempt ends.

Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to cancel the access attempt if the length of the message to be sent exceeds MAX_CAP_SIZE of the new base station. The mobile station may monitor other Paging Channels or Forward Common Control Channels which are in ACCESS_HO_LIST for T_{42m} seconds after aborting the access attempt¹⁰.

2.6.3.1.4 System Access State Exit Procedures

Upon exiting the *System Access State*, the mobile station shall direct Layer 2 to cancel (see 2.1.1.2.2 of [4]) any access attempt in progress and discard the associated message. The mobile station shall then disable the *System Access State* timer.

2.6.3.1.5 Reserved

2.6.3.1.6 Full-TMSI Timer

Whenever the mobile station sends its full TMSI, the mobile station enables a timer, called the full-TMSI timer. If the full-TMSI timer expires, the mobile station deletes the TMSI by setting all of the bits in the TMSI_CODE_{s-p} field to '1'.

The mobile station shall maintain the full-TMSI timer. The mobile station shall provide a means for enabling or disabling the full-TMSI timer.

If the mobile station sends a message with an address including the ASSIGNING_TMSI_ZONE_{s-p} and the full-TMSI timer is disabled, the mobile station shall enable the full-TMSI timer with a duration equal to $T_{69m} + 2.56 \times 2^i$ seconds where i is equal to SLOT_CYCLE_INDEX_s.

⁹ Insufficiency of the Paging Channel and the Forward Common Control Channel is implementor-defined.

¹⁰ The mobile station would be waiting for a response to the message transmitted in the access probe.

2.6.3.1.7 Monitoring Pilots

The mobile station assists the base station in the Traffic Channel assignment process by monitoring and reporting (see 2.1.1.4.1.2 of [4]) the pilot strength of the pilot in the mobile station's Paging Channel or Forward Common Control Channel Active Set (see 2.6.3.1.3.1). The mobile station can also monitor and report (see 2.1.1.4.1.2 of [4]) other pilots on the same frequency; in such cases, the mobile station shall create ACCESS_HO_LIST and OTHER_REPORTED_LIST and shall monitor the pilots on those lists, if any.

For each monitored pilot, the mobile station shall record the pilot PN phase and the pilot strength PS, using the most recent measurements from the searcher element (see 2.2.2.1 of [2]), as they become available. The mobile station shall identify each pilot through its pilot PN phase (the phase of the pilot PN sequence, in units of one chip, relative to the zero offset pilot PN sequence of the pilot (see 2.6.6.2.4)). The mobile station shall determine the pilot strength, PS, as specified in 2.6.6.2.2.

2.6.3.1.7.1 Generation of the Initial Access Handoff List

ACCESS_HO_LIST is created immediately before transmitting the first access probe after entering the *System Access State*. When it is created, ACCESS_HO_LIST is defined as a set of at most N_{13m} pilots, having the greatest pilot strength in comparison with other qualifying pilots and for which all of the following apply:

- The strength of each member exceeds T_ADD.
- Each member, other than the Active Set pilot, has the corresponding ACCESS_HO_ALLOWED field in the NGHBR_REC equal to '1'.
- The Active Set pilot that the mobile station monitors when the mobile station enters the *System Access State* is a member.
- All members can be contained in the Access Channel or Enhanced Access Channel message without exceeding the maximum capsule size.

2.6.3.1.7.2 Update of the Access Handoff List

When the mobile station performs an access probe handoff to a pilot which was not previously included in ACCESS_HO_LIST (see 2.6.3.1.3.3), it adds the pilot to ACCESS_HO_LIST.

If ACC_HO_LIST_UPD_s is equal to '1', the mobile station can update ACCESS_HO_LIST, as follows:

- The mobile station can add one or more new pilots other than the Active Set pilot to ACCESS_HO_LIST before transmitting an access probe.
- The mobile station can also drop from ACCESS_HO_LIST pilots to which access probes have not been transmitted since entering the *System Access State* and whose strength have fallen below T_ADD.

When it is updated before transmitting a subsequent access probe, ACCESS_HO_LIST is defined as a set of at most N_{13m} pilots, having the greatest pilot strength in comparison with other qualifying pilots and for which all of the following apply:

- The strength of each member to which access probes have not been transmitted exceeds T_{ADD} .
- Each member other than the pilot to which the first access probe in the System Access State was transmitted has the corresponding ACCESS_HO_ALLOWED field in the NGHBR_REC equal to '1'.
- The Active Set pilot to which the next access probe is to be transmitted is a member.
- All pilots to which access probes have been transmitted since entering the *System Access State* are members.
- All members can be contained in the Access Channel or Enhanced Access Channel message without exceeding the maximum capsule size.

2.6.3.1.7.3 Generation of the Other Reported List

OTHER_REPORTED_LIST (specified by NUM_ADD_PILOTS and NUM_OTHER_PILOTS, see 2.1.1.4.1.2.1 of [2]) is defined as a set of no more than N_{13m} minus the number of pilots in ACCESS_HO_LIST pilots, having the greatest pilot strength in comparison with other qualifying pilots and for which all of the following apply:

- The strength of each member exceeds T_{ADD} .
- No member is included in ACCESS_HO_LIST.
- All members can be contained in the Access Channel or Enhanced Access Channel message without exceeding the maximum capsule size.

2.6.3.1.7.4 Update of OTHER_REPORTED_LIST

Before transmitting each access probe, the mobile station shall generate OTHER_REPORTED_LIST according to section 2.6.3.1.7.3, using the most recent pilot strength information available from its searcher element (see 2.2.2.1 of [2]). If the mobile station updates ACCESS_HO_LIST before transmitting an access probe, it shall update OTHER_REPORTED_LIST after updating ACCESS_HO_LIST.

2.6.3.1.8 Paging Channel and Forward Common Control Channel Monitoring

When in the *System Access State*, the mobile station shall monitor the Paging Channel or the Forward Common Control Channel at all times.

The mobile station shall set a timer for T_{72m} seconds, when it begins to monitor the Paging Channel or the Forward Common Control Channel and whenever it gets an indication that a valid message was received on the Paging Channel or the Forward Common Control Channel, whether addressed to the mobile station or not (see 2.1.2.3.2 of [4]).

1 If the T_{72m} timer expires:

- 2 • The mobile station shall first finish transmitting the access probe in progress, if
3 any.
- 4 • The mobile station shall declare a loss of the Paging Channel or the Forward
5 Common Control Channel if:
 - 6 – $ACCESS_HO_S$ is equal to '1' and $ACCESS_HO_LIST$ contains more than one
7 pilot,
 - 8 – $ACC_HO_LIST_UPD_S$ is equal to '1', and Access Probe Handoff is supported by the
9 mobile station, or
 - 10 – $ACC_HO_LIST_UPD_S$ is equal to '0' and the following conditions are met:
 - 11 + $ACCESS_HO_LIST$ contains more than one pilot, and
 - 12 + Access Probe Handoff is supported by the mobile station and is enabled by
13 the base station.
- 14 • The mobile station shall perform an access handoff if the requirements in
15 2.6.3.1.3.2 are met. The mobile station may perform an access probe handoff if the
16 requirements in 2.6.3.1.3.3 are met. If the mobile station performs an access
17 handoff or an access probe handoff, the mobile station restarts the Paging Channel
18 or the Forward Common Control Channel monitoring procedure for the new base
19 station.
- 20 • If an access attempt was in progress when the timer expired and that access
21 attempt had already been suspended and resumed previously (see below), the
22 mobile station shall declare a loss of the Paging Channel¹¹ or the Forward Common
23 Control Channel and shall disable its transmitter.
- 24 • If an access attempt was in progress when the timer expired and that access
25 attempt had not been suspended and resumed before, the mobile station shall
26 consider the loss of the Paging Channel or the Forward Common Control Channel
27 as temporary, shall direct Layer 2 to suspend the access attempt (see 2.1.1.2.2 of
28 [4]), and shall perform the following:
 - 29 – The mobile station shall set the timer to $(T_{40m}-T_{72m})$ seconds.

¹¹ Requirements for processing the loss of Paging Channel are given separately for each substate of the *System Access State*, in the sections describing the substates.

- 1 – If the mobile station receives an indication that a valid message on the Paging
2 Channel or the Forward Common Control Channel, whether addressed to the
3 mobile station or not, was received (see 2.1.2.3.2 of [4]) prior to the expiration of
4 the (T_{40m} - T_{72m}) timer, the mobile station shall re-enable the transmitter,
5 shall direct Layer 2 to resume operation from the beginning of the interrupted
6 access probe sequence of the access sub-attempt (see 2.1.1.2.2 of [4]), and shall
7 transmit the first probe of the new access probe sequence immediately after re-
8 enabling the transmitter.
- 9 – If the (T_{40m} - T_{72m}) timer expires, the mobile station shall direct Layer 2 to
10 cancel any access attempt (see 2.1.1.2.2 of [4]) and shall declare a loss of the
11 Paging Channel or the Forward Common Control Channel.

12 2.6.3.2 Update Overhead Information Substate

13 In this substate, if the base station supports the Broadcast Control Channel for Spreading
14 Rate 1, or if both the mobile station and base station support Spreading Rate 3 on the
15 common channels, then the mobile station shall monitor the Broadcast Control Channel
16 until it has received the current configuration messages; otherwise, the mobile station
17 shall monitor the Paging Channel until it has received the current configuration
18 messages. The mobile station compares sequence numbers to determine whether all of
19 the configuration messages are up-to-date. To make sure it has the latest access
20 parameters, the mobile station receives at least one message containing the
21 ACC_MSG_SEQ field (except in case of a page response, since the initiating page contains
22 ACC_MSG_SEQ), and waits, if necessary, for an *Access Parameters Message* or an *Enhanced*
23 *Access Parameters Message*. In addition, if the mobile station is monitoring the Broadcast
24 Control Channel and SENDING_RAND_S is equal to '1', then it shall also wait for an *ANSI-41*
25 *RAND Message*.

26 Upon entering the *Update Overhead Information Substate*, the mobile station shall set the
27 *System Access State* timer to a value of T_{41m} seconds. The mobile station shall set PAGED
28 to NO.

29 If the *System Access State* timer expires while in this substate, the mobile station shall
30 enter the *System Determination Substate* of the *Mobile Station Initialization State* with a
31 system lost indication (see 2.6.1.1).

32 If the mobile station declares a loss of the Paging Channel or the Broadcast Control
33 Channel (see 2.6.2.1.1.4), the mobile station shall perform the following:

- 34 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
35 PACA_CANCEL to '1', shall disable the PACA state timer, and should indicate to the
36 user that the PACA call has been canceled.
- 37 • The mobile station shall declare an access attempt failure and update its
38 registration variables as specified in 2.6.5.5.3.2.
- 39 • The mobile station shall enter the *Mobile Station Idle State*.

1 If PACA_S is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the
 2 user directs the mobile station to cancel a PACA call.

3 If the mobile station receives any of the following messages, it shall process the message
 4 as follows:

- 5 1. *System Parameters Message*: The mobile station shall process the parameters from
 6 the message (see 2.6.2.2.1).
- 7 2. *Access Parameters Message*: The mobile station shall process the parameters from
 8 the message (see 2.6.2.2.2).
- 9 3. *Neighbor List Message*: The mobile station shall process the parameters from the
 10 message (see 2.6.2.2.3).
- 11 4. *CDMA Channel List Message*: The mobile station shall process the parameters from
 12 the message (see 2.6.2.2.4).
- 13 5. *Extended System Parameters Message*: The mobile station shall process the
 14 parameters from the message (see 2.6.2.2.5).
- 15 6. *Global Service Redirection Message*: The mobile station shall process the
 16 parameters from the message (see 2.6.2.2.6).
- 17 7. *Extended Neighbor List Message*: The mobile station shall process the parameters
 18 from the message (see 2.6.2.2.7).
- 19 8. *General Neighbor List Message*: The mobile station shall process the parameters
 20 from the message (see 2.6.2.2.8).
- 21 9. *Lock Until Power-Cycled Order*: The mobile station shall record the reason for the
 22 *Lock Until Power-Cycled Order* in the mobile station's semi-permanent memory
 23 (LCKRSN_P_{S-p} equals the least-significant four bits of ORDQ_r). The mobile station
 24 should notify the user of the locked condition. The mobile station shall then enter
 25 the *System Determination Substate* of the *Mobile Station Initialization State* with a lock
 26 indication (see 2.6.1.1), and shall not enter the *System Access State* again until
 27 after the next mobile station power-up or until it has received an *Unlock Order*.
 28 This requirement shall take precedence over any other mobile station
 29 requirement specifying entry to the *System Access State*.
- 30 10. *General Page Message* or *Universal Page Message*: If CURR_ACC_MSG_SEQ is equal
 31 to NULL, the mobile station shall set CURR_ACC_MSG_SEQ to ACC_MSG_SEQ_r.
 32 The mobile station shall compare CONFIG_MSG_SEQ_S to CONFIG_MSG_SEQ_r. If
 33 the comparison results in a mismatch, the mobile station shall set
 34 CONFIG_MSG_SEQ_S to CONFIG_MSG_SEQ_r. The mobile station may ignore the
 35 rest of the message. If this substate was not entered with an origination or page
 36 response indication, the mobile station may also determine whether there is a
 37 page match. If the mobile station attempts to determine whether there is a page
 38 match, it shall use the procedure as defined in 2.6.2.3. If a match is declared, the
 39 mobile station shall set PAGED to YES.

- 1 11. *User Zone Identification Message*: The mobile station shall process the parameters
2 from the message (see 2.6.2.2.9).
- 3 12. *Private Neighbor List Message*: The mobile station shall process the parameters from
4 the message (see 2.6.2.2.10).
- 5 13. *Extended Global Service Redirection Message*: The mobile station shall process the
6 parameters from the message (see 2.6.2.2.11).
- 7 14. *Extended CDMA Channel List Message*: The mobile station shall process the
8 parameters from the message (see 2.6.2.2.12).
- 9 15. *ANSI-41 System Parameters Message*: The mobile station shall process the
10 parameters from the message (see 2.6.2.2.13).
- 11 16. *MC-RR Parameters Message*: The mobile station shall process the parameters from
12 the message (see 2.6.2.2.14).
- 13 17. *Enhanced Access Parameters Message*: The mobile station shall process the
14 parameters from the message (see 2.6.2.2.15).
- 15 18. *ANSI-41 RAND Message*: The mobile station shall process the parameters from the
16 message (see 2.6.2.2.16).
- 17 19. *Universal Neighbor List Message*: The mobile station shall process the parameters
18 from the message (see 2.6.2.2.17).

19 If the mobile station receives a message which is not included in the above list, the mobile
20 station shall ignore the message.

21 When all of the following conditions are met:

- 22 • the stored configuration parameters are current (see 2.6.2.2)
- 23 • CURR_ACC_MSG_SEQ_S and ACC_MSG_SEQ_S are equal and are not NULL, and
- 24 • if the mobile station is monitoring the Broadcast Control Channel and
25 SENDING_RAND_S is equal to '1', the *ANSI-41 RAND Message* has been received,

26 then the mobile station shall disable the *System Access State* timer and shall do one of the
27 following:

- 28 • If PAGED is equal to YES, the mobile station shall determine whether the message
29 resulting in the page match was received on the current Paging Channel or
30 Forward Common Control Channel. If the message was received on the current
31 Paging Channel or Forward Common Control Channel, the mobile station shall
32 enter the *Page Response Substate*; otherwise, the mobile station shall enter the
33 *Mobile Station Idle State*.

- 1 • If this substate was entered with a page response indication and the mobile station
2 has not performed an access entry handoff, the mobile station shall determine
3 whether the message resulting in the page match was received on the current
4 Paging Channel or Forward Common Control Channel. If the message was received
5 on the current Paging Channel or Forward Common Control Channel, the mobile
6 station shall enter the *Page Response Substate*; otherwise, the mobile station shall
7 enter the *Mobile Station Idle State*.
- 8 • If this substate was entered with a page response indication and the mobile station
9 has performed an access entry handoff, the mobile station shall enter the *Page*
10 *Response Substate*.
- 11 • If this substate was entered with a page response retransmission indication, the
12 mobile station shall enter the *Page Response Substate*.
- 13 • If this substate was entered with an origination indication, the mobile station shall
14 enter the *Mobile Station Origination Attempt Substate* with an origination indication.
- 15 • If this substate was entered with a PACA response indication, the mobile station
16 shall enter the *Mobile Station Origination Attempt Substate* with a PACA response
17 indication.
- 18 • If this substate was entered with an order/message response indication and the
19 mobile station has not performed an access entry handoff, the mobile station shall
20 determine whether the message resulting in the response was received on the
21 current Paging Channel or Forward Common Control Channel. If the message was
22 received on the current Paging Channel or Forward Common Control Channel, the
23 mobile station shall enter the *Mobile Station Order/Message Response Substate*;
24 otherwise, the mobile station shall discard the response and enter the *Mobile*
25 *Station Idle State*.
- 26 • If this substate was entered with an order/message response indication and the
27 mobile station has performed an access entry handoff, the mobile station shall
28 enter the *Mobile Station Order/Message Response Substate*.
- 29 • If this substate was entered with a registration indication, the mobile station shall
30 enter the *Registration Access Substate*.
- 31 • If this substate was entered with a message transmission indication, the mobile
32 station shall enter the *Mobile Station Message Transmission Substate* with a message
33 transmission indication.
- 34 • If this substate was entered with a hook status indication, the mobile station shall
35 enter the *Mobile Station Message Transmission Substate* with a hook status
36 indication.
- 37 • If this substate was entered with a PACA cancel indication, the mobile station shall
38 enter the *PACA Cancel Substate*.

2.6.3.3 Page Response Substate

In this substate, the mobile station sends a *Page Response Message* in response to a mobile-station-addressed page from a base station. If a base station responds to the *Page Response Message* with an authentication request, the mobile station responds in this substate.

If a message received from the base station requires a Layer 2 acknowledgment and does not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is outstanding (see 2.1.1.2.2.1 of [4]).

If a message received from the base station requires a Layer 2 acknowledgment and also a Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see 2.1.1.2.2.1 of [4]).

When transmitting a response to a message received from the base station, Layer 3 shall indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous message (i.e., a message that is not sent as a response to a message received from the base station), Layer 3 shall indicate to Layer 2 that the type of the message is a request other than a registration request or a message transmission request (see 2.1.1.2.2.1 of [4]).

If the mobile station has a stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record) and $USE_SYNC_ID_S$ is equal to '1', the mobile station may include the $SYNC_ID$ field in the *Page Response Message* and, if included, shall set it to the 16-bit CRC computed over the entire stored service configuration as specified in 2.6.11.

Upon entering the *Page Response Substate*, the mobile station shall set $RLGAIN_ADJ_S$ to '0000' and send a *Page Response Message*.

While in this substate, the mobile station shall monitor the Paging Channel or the Forward Common Control Channel. The mobile station may perform an access probe handoff or access handoff as described in 2.6.3.1.3.2 and 2.6.3.1.3.3. If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel (see 2.6.2.1.1.4) during an access attempt, the mobile station may perform an access probe handoff; otherwise, it shall declare an access attempt failure and shall perform the following actions:

- The mobile station shall update its registration variables as specified in 2.6.5.5.3.2,
- If the mobile station is monitoring the Paging Channel, the mobile station shall set $SYS_PAR_MSG_SEQ_S$ and $ACC_MSG_SEQ_S$ to NULL,
- If the mobile station is monitoring the Forward Common Control Channel, the mobile station shall set $MC_RR_PAR_MSG_SEQ_S$ and $ACC_MSG_SEQ_S$ to NULL.
- If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

- 1 • The mobile station shall disable its transmitter, and
- 2 • The mobile station shall enter the *Mobile Station Idle State*.

3 If the mobile station receives confirmation of delivery of any message sent by the mobile
4 station in this substate, the mobile station shall perform an access handoff if all of the
5 following conditions hold:

- 6 • The mobile station declares a loss of the Paging Channel or the Forward Common
7 Control Channel, and
- 8 • The mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2), and
9 there are pilots other than the active pilot in the access handoff list (see
10 2.6.3.1.3.2).

11 If the mobile station declares a loss of the Paging Channel or the Forward Common Control
12 Channel and does not perform an access handoff, the mobile station shall perform the
13 following:

- 14 • If the mobile station is monitoring the Paging Channel, the mobile station shall set
15 SYS_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.
- 16 • If the mobile station is monitoring the Forward Common Control Channel, the
17 mobile station shall set MC_RR_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.
- 18 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
19 PACA_CANCEL to 0, shall disable the PACA state timer, and should indicate to the
20 user that the PACA call has been canceled,
- 21 • The mobile station shall disable its transmitter, and
- 22 • The mobile station shall enter the *Mobile Station Idle State*.

23 If PACA_S is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the
24 user directs the mobile station to cancel a PACA call.

25 If the mobile station receives confirmation of delivery of the *Page Response Message* sent
26 in this substate, the mobile station shall update its registration variables with respect to
27 the base station to which the first access probe was transmitted after entering the *System*
28 *Access State*, as specified in 2.6.5.5.3.1.

29 If the *System Access State* timer expires while in this substate, the mobile station shall
30 perform the following:

- 31 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
32 PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the
33 user that the PACA call has been canceled.
- 34 • If the mobile station is monitoring the Paging Channel, the mobile station shall set
35 SYS_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL, and shall enter the *Mobile*
36 *Station Idle State*.

- If the mobile station is monitoring the Forward Common Control Channel, the mobile station shall set MC_RR_PAR_MSG_SEQ_s and ACC_MSG_SEQ_s to NULL and enter the *Mobile Station Idle State*.

The mobile station shall set and disable the *System Access State* timer as follows:

- The mobile station shall disable the timer whenever it begins an access attempt.
- The mobile station shall set the timer to T_{42m} seconds whenever it ends an access attempt.
- The mobile station shall disable the timer whenever it exits the *System Access State*.

If the mobile station receives a *Channel Assignment Message* or the *Extended Channel Assignment Message*, Layer 3 shall send a *dedicated channel assignment* indication to Layer 2 (see 2.1.2.1.2 of [4]). If the mobile station has not received confirmation of delivery of the *Page Response Message*, before receiving the *Channel Assignment Message* or the *Extended Channel Assignment Message*, the mobile station shall update its registration variables with respect to the base station to which the first access probe was transmitted after entering the *System Access State*, as specified in 2.6.5.5.3.1.

If the mobile station is to exit the *System Access State* as a result of processing Layer 3 fields of a message requiring an acknowledgment, the mobile station shall exit the *System Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to the message has been sent and acknowledged.

If Layer 3 receives a message other than a *Channel Assignment Message* or an *Extended Channel Assignment Message* with an indication from Layer 2 that an access attempt for a message being transmitted was not terminated as a result of processing the Layer 2 fields of the received message, the mobile station shall ignore the received message.

The following directed messages and orders can be received. If any field value of the message or order is outside its permissible range, the mobile station may send a *Mobile Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

1. *Authentication Challenge Message*: The mobile station shall respond to the message as specified in 2.3.12.1.4, regardless of the value of AUTH_s.
2. *Base Station Challenge Confirmation Order*: The mobile station shall respond to the message as specified in 2.3.12.1.5.
3. *Channel Assignment Message*: The mobile station shall process the message as follows:
 - If ASSIGN_MODE_r equals '000', the mobile station shall perform the following actions:
 - The mobile station shall set CH_IND_s to '01'.

- 1 – The mobile station shall store the frame offset ($FRAME_OFFSET_S =$
2 $FRAME_OFFSET_P$), the message encryption mode indicator
3 ($ENCRYPT_MODE_S = ENCRYPT_MODE_P$), and, if $FREQ_INCL_P$ equals '1', the
4 Frequency Assignment ($CDMACH_S = CDMA_FREQ_P$).
- 5 – The mobile station shall set $SERV_NEG_S$ to disabled.
- 6 – If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled
7 and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should
8 indicate to the user that the PACA call has been canceled.
- 9 – The mobile station shall initialize $CODE_CHAN_LIST$ as described in 2.6.8.
- 10 – The mobile station shall enter the *Traffic Channel Initialization Substate* of
11 the *Mobile Station Control on the Traffic Channel State*.
- 12 • If $ASSIGN_MODE_P$ equals '001', the mobile station shall perform the following
13 actions:
 - 14 – If $FREQ_INCL_P$ equals '1', the mobile station shall perform the following:
 - 15 + If the message requires acknowledgement, the mobile station shall wait
16 until Layer 3 receives an indication from Layer 2 that the
17 acknowledgement to the message has been sent and acknowledged.
 - 18 + The mobile station shall set $CDMACH_S$ to $CDMA_FREQ_P$, tune to the new
19 Frequency Assignment, and measure the strength of each pilot listed in
20 the assignment using the Neighbor Set search procedures specified in
21 2.6.6.2.1 and 2.6.6.2.2.
 - 22 – The mobile station shall set $CONFIG_MSG_SEQ_S$ and $ACC_MSG_SEQ_S$ to
23 NULL (see 2.6.2.2) and shall set $PILOT_PN_S$ to the pilot PN sequence offset of
24 the strongest pilot in the list ($PILOT_PN_P$).
 - 25 – If the mobile station has not stored configuration parameters for the
26 Primary Paging Channel of the new base station, or if the stored information
27 is not current (see 2.6.2.2), the mobile station shall set
28 $SYS_PAR_MSG_SEQ_S$, $NGHBR_LST_MSG_SEQ_S$,
29 $EXT_NGHBR_LST_MSG_SEQ_S$, $GEN_NGHBR_LIST_MSG_SEQ_S$,
30 $USER_ZONE_ID_MSG_SEQ_S$, $PRI_NGHBR_LST_MSG_SEQ_S$,
31 $CHAN_LST_MSG_SEQ_S$, $EXT_CHAN_LST_MSG_SEQ_S$,
32 $EXT_SYS_PAR_MSG_SEQ_S$, $GLOB_SERV_REDIR_MSG_SEQ_S$, and
33 $EXT_GLOB_SERV_REDIR_MSG_SEQ_S$ to NULL.
 - 34 – The mobile station shall set $PAGE_CHAN_S$ to '1' and $PAGECH_S$ to the Primary
35 Paging Channel. The mobile station shall then begin monitoring the
36 Primary Paging Channel of the selected base station.

- 1 – If RESPOND_r is equal to '1', the mobile station shall enter the *Update*
2 *Overhead Information Substate* with a page response retransmission
3 indication within T_{34m} seconds after receiving the *Channel Assignment*
4 *Message*.
- 5 – If RESPOND_r is equal to '0', the mobile station shall enter the *Mobile Station*
6 *Idle State* within T_{34m} seconds after receiving the *Channel Assignment*
7 *Message*.
- 8 • If ASSIGN_MODE_r equals '010', the mobile station shall perform the following
9 actions:
 - 10 – If the mobile station does not support analog operation in the requested band
11 class, the mobile station shall send a *Mobile Station Reject Order* with ORDQ
12 field set to '00000110' (capability not supported by the mobile station) and
13 shall remain in the *Page Response Substate*.
 - 14 – If the mobile station supports analog operation in the requested band class,
15 the mobile station shall perform the following actions:
 - 16 + If USE_ANALOG_SYS_r equals '1', the mobile station shall set SERVSYS_s
17 to SYS_A if ANALOG_SYS_r is equal to '0', or shall set SERVSYS_s to SYS_B
18 if ANALOG_SYS_r is equal to '1'.
 - 19 + If PACA_s is equal to enabled, the mobile station shall set PACA_s to
20 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
21 and should indicate to the user that the PACA call has been canceled.
 - 22 + If RESPOND_r equals '0', the mobile station shall enter the analog
23 Initialization Task with a wait-for-page indication (see 2.6.1). If
24 RESPOND_r equals '1', the mobile station shall enter the analog
25 Initialization Task with a page response indication (see 2.6.1).
- 26 • If ASSIGN_MODE_r equals '011', the mobile station shall perform the following
27 actions:
 - 28 – If the mobile station does not support analog operation in the requested band
29 class, the mobile station shall send a *Mobile Station Reject Order* with ORDQ
30 field set to '00000110' (capability not supported by the mobile station) and
31 remain in the *Page Response Substate*.
 - 32 – If the mobile station supports analog operation in the requested band class:
 - 33 + If PACA_s is equal to enabled, the mobile station shall set PACA_s to
34 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
35 and should indicate to the user that the PACA call has been canceled.

- 1 + If the analog channel type is '00', the mobile station shall store the
2 system identification ($SID_S = SID_P$), voice mobile station attenuation
3 code ($VMAC_S = VMAC_P$), voice channel number ($ANALOG_CHAN_S =$
4 $ANALOG_CHAN_P$), SAT color code ($SCC_S = SCC_P$), and message encryption
5 mode indicator ($MEM_S = MEM_P$), shall set DTX_S to '00' and shall enter the
6 Confirm Initial Voice Channel Task (see 2.6.4.2) with a page response
7 indication.
- 8 + If the analog channel type is not '00':
 - 9 o If the mobile station supports narrow analog mode, the mobile station
10 shall store the system identification ($SID_S = SID_P$), voice mobile
11 station attenuation code ($VMAC_S = VMAC_P$), voice channel number
12 ($ANALOG_CHAN_S = ANALOG_CHAN_P$), message encryption mode
13 indicator ($MEM_S = MEM_P$), analog channel type ($AN_CHAN_TYPE_S =$
14 $AN_CHAN_TYPE_P$) and the digital SAT code ($DSCC_S = DSCC_MSB_P \times 4$
15 $+ SCC_P$), shall set DTX_S to '00', and shall enter the Confirm Initial
16 Narrow Analog Voice Channel Task (see 2.6.5.2A of [22]) with a page
17 response indication.
 - 18 o If the mobile station does not support narrow analog mode, the
19 mobile station shall send a *Mobile Station Reject Order* with the ORDQ
20 field set to '00000110' (capability not supported by the mobile station)
21 and the mobile station shall remain in the *Page Response Substate* of
22 the *System Access State*.
- 23 • If $ASSIGN_MODE_P$ equals '100', the mobile station shall perform the following
24 actions:
 - 25 – The mobile station shall set CH_IND_S to '01'.
 - 26 – If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled
27 and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should
28 indicate to the user that the PACA call has been canceled.
 - 29 – If $GRANTED_MODE_P$ equals '00', and the multiplex option and radio
30 configuration combination specified in the $DEFAULT_CONFIG$ field is not
31 supported by the mobile station, the mobile station shall send a *Mobile*
32 *Station Reject Order* with ORDQ field set to '00000110' (capability not
33 supported by the mobile station) and remain in the *Page Response Substate*.
 - 34 – If $FREQ_INCL_P$ equals '0', the mobile station shall perform the following
35 actions:

- 1 + The mobile station shall store the frame offset ($\text{FRAME_OFFSET}_S =$
2 FRAME_OFFSET_T), the message encryption mode indicator
3 ($\text{ENCRYPT_MODE}_S = \text{ENCRYPT_MODE}_T$), the granted mode
4 ($\text{GRANTED_MODE}_S = \text{GRANTED_MODE}_T$), and default configuration
5 ($\text{DEFAULT_CONFIG}_S = \text{DEFAULT_CONFIG}_T$).
- 6 + The mobile station shall set SERV_NEG_S to enabled.
- 7 + The mobile station shall initialize CODE_CHAN_LIST as described in
8 2.6.8 and shall then enter the *Traffic Channel Initialization Substate* of the
9 *Mobile Station Control on the Traffic Channel State*.
- 10 – If FREQ_INCL_T equals '1', the mobile station shall perform the following
11 actions:
 - 12 + If the band class is not supported by the mobile station, the mobile
13 station shall send a *Mobile Station Reject Order* with ORDQ field set to
14 '00000110' (capability not supported by the mobile station) and shall
15 remain in the *Page Response Substate*.
 - 16 + If the band class is supported by the mobile station, the mobile station
17 shall perform the following actions:
 - 18 o The mobile station shall store the frame offset ($\text{FRAME_OFFSET}_S =$
19 FRAME_OFFSET_T), the message encryption mode indicator
20 ($\text{ENCRYPT_MODE}_S = \text{ENCRYPT_MODE}_T$), the bypass indicator
21 ($\text{BYPASS_ALERT_ANSWER}_S = \text{BYPASS_ALERT_ANSWER}_T$), the granted
22 mode ($\text{GRANTED_MODE}_S = \text{GRANTED_MODE}_T$), the default
23 configuration ($\text{DEFAULT_CONFIG}_S = \text{DEFAULT_CONFIG}_T$), the band
24 class ($\text{CDMABAND}_S = \text{BAND_CLASS}_T$), and the Frequency Assignment
25 ($\text{CDMACH}_S = \text{CDMA_FREQ}_T$).
 - 26 o The mobile station shall initialize CODE_CHAN_LIST as described in
27 2.6.8, and shall set SERV_NEG_S to enabled.
 - 28 o The mobile station shall then tune to the new Frequency
29 Assignment and shall enter the *Traffic Channel Initialization Substate*
30 of the *Mobile Station Control on the Traffic Channel State*.
- 31 • If ASSIGN_MODE_T equals '101', the mobile station shall perform the following
32 actions:
 - 33 – If FREQ_INCL_T equals '0', the mobile station shall perform the following
34 actions:
 - 35 + If the message requires acknowledgement, the mobile station shall wait
36 until Layer 3 receives an indication from Layer 2 that the
37 acknowledgement to the message has been sent and acknowledged.

- 1 + The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to
2 NULL (see 2.6.2.2) and shall set PILOT_PN_S to the pilot PN sequence
3 offset of the strongest pilot in the list (PILOT_PN_P).
- 4 + If the mobile station has not stored configuration parameters for the
5 Primary Paging Channel of the new base station, or if the stored
6 information is not current (see 2.6.2.2), the mobile station shall set
7 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
8 EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LIST_MSG_SEQ_S,
9 USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S
10 CHAN_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
11 EXT_SYS_PAR_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, and
12 EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL.
- 13 + The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
14 Primary Paging Channel. The mobile station shall then begin
15 monitoring the Primary Paging Channel of the selected base station.
- 16 + If RESPOND_T is equal to '1', the mobile station shall perform the
17 following:
 - 18 o If the *Channel Assignment Message* does not require an
19 acknowledgment, the mobile station shall enter the *Update Overhead*
20 *Information Substate* with a page response retransmission indication
21 within T_{34m} seconds after receiving the *Channel Assignment*
22 *Message*.
 - 23 o If the *Channel Assignment Message* requires an acknowledgment, the
24 mobile station shall enter the *Update Overhead Information Substate*
25 with a page response retransmission indication within T_{34m} seconds
26 after Layer 3 receives an indication from Layer 2 that the
27 acknowledgement to the *Channel Assignment Message* has been sent
28 and acknowledged.
- 29 + If RESPOND_T is equal to '0', the mobile station shall perform the
30 following:
 - 31 o If the *Channel Assignment Message* does not require an
32 acknowledgment, the mobile station shall enter the *Mobile Station*
33 *Idle State* within T_{34m} seconds after receiving the *Channel*
34 *Assignment Message*.
 - 35 o If the *Channel Assignment Message* requires an acknowledgment, the
36 mobile station shall enter the *Mobile Station Idle State* within T_{34m}
37 seconds after Layer 3 receives an indication from Layer 2 that the
38 acknowledgement to the *Channel Assignment Message* has been sent
39 and acknowledged.

- 1 – If $FREQ_INCL_r$ equals '1', the mobile station shall perform the following
2 actions:
 - 3 + If the band class is not supported by the mobile station, the mobile
4 station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to
5 '00000110' (capability not supported by the mobile station) and shall
6 remain in the *Page Response Substate*.
 - 7 + If the band class is supported by the mobile station, the mobile station
8 shall perform the following actions:
 - 9 o If the message requires acknowledgement, the mobile station shall
10 wait until Layer 3 receives an indication from Layer 2 that the
11 acknowledgement to the message has been sent and acknowledged.
 - 12 o The mobile station shall set $CONFIG_MSG_SEQ_s$ and
13 $ACC_MSG_SEQ_s$ to NULL (see 2.6.2.2) and shall set $PILOT_PN_s$ to the
14 pilot PN sequence offset of the strongest pilot in the list ($PILOT_PN_r$).
 - 15 o If the mobile station has not stored configuration parameters for the
16 Primary Paging Channel of the new base station, or if the stored
17 information is not current (see 2.6.2.2), the mobile station shall set
18 $SYS_PAR_MSG_SEQ_s$, $NGHBR_LST_MSG_SEQ_s$,
19 $EXT_NGHBR_LST_MSG_SEQ_s$, $GEN_NGHBR_LIST_MSG_SEQ_s$,
20 $USER_ZONE_ID_MSG_SEQ_s$, $PRI_NGHBR_LST_MSG_SEQ_s$,
21 $CHAN_LST_MSG_SEQ_s$, $EXT_CHAN_LST_MSG_SEQ_s$,
22 $EXT_SYS_PAR_MSG_SEQ_s$, $GLOB_SERV_REDIR_MSG_SEQ_s$, and
23 $EXT_GLOB_SERV_REDIR_MSG_SEQ_s$ to NULL.
 - 24 o The mobile station shall store the band class ($CDMABAND_s =$
25 $BAND_CLASS_r$) and the Frequency Assignment
26 ($CDMACH_s = CDMA_FREQ_r$).
 - 27 o The mobile station shall set $PAGE_CHAN_s$ to '1' and $PAGECH_s$ to the
28 Primary Paging Channel. The mobile station shall then begin
29 monitoring the Primary Paging Channel of the selected base station.
 - 30 o If $RESPOND_r$ is equal to '1', the mobile station shall perform the
31 following:
 - 32 ◊ If the *Channel Assignment Message* does not require an
33 acknowledgment, the mobile station shall enter the *Update*
34 *Overhead Information Substate* with a page response
35 retransmission indication within T_{34m} seconds after receiving
36 the *Channel Assignment Message*.

◇ If the *Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Channel Assignment Message* has been sent and acknowledged.

o If $RESPOND_r$ is equal to '0', the mobile station perform the following:

◇ If the *Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after receiving the *Channel Assignment Message*.

◇ If the *Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Channel Assignment Message* has been sent and acknowledged.

4. *Data Burst Message*

5. *Extended Channel Assignment Message*: The mobile station shall process the message as follows:

- If $ASSIGN_MODE_r$ equals '000', the mobile station shall perform the following actions:
 - The mobile station shall set CH_IND_s to '01'.
 - If $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ to disabled and $PACA_CANCEL$ to '0', shall disable the $PACA$ state timer, and should indicate to the user that the $PACA$ call has been canceled.
 - If $GRANTED_MODE_r$ equals '00', and the multiplex option and radio configuration specified in the $DEFAULT_CONFIG$ field are not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00000110' (capability not supported by the mobile station) and shall remain in the *Page Response Substate*.
 - If $GRANTED_MODE_r$ is equal to '00' and $DEFAULT_CONFIG_r$ is not equal to '100', the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00001110' (RC does not match with $DEFAULT_CONFIG_r$) and shall remain in the *Page Response Substate* if any of the following conditions is true:
 - $FOR_FCH_RC_r$ is not equal to the RC associated with $DEFAULT_CONFIG_r$ (see Table 3.7.2.3.2.21-2).

REV_FCH_RC_r is not equal to the RC associated with DEFAULT_CONFIG_r
(see Table 3.7.2.3.2.21-2).

- If the mobile station does not support either of the Fundamental Channel Radio Configurations (FOR_FCH_RC or REV_FCH_RC), the mobile shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported by the mobile station) and remain in the *Page Response Substate*.
- If P_REV_IN_USE_s is equal to or greater than 6, the mobile station shall store the Forward Fundamental Channel Radio Configuration (FOR_FCH_RC_s = FOR_FCH_RC_r) and the Reverse Fundamental Channel Radio Configuration (REV_FCH_RC_s = REV_FCH_RC_r).
- If FREQ_INCL_r equals '0', the mobile station shall perform the following actions:
 - + The mobile station shall store the frame offset (FRAME_OFFSET_s = FRAME_OFFSET_r); the message encryption mode indicator (ENCRYPT_MODE_s = ENCRYPT_MODE_r); the bypass indicator (BYPASS_ALERT_ANSWER_s = BYPASS_ALERT_ANSWER_r); the granted mode (GRANTED_MODE_s = GRANTED_MODE_r); the default configuration (DEFAULT_CONFIG_s = DEFAULT_CONFIG_r); and the occurrences of PILOT_PN and PWR_COMB for each included member of the Active Set.
 - + The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8, and shall set SERV_NEG_s to enabled.
 - + The mobile station shall set FPC_FCH_INIT_SETPT_s to FPC_FCH_INIT_SETPT_r, FPC_FCH_CURR_SETPT_s to FPC_FCH_INIT_SETPT_s, FPC_FCH_FER_s to FPC_FCH_FER_r, FPC_FCH_MIN_SETPT_s to FPC_FCH_MIN_SETPT_r, FPC_FCH_MAX_SETPT_s to FPC_FCH_MAX_SETPT_r, and FPC_PRI_CHAN_s to '0' if the mobile station supports any Radio Configuration greater than 2.
 - + The mobile station shall set FPC_SUBCHAN_GAIN_s to FPC_SUBCHAN_GAIN_r.
 - + The mobile station shall set RLGAIN_ADJ_s to RLGAIN_ADJ_r.
 - + The mobile station shall set REV_FCH_GATING_MODE_s to REV_FCH_GATING_MODE_r.
 - + The mobile station shall set REV_PWR_CNTL_DELAY_s to REV_PWR_CNTL_DELAY_r if REV_PWR_CNTL_DELAY_INCL_r is equal to '1'.

- 1 + The mobile station shall then enter the *Traffic Channel Initialization*
- 2 *Substate* of the *Mobile Station Control on the Traffic Channel State*.
- 3 – If $FREQ_INCL_r$ equals '1', and the band class is not supported by the mobile
- 4 station, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$
- 5 field set to '00000110' (capability not supported by the mobile station) and
- 6 remain in the *Page Response Substate*.
- 7 – If $FREQ_INCL_r$ equals '1', and the band class is supported by the mobile
- 8 station, the mobile station shall perform the following actions:
 - 9 + The mobile station shall store the frame offset ($FRAME_OFFSET_s =$
 - 10 $FRAME_OFFSET_r$); the message encryption mode indicator
 - 11 ($ENCRYPT_MODE_s = ENCRYPT_MODE_r$); the bypass indicator
 - 12 ($BYPASS_ALERT_ANSWER_s = BYPASS_ALERT_ANSWER_r$); the granted
 - 13 mode ($GRANTED_MODE_s = GRANTED_MODE_r$); the default configuration
 - 14 ($DEFAULT_CONFIG_s = DEFAULT_CONFIG_r$); the band class ($CDMABAND_s$
 - 15 $= BAND_CLASS_r$); the Frequency Assignment
 - 16 ($CDMACH_s = CDMA_FREQ_r$); and the occurrences of $PILOT_PN$ and
 - 17 PWR_COMB_IND for each included member of the Active Set.
 - 18 + The mobile station shall set $FPC_FCH_INIT_SETPT_s$ to
 - 19 $FPC_FCH_INIT_SETPT_r$, $FPC_FCH_CURR_SETPT_s$ to
 - 20 $FPC_FCH_INIT_SETPT_s$, $FPC_FCH_FER_s$ to $FPC_FCH_FER_r$,
 - 21 $FPC_FCH_MIN_SETPT_s$ to $FPC_FCH_MIN_SETPT_r$,
 - 22 $FPC_FCH_MAX_SETPT_s$ to $FPC_FCH_MAX_SETPT_r$, and $FPC_PRI_CHAN_s$
 - 23 to '0' if the mobile station supports any Radio Configuration greater than
 - 24 2.
 - 25 + The mobile station shall set $FPC_SUBCHAN_GAIN_s$ to
 - 26 $FPC_SUBCHAN_GAIN_r$.
 - 27 + The mobile station shall set $RLGAIN_ADJ_s$ to $RLGAIN_ADJ_r$.
 - 28 + The mobile station shall set $REV_FCH_GATING_MODE_s$ to
 - 29 $REV_FCH_GATING_MODE_r$.
 - 30 + The mobile station shall set $REV_PWR_CNTL_DELAY_s$ to
 - 31 $REV_PWR_CNTL_DELAY_r$ if $REV_PWR_CNTL_DELAY_INCL_r$ is equal to '1'.
 - 32 + The mobile station shall initialize $CODE_CHAN_LIST$ as described in
 - 33 2.6.8, and shall set $SERV_NEG_s$ to enabled.
 - 34 + The mobile station shall then tune to the new Frequency Assignment
 - 35 and shall enter the *Traffic Channel Initialization Substate* of the *Mobile*
 - 36 *Station Control on the Traffic Channel State*.

- 1 • If ASSIGN_MODE_r equals '001', the mobile station shall perform the following
2 actions:
 - 3 – If FREQ_INCL_r equals '0', the mobile station shall perform the following
4 actions:
 - 5 + If the message requires acknowledgement, the mobile station shall wait
6 until Layer 3 receives an indication from Layer 2 that the
7 acknowledgement to the message has been sent and acknowledged.
 - 8 + The mobile station shall set CONFIG_MSG_SEQ_s and ACC_MSG_SEQ_s to
9 NULL (see 2.6.2.2) and shall set PILOT_PN_s to the pilot PN sequence
10 offset of the strongest pilot in the list (PILOT_PN_r). If the mobile station
11 has not stored configuration parameters for the Primary Paging Channel
12 of the new base station, or if the stored information is not current (see
13 2.6.2.2), the mobile station shall set SYS_PAR_MSG_SEQ_s,
14 NGHBR_LST_MSG_SEQ_s, EXT_NGHBR_LST_MSG_SEQ_s,
15 GEN_NGHBR_LIST_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s,
16 PRI_NGHBR_LST_MSG_SEQ_s, CHAN_LST_MSG_SEQ_s,
17 EXT_CHAN_LST_MSG_SEQ_s, EXT_SYS_PAR_MSG_SEQ_s,
18 GLOB_SERV_REDIR_MSG_SEQ_s, and EXT_GLOB_SERV_REDIR_MSG_SEQ_s
19 to NULL.
 - 20 + The mobile station shall set PAGE_CHAN_s to '1' and PAGECH_s to the
21 Primary Paging Channel. The mobile station shall then begin
22 monitoring the Primary Paging Channel of the selected base station.
 - 23 + If RESPOND_r is equal to '1', the mobile station shall perform the
24 following:
 - 25 o If the *Extended Channel Assignment Message* does not require an
26 acknowledgment, the mobile station shall enter the *Update Overhead*
27 *Information Substate* with a page response retransmission indication
28 within T_{34m} seconds after receiving the *Extended Channel*
29 *Assignment Message*.
 - 30 o If the *Extended Channel Assignment Message* requires an
31 acknowledgment, the mobile station shall enter the *Update Overhead*
32 *Information Substate* with a page response retransmission indication
33 within T_{34m} seconds after Layer 3 receives an indication from Layer
34 2 that the acknowledgement to the *Extended Channel Assignment*
35 *Message* has been sent and acknowledged.
 - 36 + If RESPOND_r is equal to '0', the mobile station shall perform the
37 following:

- o If the *Extended Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after receiving the *Extended Channel Assignment Message*.
 - o If the *Extended Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Extended Channel Assignment Message* has been sent and acknowledged.
- If $FREQ_INCL_r$ equals '1', and the band class is not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00000110' (capability not supported by the mobile station) and remain in the *Page Response Substate*.
- If $FREQ_INCL_r$ equals '1', and the band class is supported by the mobile station, the mobile station shall perform the following actions:
 - + If the message requires acknowledgement, the mobile station shall wait until Layer 3 receives an indication from Layer 2 that the acknowledgement to the message has been sent and acknowledged.
 - + The mobile station shall set $CONFIG_MSG_SEQ_s$ and $ACC_MSG_SEQ_s$ to NULL (see 2.6.2.2) and shall set $PILOT_PN_s$ to the pilot PN sequence offset of the strongest pilot in the list ($PILOT_PN_r$).
 - + If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set $SYS_PAR_MSG_SEQ_s$, $NGHBR_LST_MSG_SEQ_s$, $EXT_NGHBR_LST_MSG_SEQ_s$, $GEN_NGHBR_LST_MSG_SEQ_s$, $USER_ZONE_ID_MSG_SEQ_s$, $PRI_NGHBR_LST_MSG_SEQ_s$, $CHAN_LST_MSG_SEQ_s$, $EXT_CHAN_LST_MSG_SEQ_s$, $EXT_SYS_PAR_MSG_SEQ_s$, $GLOB_SERV_REDIR_MSG_SEQ_s$, and $EXT_GLOB_SERV_REDIR_MSG_SEQ_s$ to NULL.
 - + The mobile station shall store the band class ($CDMABAND_s = BAND_CLASS_r$) and the Frequency Assignment ($CDMACH_s = CDMA_FREQ_r$).
 - + The mobile station shall set $PAGE_CHAN_s$ to '1' and $PAGECH_s$ to the Primary Paging Channel. The mobile station shall then begin monitoring the Primary Paging Channel of the selected base station.
 - + If $RESPOND_r$ is equal to '1', the mobile station shall perform the following:

- o If the *Extended Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after receiving the *Extended Channel Assignment Message*.
 - o If the *Extended Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Extended Channel Assignment Message* has been sent and acknowledged.
- + If $RESPOND_r$ is equal to '0', the mobile station shall perform the following:
 - o If the *Extended Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after receiving the *Extended Channel Assignment Message*.
 - o If the *Extended Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Extended Channel Assignment Message* has been sent and acknowledged.
- If $ASSIGN_MODE_r$ equals '010', the mobile station shall perform the following actions:
 - If the mobile station does not support analog operation in the requested band class, the mobile station shall send a *Mobile Station Reject Order* with ORDQ field set to '00000110' (capability not supported by the mobile station) and remain in the *Page Response Substate*.
 - If the mobile station supports analog operation in the requested band class, the mobile station shall perform the following actions:
 - + If $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ to disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.
 - + If $RESPOND_r$ equals '0', and $USE_ANALOG_SYS_r$ equals '1', the mobile station shall set $SERVSYS_s$ to SYS_A if $ANALOG_SYS_r$ is equal to '0', or set $SERVSYS_s$ to SYS_B if $ANALOG_SYS_r$ is equal to '1'. The mobile station shall then enter the analog Initialization Task with a wait-for-page indication (see 2.6.1 of [6]).

- 1 + If RESPOND_r equals '1', and USE_ANALOG_SYS_r equals '1', the mobile station
2 shall set SERVSYS_s to SYS_A if ANALOG_SYS_r is equal to '0', or set
3 SERVSYS_s to SYS_B if ANALOG_SYS_r is equal to '1'. The mobile station shall
4 then enter the analog Initialization Task with a page response indication
5 (see 2.6.1 of [6]).
- 6 + If RESPOND_r equals '0', and USE_ANALOG_SYS_r equals '0' the mobile station
7 shall enter the analog Initialization Task with a wait for page indication
8 (see 2.6.1 of [6]).
- 9 + If RESPOND_r equals '1', and USE_ANALOG_SYS_r equals '0' the mobile station
10 shall enter the analog Initialization Task with a page response indication
11 (see 2.6.1 of [6]).
- 12 • If ASSIGN_MODE_r equals '011', the mobile station shall perform the following
13 actions:
 - 14 – If the mobile station does not support analog operation in the requested band
15 class, the mobile station shall send a *Mobile Station Reject Order* with ORDQ field
16 set to '00000110' (capability not supported by the mobile station) and remain in
17 the *Page Response Substate*.
 - 18 – If the mobile station supports analog operation in the requested band class, and
19 the analog channel type is '00', the mobile station shall store the system
20 identification ($\text{SID}_s = \text{SID}_r$), voice mobile station attenuation code ($\text{VMAC}_s =$
21 VMAC_r), voice channel number ($\text{ANALOG_CHAN}_s = \text{ANALOG_CHAN}_r$), SAT color
22 code ($\text{SCC}_s = \text{SCC}_r$), and message encryption mode indicator ($\text{MEM}_s = \text{MEM}_r$),
23 shall set DTX_s to '00', and shall enter the Confirm Initial Voice Channel Task
24 (see 2.6.4.2) with a page response indication. If PACA_s is equal to enabled, the
25 mobile station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable
26 the PACA state timer, and should indicate to the user that the PACA call has
27 been canceled.
 - 28 – If the mobile station supports analog operation in the requested band class, the
29 analog channel type is not '00':

- 1 + If the mobile supports narrow analog mode, the mobile station shall store
2 the system identification ($SID_S = SID_T$), voice mobile station attenuation
3 code ($VMAC_S = VMAC_T$), voice channel number ($ANALOG_CHAN_S =$
4 $ANALOG_CHAN_T$), message encryption mode indicator ($MEM_S = MEM_T$),
5 analog channel type ($AN_CHAN_TYPE_S = AN_CHAN_TYPE_T$) and the digital
6 SAT code ($DSCC_S = DSCC_MSB_T \times 4 + SCC_T$), shall set DTX_S to '00', and shall
7 enter the Confirm Initial Narrow Analog Voice Channel Task (see 2.6.5.2A
8 of [22]) with a page response indication. If $PACA_S$ is equal to enabled, the
9 mobile station shall set $PACA_S$ to disabled and $PACA_CANCEL$ to '0', shall
10 disable the PACA state timer, and should indicate to the user that the PACA
11 call has been canceled.
- 12 + If the mobile station does not support narrow analog mode, the mobile
13 station shall send a *Mobile Station Reject Order* with the ORDQ field set to
14 '00000110' (capability not supported by the mobile station) and the mobile
15 station shall remain in the *Page Response Substate* of the *System Access*
16 *State*.
- 17 • If $ASSIGN_MODE_T$ equals '100', the mobile station shall perform the following
18 actions:
- 19 – If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled and
20 $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to
21 the user that the PACA call has been canceled.
- 22 – If $GRANTED_MODE_T$ equals '00' and the multiplex option and radio configuration
23 specified in the $DEFAULT_CONFIG_T$ field are not supported by the mobile
24 station, the mobile station shall send a *Mobile Station Reject Order* with ORDQ
25 field set to '00000110' (capability not supported by the mobile station) and shall
26 remain in the *Page Response Substate*.
- 27 – If $GRANTED_MODE_T$ equals '00' and $DEFAULT_CONFIG_T$ is not equal to '100', the
28 mobile station shall send a *Mobile Station Reject Order* with ORDQ field set to
29 '00001110' (RC does not match with $DEFAULT_CONFIG$) and shall remain in the
30 *Page Response Substate* if one of the following conditions is true:
- 31 + FOR_RC_T is not equal to the RC associated with $DEFAULT_CONFIG_T$ as
32 specified in Table 3.7.2.3.2.21-2.
- 33 + REV_RC_T is not equal to the RC associated with $DEFAULT_CONFIG_T$ as
34 specified in Table 3.7.2.3.2.21-2.
- 35 – If the mobile station does not support either of the Radio Configurations
36 (FOR_RC or REV_RC), the mobile station shall send a *Mobile Station Reject Order*
37 with the ORDQ field set to '00000110' (capability not supported by the mobile
38 station) and remain in the *Page Response Substate*.

- 1 – If $CH_IND_r = '01'$ and the mobile station does not support Fundamental Channel,
2 the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
3 set to '00000110' (capability not supported by the mobile station) and remain in
4 the *Page Response Substate*.
- 5 – If $CH_IND_r = '10'$ and the mobile station does not support the Dedicated Control
6 Channel, the mobile station shall send a *Mobile Station Reject Order* with the
7 ORDQ field set to '00000110' (capability not supported by the mobile station) and
8 remain in the *Page Response Substate*.
- 9 – If $CH_IND_r = '11'$ and the mobile station does not support the Dedicated Control
10 Channel and Fundamental Channel concurrently, the mobile station shall send
11 a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not
12 supported by the mobile station) and remain in the *Page Response Substate*.
- 13 – If $FREQ_INCL_r$ equals '1' and if the band class ($BAND_CLASS_r$) is not supported
14 by the mobile station, the mobile station shall send a *Mobile Station Reject Order*
15 with ORDQ field set to '00000110' (capability not supported by the mobile station)
16 and remain in the *Page Response Substate*.
- 17 – If the mobile station does not send a Mobile Station Reject Order as specified
18 above, it shall continue to perform the actions specified below.
- 19 – If $FREQ_INCL_r$ equals '1', the mobile station shall set
20 + $CDMABAND_s = BAND_CLASS_r$
21 + $CDMACH_s = CDMA_FREQ_r$
- 22 – The mobile station shall store the bypass indicator ($BYPASS_ALERT_ANSWER_s =$
23 $BYPASS_ALERT_ANSWER_r$).
- 24 – The mobile station shall store granted mode ($GRANTED_MODE_s =$
25 $GRANTED_MODE_r$)
- 26 – The mobile station shall store the default configuration ($DEFAULT_CONFIG_s =$
27 $DEFAULT_CONFIG_r$).
- 28 – The mobile station shall store the Forward Traffic Channel Radio Configuration
29 ($FOR_RC_s = FOR_RC_r$) and the Reverse Traffic Channel Radio Configuration
30 ($REV_RC_s = REV_RC_r$).
- 31 – The mobile station shall store the frame offset ($FRAME_OFFSET_s =$
32 $FRAME_OFFSET_r$).
- 33 – The mobile station shall store the message encryption mode indicator
34 ($ENCRYPT_MODE_s = ENCRYPT_MODE_r$).
- 35 – The mobile station shall store the Forward power control subchannel relative
36 gain [$FPC_SUBCHAN_GAIN_s = FPC_SUBCHAN_GAIN_r$].

- 1 – The mobile station shall set $RLGAIN_ADJ_S$ to $RLGAIN_ADJ_R$.
- 2 – The mobile station shall set $REV_FCH_GATING_MODE_S$ to
- 3 $REV_FCH_GATING_MODE_R$.
- 4 – The mobile station shall set $REV_PWR_CNTL_DELAY_S$ to
- 5 $REV_PWR_CNTL_DELAY_R$ if $REV_PWR_CNTL_DELAY_INCL_R$ is equal to '1'.
- 6 – If $3XFL_1XRL_INCL_R$ is equal to '1', the mobile station shall set
- 7 $1XRL_FREQ_OFFSET_S$ to $1XRL_FREQ_OFFSET_R$.
- 8 – The mobile station shall store the channel indicator ($CH_IND_S = CH_IND_R$) and
- 9 the mobile station shall perform the following actions:
 - 10 + If CH_IND_R equals '01', the mobile station shall set $FPC_FCH_INIT_SETPT_S$
 - 11 to $FPC_FCH_INIT_SETPT_R$, $FPC_FCH_CURR_SETPT_S$ to
 - 12 $FPC_FCH_INIT_SETPT_S$, $FPC_FCH_FER_S$ to $FPC_FCH_FER_R$,
 - 13 $FPC_FCH_MIN_SETPT_S$ to $FPC_FCH_MIN_SETPT_R$, $FPC_FCH_MAX_SETPT_S$ to
 - 14 $FPC_FCH_MAX_SETPT_R$, and $FPC_PRI_CHAN_S$ to '0' if the mobile station
 - 15 supports any Radio Configuration greater than 2. Then for each included
 - 16 member of the Active Set, the mobile station shall store the following:
 - 17 o Set the $PILOT_PN$ field to $PILOT_PN_R$.
 - 18 o Set the $ADD_PILOT_REC_INCL$ field to
 - 19 $ADD_PILOT_REC_INCL_R$. If $ADD_PILOT_REC_INCL_R$ equals '1', the mobile
 - 20 station shall store the following:
 - 21 Set the $PILOT_REC_TYPE$ field of $PILOT_REC$ to $PILOT_REC_TYPE_R$.
 - 22 If $PILOT_REC_TYPE_R$ equals '000', the mobile station shall set the
 - 23 TD_POWER_LEVEL field of $PILOT_REC$ to $TD_POWER_LEVEL_R$ and set
 - 24 the TD_MODE field of $PILOT_REC$ to TD_MODE_R .
 - 25 If $PILOT_REC_TYPE_R$ is equal to '001', the mobile station shall.
 - 26 – Set the AUX_PILOT_QOF field of $PILOT_REC$ to QOF_R .
 - 27 – Set the $AUX_PILOT_WALSH_CODE$ field of $PILOT_REC$ to
 - 28 $AUX_PILOT_WALSH_R$ with the Walsh Code length specified by
 - 29 $WALSH_LENGTH_R$.
 - 30 If $NGHBR_PILOT_REC_TYPE_R$ is equal to '010', the mobile station shall:
 - 31 – Set the $AUX_PILOT_TD_QOF$ field of $PILOT_REC$ to QOF_R .
 - 32 – Set the $AUX_PILOT_TD_WALSH_CODE$ field of $PILOT_REC$ to
 - 33 $AUX_TD_WALSH_R$ with the Walsh Code length specified by
 - 34 $WALSH_LENGTH_R$.

- 1 – Set the AUX_TD_POWER_LEVEL field of PILOT_REC to
- 2 AUX_TD_POWER_LEVEL_r.
- 3 – Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.

4 If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- 5 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
- 6 SR3_PRIMARY_PILOT_r.
- 7 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
- 8 SR3_PILOT_POWER1_r.
- 9 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
- 10 SR3_PILOT_POWER2_r.

11 If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- 12 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
- 13 SR3_PRIMARY_PILOT_r.
- 14 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
- 15 SR3_PILOT_POWER1_r.
- 16 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
- 17 SR3_PILOT_POWER2_r.
- 18 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 19 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
- 20 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 21 WALSH_LENGTH_r.
- 22 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field
- 23 of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1
- 24 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code
- 25 length specified by WALSH_LENGTH1_r.
- 26 – Otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r
- 27 and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to
- 28 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 29 WALSH_LENGTH_r.
- 30 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field
- 31 of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2
- 32 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code
- 33 length specified by WALSH_LENGTH2_r.

- 1 – Otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r
2 and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to
3 AUX_PILOT_WALSH_r with the Walsh Code length specified by
4 WALSH_LENGTH_r.
- 5 o Set the PWR_COMB_IND field to PWR_COMB_IND_r.
- 6 o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.
- 7 o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.
- 8 + If CH_IND_r equals '01' and 3X_FCH_INFO_INCL_r equals to '1', for each
9 included member of the Active Set, the mobile station store the following:
10 o If 3X_FCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_FCH_LOW field
11 to QOF_MASK_ID_FCH_LOW_r and the CODE_CHAN_FCH_LOW field to
12 CODE_CHAN_FCH_LOW_r. Otherwise, set the QOF_MASK_ID_FCH_LOW
13 field to QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_LOW to
14 CODE_CHAN_FCH_r.
- 15 o If 3X_FCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_FCH_HIGH field
16 to QOF_MASK_ID_FCH_HIGH_r and the CODE_CHAN_FCH_HIGH field to
17 CODE_CHAN_FCH_HIGH_r. Otherwise, set the QOF_MASK_ID_FCH_HIGH
18 field to QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_HIGH to
19 CODE_CHAN_FCH_r.
- 20 + If CH_IND_r equals '10', the mobile station shall set FPC_DCCH_INIT_SETPT_s
21 to FPC_DCCH_INIT_SETPT_r, FPC_DCCH_CURR_SETPT_s to
22 FPC_DCCH_INIT_SETPT_s, FPC_DCCH_FER_s to FPC_DCCH_FER_r,
23 FPC_DCCH_MIN_SETPT_s to FPC_DCCH_MIN_SETPT_r,
24 FPC_DCCH_MAX_SETPT_s to FPC_DCCH_MAX_SETPT_r, and FPC_PRI_CHAN_s
25 to '1' if the mobile station supports any Radio Configuration greater than 2.
26 Then for each included member of the Active Set, the mobile station shall
27 store the following:
28 o Set the PILOT_PN to PILOT_PN_r.
- 29 o Set the ADD_PILOT_REC_INCL field to ADD_PILOT_REC_INCL_r. If
30 ADD_PILOT_REC_INCL is equal to '1', the mobile station shall store the
31 following:
32 Set the PILOT_REC_TYPE field of PILOT_REC to PILOT_REC_TYPE_r.
33 If PILOT_REC_TYPE_r equals '000', the mobile station shall set the
34 TD_POWER_LEVEL field of PILOT_REC to TD_POWER_LEVEL_r and set
35 the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '001', the mobile station shall.

- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:

- Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to AUX_TD_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- Set the AUX_TD_POWER_LEVEL field of PILOT_REC to AUX_TD_POWER_LEVEL_r.
- Set the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.

If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.
- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

- 1 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field
- 2 of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1
- 3 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code
- 4 length specified by WALSH_LENGTH1_r.
- 5 – Otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r
- 6 and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to
- 7 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 8 WALSH_LENGTH_r.
- 9 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field
- 10 of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2
- 11 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code
- 12 length specified by WALSH_LENGTH2_r.
- 13 – Otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r
- 14 and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to
- 15 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 16 WALSH_LENGTH_r.
- 17 o Set the PWR_COMB_IND field to PWR_COMB_IND_r.
- 18 o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.
- 19 o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.
- 20 o Set the DCCH_INCL field to DCCH_INCL_r. If DCCH_INCL_r equals '1', the
- 21 mobile station shall store the following:
- 22 ◊ Set the CODE_CHAN_DCCH field to CODE_CHAN_DCCH_r.
- 23 ◊ Set the QOF_MASK_ID_DCCH field to QOF_MASK_ID_DCCH_r.
- 24 + If CH_IND_r equals '10' and 3X_DCCH_INFO_INCL_r equals to '1', for each
- 25 included member of the Active Set, the mobile station store the following:
- 26 o If 3X_DCCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_DCCH_LOW
- 27 field to QOF_MASK_ID_DCCH_LOW_r and the CODE_CHAN_DCCH_LOW
- 28 field to CODE_CHAN_DCCH_LOW_r. Otherwise, set the
- 29 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_FCH_r and the
- 30 CODE_CHAN_DCCH_LOW to CODE_CHAN_FCH_r.
- 31 o If 3X_DCCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_DCCH_HIGH
- 32 field to QOF_MASK_ID_DCCH_HIGH_r and the CODE_CHAN_DCCH_HIGH
- 33 field to CODE_CHAN_DCCH_HIGH_r. Otherwise, set the
- 34 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_FCH_r and the
- 35 CODE_CHAN_DCCH_HIGH to CODE_CHAN_FCH_r.

+ If CH_IND_r equals '11', the mobile station shall set FPC_FCCH_INIT_SETPT_s to FPC_FCH_INIT_SETPT_r, FPC_FCH_CURR_SETPT_s to FPC_FCH_INIT_SETPT_s, FPC_FCH_FER_s to FPC_FCH_FER_r, FPC_FCH_MIN_SETPT_s to FPC_FCH_MIN_SETPT_r, FPC_FCH_MAX_SETPT_s to FPC_FCH_MAX_SETPT_r, FPC_DCCH_INIT_SETPT_s to FPC_DCCH_INIT_SETPT_r, FPC_DCCH_CURR_SETPT_s to FPC_DCCH_INIT_SETPT_s, FPC_DCCH_FER_s to FPC_DCCH_FER_r, FPC_DCCH_MIN_SETPT_s to FPC_DCCH_MIN_SETPT_r, FPC_DCCH_MAX_SETPT_s to FPC_DCCH_MAX_SETPT_r and FPC_PRI_CHAN_s to FPC_PRI_CHAN_r. Then for each included member of the Active Set, the mobile station shall store the following:

- o Set the PILOT_PN to PILOT_PN_r.
- o Set the ADD_PILOT_REC_INCL field to ADD_PILOT_REC. If ADD_PILOT_REC_INCL is equal to '1', the mobile station shall store the following:

Set the PILOT_REC_TYPE field of PILOT_REC to PILOT_REC_TYPE_r.

If PILOT_REC_TYPE_r equals '000', the mobile station shall set the TD_POWER_LEVEL field of PILOT_REC to TD_POWER_LEVEL_r and set the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '001', the mobile station shall:

- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:

- Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to AUX_TD_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- Set the AUX_TD_POWER_LEVEL field of PILOT_REC to AUX_TD_POWER_LEVEL_r.
- Set the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.

1 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
2 SR3_PILOT_POWER1_r.

3 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
4 SR3_PILOT_POWER2_r.

5 If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

6 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
7 SR3_PRIMARY_PILOT_r.

8 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
9 SR3_PILOT_POWER1_r.

10 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
11 SR3_PILOT_POWER2_r.

12 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.

13 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
14 AUX_PILOT_WALSH_r with the Walsh Code length specified by
15 WALSH_LENGTH_r.

16 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field
17 of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1
18 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code
19 length specified by WALSH_LENGTH1_r.

20 – Otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r
21 and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to
22 AUX_PILOT_WALSH_r with the Walsh Code length specified by
23 WALSH_LENGTH_r.

24 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field
25 of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2
26 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code
27 length specified by WALSH_LENGTH2_r.

28 – Otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r
29 and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to
30 AUX_PILOT_WALSH_r with the Walsh Code length specified by
31 WALSH_LENGTH_r.

32 o Set the PWR_COMB_IND field to PWR_COMB_IND_r.

33 o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.

34 o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.

- o Set the CODE_CHAN_DCCH field to CODE_CHAN_DCCH_r.
 - o Set the QOF_MASK_ID_DCCH field to QOF_MASK_ID_DCCH.
 - + If CH_IND_r equals '11' and 3X_FCH_INFO_INCL_r equals to '1', for each included member of the Active Set, the mobile station store the following:
 - o If 3X_FCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_LOW_r and the CODE_CHAN_FCH_LOW field to CODE_CHAN_FCH_LOW_r. Otherwise, set the QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_LOW to CODE_CHAN_FCH_r.
 - o If 3X_FCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_HIGH_r and the CODE_CHAN_FCH_HIGH field to CODE_CHAN_FCH_HIGH_r. Otherwise, set the QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_HIGH to CODE_CHAN_FCH_r.
 - + If CH_IND_r equals '11' and 3X_DCCH_INFO_INCL_r equals to '1', for each included member of the Active Set, the mobile station store the following:
 - o If 3X_DCCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_DCCH_LOW_r and the CODE_CHAN_DCCH_LOW field to CODE_CHAN_DCCH_LOW_r. Otherwise, set the QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_LOW to CODE_CHAN_FCH_r.
 - o If 3X_DCCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_DCCH_HIGH_r and the CODE_CHAN_DCCH_HIGH field to CODE_CHAN_DCCH_HIGH_r. Otherwise, set the QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_HIGH to CODE_CHAN_FCH_r.
 - The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8, and shall set SERV_NEG_s to enabled.
 - If FREQ_INCL_r equals '1', the mobile station shall then tune to the new frequency assignment.
 - The mobile station shall then enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.
6. *Feature Notification Message*
7. *Local Control Order*
8. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-

- 1 permanent memory (LCKRSN_{P-S-p} equals the least significant four bits of ORDQ_r).
 2 The mobile station should notify the user of the locked condition. The mobile
 3 station shall enter the *System Determination Substate of the Mobile Station*
 4 *Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System*
 5 *Access State* again until after the next mobile station power-up or until it has
 6 received an *Unlock Order*. This requirement shall take precedence over any other
 7 mobile station requirement specifying entry to the *System Access State*.
- 8 9. *Maintenance Required Order*: The mobile station shall record the reason for the
 9 *Maintenance Required Order* in the mobile station's semi-permanent memory
 10 (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_r). The mobile station
 11 shall remain in the unlocked condition. The mobile station should notify the user
 12 of the maintenance required condition.
- 13 10. *Registration Accepted Order*:
- 14 • If ORDQ_r = '00000101', the mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_r}
 15 and should display the roaming condition.
 - 16 • If ORDQ_r = '00000111', the mobile station shall perform the following:
 - 17 - The mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_r} and should display
 18 the roaming condition.
 - 19 - The mobile station shall set SIG_ENCRYPT_MODE_S = SIG_ENCRYPT_MODE_r
 20 and start encrypting the signaling messages sent on r-dsch and r-csch
 21 using the encryption algorithm specified by SIG_ENCRYPT_MODE_r (see
 22 Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (see Table 3.7.4.5-
 23 2).
 - 24 - If USE_NEW_KEY is set to '1', the mobile station shall use the session key
 25 generated at the most recent registration for encryption of signaling and
 26 user information. The mobile station shall store the session key in
 27 KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall increment the variable
 28 KEY_SEQ_NEW_{S-p} by one (modulo 16).
 - 29 - If USE_NEW_KEY is set to '0' then the mobile station shall use
 30 KEY[KEY_SEQ_r] as the session key.
- 31 11. *Registration Rejected Order*: This order indicates that normal service is not available
 32 on this system. The mobile station shall disable the full-TMSI timer. If the
 33 received order specifies to delete the TMSI (ORDQ = '00000100'), the mobile station
 34 shall set all the bits of the TMSI_CODE_{S-p} to '1'. The mobile station shall enter the
 35 *System Determination Substate of the Mobile Station Initialization State* with a
 36 registration rejected indication (see 2.6.1.1).
- 37 12. *Release Order*: If NDSS_ORIG_S is equal to enabled, the mobile station shall set
 38 NDSS_ORIG_S to disabled, and should indicate to the user that the call origination
 39 has been canceled. The mobile station shall enter the *Mobile Station Idle State* or

the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1). If the mobile station enters the *Mobile Station Idle State*, and if PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

13. *Retry Order*: The mobile station shall process the message as follows:

- If RETRY_TYPE_R is equal to '000', the mobile station shall set RETRY_DELAY_S[RETRY_TYPE] to 0, where RETRY_TYPE is equal to '001', '010', or '011'.
- If RETRY_TYPE_R is equal to '001', the mobile station shall perform the following:
 - If RETRY_DELAY_R is equal to '00000000', then the mobile station shall set RETRY_DELAY_S[RETRY_TYPE_R] to 0.
 - If RETRY_DELAY_R is not equal to '00000000', the mobile station shall set RETRY_DELAY_S[RETRY_TYPE_R] as follows:
 - + If the most significant bit of the RETRY_DELAY_R is '0', set RETRY_DELAY_UNIT_S to 1000ms. If the most significant bit of the RETRY_DELAY_R is '1', set RETRY_DELAY_UNIT_S to 60000ms.
 - + The mobile station shall set RETRY_DELAY_VALUE_S to the seven least significant bits of RETRY_DELAY_R.
 - + The mobile station shall store the next system time 80 ms boundary + RETRY_DELAY_VALUE_S × RETRY_DELAY_UNIT_S ms as RETRY_DELAY_S[RETRY_TYPE_R].

14. *Security Mode Command Message*: The mobile station shall process the message as follows:

- The mobile station shall set SIG_ENCRYPT_MODE_S to SIG_ENCRYPT_MODE_R.
- If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated at the most recent registration for encryption of signaling and user information. The mobile station shall store the session key in KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall then increment the variable KEY_SEQ_NEW_{S-p} by one (modulo 16).
- If USE_NEW_KEY is set to '0' then the mobile station shall use KEY[KEY_SEQ_R] as the session key.

15. *Service Redirection Message*: The mobile station shall process the message as follows:

- 1 • If the mobile station is directed to an unsupported operation mode or band class,
2 the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ
3 equal to '00000110' (message requires a capability that is not supported by the
4 mobile station).
- 5 • If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
6 TMSI_CODE_{s-p} to '1'. The mobile station shall disable the full-TMSI timer.
- 7 • The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
- 8 • If RECORD_TYPE_r is equal to '00000000', the mobile station shall enter the
9 *System Determination Substate* of the *Mobile Station Initialization State* with an
10 NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the
11 redirection record received in the message as REDIRECT_REC_s and shall enter
12 the *System Determination Substate* of the *Mobile Station Initialization State* with a
13 redirection indication (see 2.6.1.1).
- 14 16. *SSD Update Message*: The mobile station shall respond to the message as specified
15 in 2.3.12.1.5.
- 16 17. *Status Request Message*: The mobile station shall disable the *System Access State*
17 timer and respond to the message. If P_REV_IN_USE_s is less than or equal to three,
18 the mobile station shall respond with a *Status Response Message*. If P_REV_IN_USE_s
19 is greater than three, the mobile station shall respond with an *Extended Status*
20 *Response Message*. If the message does not specify any qualification information
21 (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall include the
22 requested information records in the response. If the message specifies a band
23 class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only
24 include the requested information records for the specified band class
25 (BAND_CLASS_r) in the response. If the message specifies a band class and an
26 operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall
27 only include the requested information records for the specified band class
28 (BAND_CLASS_r) and operating mode (OP_MODE_r) in the response. If the message
29 specifies a band class or a band class and an operating mode which is not supported
30 by the mobile station, the mobile station shall send a *Mobile Station Reject Order*
31 with ORDQ set to '00000110' (message requires a capability that is not supported by
32 the mobile station). If the response to this message exceeds the allowable length,
33 the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to
34 '00001000' (response message would exceed the allowable length). If the message
35 specifies an information record which is not supported by the mobile station for the
36 specified band class and operating mode, the mobile station shall send a *Mobile*
37 *Station Reject Order* with ORDQ set to '00001001' (information record is not supported
38 for the specified band class and operating mode).
- 39 18. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code
40 as follows:

- 1 • The mobile station shall store the length of the TMSI zone field by setting
2 ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r;
- 3 • The mobile station shall store the assigning TMSI zone number by setting the
4 ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p}
5 to TMSI_ZONE_r, and
- 6 • The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.
7 The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-}
8 _p to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The
9 mobile station shall then respond with a *TMSI Assignment Completion Message*
10 within T_{56m} seconds.

11 19. *User Zone Reject Message*

- 12 20. *Any other message*: If the mobile station receives any other message specified in
13 Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all
14 other messages.

15 If the mobile station performs an access probe handoff or access handoff and receives any
16 of the following messages, it shall process the message as specified in 2.6.3.1.3:

- 17 1. *System Parameters Message*
- 18 2. *Access Parameters Message*
- 19 3. *Neighbor List Message*
- 20 4. *Extended System Parameters Message*
- 21 5. *Extended Neighbor List Message*
- 22 6. *General Neighbor List Message*
- 23 7. *Global Service Redirection Message*
- 24 8. *Extended Global Service Redirection Message*

25 2.6.3.4 Mobile Station Order/Message Response Substate

26 In this substate, the mobile station sends a message that is a response to a message
27 received from the base station. If the base station responds to the mobile station's
28 message with an authentication request, the mobile station responds in this substate.

29 If a message received from the base station requires a Layer 2 acknowledgment and does
30 not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is
31 outstanding (see 2.1.1.2.2.1 of [4]).

32 If a message received from the base station requires a Layer 2 acknowledgment and also a
33 Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see
34 2.1.1.2.2.1 of [4]).

1 When transmitting a response to a message received from the base station, Layer 3 shall
2 indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

3 When transmitting an autonomous message (i.e., a message that is not sent as a response
4 to a message received from the base station), Layer 3 shall indicate to Layer 2 that the
5 type of the message is a request other than a registration request or a message
6 transmission request (see 2.1.1.2.2.1 of [4]).

7 Upon entering the *Mobile Station Order/Message Response Substate*, the mobile station shall
8 send the response message.

9 If this substate was entered with a service release message response with success
10 indication, the mobile station shall send a *Service Release Response Message* to the base
11 station. The mobile station shall set the SUCCESS_IND field to '1'.

12 If this substate was entered with a service release message response with failure
13 indication, the mobile station shall send a *Service Release Response Message* to the base
14 station. The mobile station shall set the SUCCESS_IND field to '0'.

15 While in this substate, the mobile station shall monitor the Paging Channel or the Forward
16 Common Control Channel. If the mobile station declares a loss of the Paging Channel or
17 the Forward Common Control Channel (see 2.6.2.1.1.4), the mobile station shall perform
18 the following:

- 19 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
20 PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the
21 user that the PACA call has been canceled.
- 22 • The mobile station shall declare an access attempt failure and update its
23 registration variables as specified in 2.6.5.5.3.2.
- 24 • The mobile station shall disable its transmitter.
- 25 • The mobile station shall enter the *Mobile Station Idle State*.

26 If the mobile station receives confirmation of delivery of any message sent by the mobile
27 station in this substate, it shall send a response in this substate if required, and shall
28 then enter the *Mobile Station Idle State*.

29 If PACA_S is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the
30 user directs the mobile station to cancel a PACA call.

31 If the mobile station is to exit the *System Access State* as a result of processing Layer 3
32 fields of a message requiring an acknowledgment, the mobile station shall exit the *System*
33 *Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to
34 the message has been sent and acknowledged.

35 If Layer 3 receives a message with an indication from Layer 2 that an access attempt for a
36 message being transmitted was not terminated as a result of processing the Layer 2 fields
37 of the received message, the mobile station shall ignore the received message.

The following directed messages and orders can be received. If any field value of the message or order is outside its permissible range, the mobile station may send a *Mobile Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

1. *Authentication Challenge Message*: The mobile station shall respond to the message as specified in 2.3.12.1.4, regardless of the value of AUTH_S.
2. *Base Station Challenge Confirmation Order*: The mobile station shall respond to the message as specified in 2.3.12.1.5.
3. *Data Burst Message*
4. *Feature Notification Message*
5. *Local Control Order*
6. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-permanent memory (LCKRSN_P_{S-p} equals the least significant four bits of ORDQ_T). The mobile station should notify the user of the locked condition. The mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System Access State* again until after the next mobile station power-up or until it has received an *Unlock Order*. This requirement shall take precedence over any other mobile station requirement specifying entry to the *System Access State*.
7. *Maintenance Required Order*: The mobile station shall record the reason for the *Maintenance Required Order* in the mobile station's semi-permanent memory (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_T). The mobile station shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.
8. *Registration Accepted Order*:
 - If ORDQ_T = '00000101', the mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_T} and should display the roaming condition.
 - If ORDQ_T = '00000111', the mobile station shall perform the following:
 - The mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_T} and should display the roaming condition.
 - The mobile station shall set SIG_ENCRYPT_MODE_S = SIG_ENCRYPT_MODE_T and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by SIG_ENCRYPT_MODE_T (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_T (see Table 3.7.4.5-2).

- 1 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key
2 generated at the most recent registration for encryption of signaling and
3 user information. The mobile station shall store the session key in
4 KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall increment the variable
5 KEY_SEQ_NEW_{S-p} by one (modulo 16).
- 6 - If USE_NEW_KEY is set to '0' then the mobile station shall use
7 KEY[KEY_SEQ_r] as the session key.
- 8 9. *Registration Rejected Order*: This order indicates that normal service is not available
9 on this system. The mobile station shall disable the full-TMSI timer. If the
10 received order specifies to delete the TMSI (ORDQ = '00000100'), the mobile station
11 shall set all the bits of the TMSI_CODE_{S-p} to '1'. The mobile station shall enter the
12 *System Determination Substate* of the *Mobile Station Initialization State* with a
13 registration rejected indication (see 2.6.1.1).
- 14 10. *Retry Order*: The mobile station shall process the message as follows:
- 15 • If RETRY_TYPE_r is equal to '000', the mobile station shall set
16 RETRY_DELAY_S[RETRY_TYPE] to 0, where RETRY_TYPE is equal to '001', '010', or
17 '011'.
 - 18 • If RETRY_TYPE_r is equal to '001', the mobile station shall perform the following:
 - 19 – If RETRY_DELAY_r is equal to '00000000', then the mobile station shall set
20 RETRY_DELAY_S[RETRY_TYPE_r] to 0.
 - 21 – If RETRY_DELAY_r is not equal to '00000000', the mobile station shall set
22 RETRY_DELAY_S[RETRY_TYPE_r] as follows:
 - 23 + If the most significant bit of the RETRY_DELAY_r is '0', set
24 RETRY_DELAY_UNIT_S to 1000ms. If the most significant bit of the
25 RETRY_DELAY_r is '1', set RETRY_DELAY_UNIT_S to 60000ms.
 - 26 + The mobile station shall set RETRY_DELAY_VALUE_S to the seven least
27 significant bits of RETRY_DELAY_r.
 - 28 + The mobile station shall store the next system time 80 ms boundary +
29 RETRY_DELAY_VALUE_S × RETRY_DELAY_UNIT_S ms as
30 RETRY_DELAY_S[RETRY_TYPE_r].
- 31 11. *Security Mode Command Message*: The mobile station shall process the message as
32 follows:
- 33 • The mobile station shall set SIG_ENCRYPT_MODE_S to SIG_ENCRYPT_MODE_r.

- If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated at the most recent registration for encryption of signaling and user information. The mobile station shall store the session key in KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall then increment the variable KEY_SEQ_NEW_{S-p} by one (modulo 16).
- If USE_NEW_KEY is set to '0' then the mobile station shall use KEY[KEY_SEQ_r] as the session key.

12. *Service Redirection Message*: The mobile station shall process the message as follows:

- If the mobile station is directed to an unsupported operation mode or band class, the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ equal to '00000110' (message requires a capability that is not supported by the mobile station).
- If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of TMSI_CODE_{S-p} to '1'. The mobile station shall disable the full-TMSI timer.
- The mobile station shall set RETURN_IF_FAIL_S = RETURN_IF_FAIL_r.
 - If RECORD_TYPE_r is equal to '00000000', the mobile station shall enter the *System Determination Substate of the Mobile Station Initialization State* with an NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the redirection record received in the message as REDIRECT_REC_S and shall enter the *System Determination Substate of the Mobile Station Initialization State* with a redirection indication (see 2.6.1.1).

13. *SSD Update Message*: The mobile station shall respond to the message as specified in 2.3.12.1.5.

14. *Status Request Message*: The mobile station shall disable the *System Access State* timer and respond to the message. If P_REV_IN_USE_S is less than or equal to three, the mobile station shall respond with a *Status Response Message*. If P_REV_IN_USE_S is greater than three, the mobile station shall respond with an *Extended Status Response Message*. If the message does not specify any qualification information (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall include the requested information records in the response. If the message specifies a band class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) in the response. If the message specifies a band class and an operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) and operating mode (OP_MODE_r) in the response. If the message specifies a band class or a band class and an operating mode which is not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00000110' (message requires a capability that is not supported by

the mobile station). If the response to this message exceeds the allowable length, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001000' (response message would exceed the allowable length). If the message specifies an information record which is not supported by the mobile station for the specified band class and operating mode, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is not supported for the specified band class and operating mode).

15. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code as follows:

- The mobile station shall store the length of the TMSI zone field by setting ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r.
- The mobile station shall store the assigning TMSI zone number by setting the ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.

The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

16. *User Zone Reject Message*

17. Any other message: If the mobile station receives any other message specified in Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all other messages.

2.6.3.5 Mobile Station Origination Attempt Substate

In this substate, the mobile station sends an *Origination Message*. If the base station responds to the *Origination Message* with an authentication request, the mobile station responds in this substate.

If a message received from the base station requires a Layer 2 acknowledgment and does not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is outstanding (see 2.1.1.2.2.1 of [4]).

If a message received from the base station requires a Layer 2 acknowledgment and also a Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see 2.1.1.2.2.1 of [4]).

When transmitting a response to a message received from the base station, Layer 3 shall indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous message (i.e., a message that is not sent as a response to a message received from the base station), Layer 3 shall indicate to Layer 2 that the

type of the message is a request other than a registration request or a message transmission request (see 2.1.1.2.2.1 of [4]).

Upon entering the *Mobile Station Origination Attempt Substate*, the mobile station shall set RLGAIN_ADJ_S to '0000' and perform the following:

- If the substate was entered with an origination indication, the mobile station shall send the *Origination Message* as an r-csch request.
- If the substate was entered with a PACA response indication, the mobile station shall send the *Origination Message* as an r-csch response using the access procedures specified in 2.6.3.1.1.2. The mobile station shall include the dialed digits from the previous origination attempt in the *Origination Message*.
- If the origination is a result of NDSS_ORIG_S being equal to enabled, the mobile station shall include in the *Origination Message* the dialed digits recorded from the previous origination attempt.
- If the mobile station has a stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record) and USE_SYNC_ID_S is equal to '1', the mobile station may include the SYNC_ID field in the *Origination Message* and, if included, shall set it to the 16-bit CRC computed over the entire stored service configuration as specified in 2.6.11.
- The mobile station shall include in the *Origination Message* as many of the dialed digits as possible without exceeding the message capsule size. When calculating the number of dialed digits to be included in the *Origination Message*, the mobile station shall assume the following if P_REV_IN_USE_S is greater than three:
 - The number of additional reported pilots (NUM_ADD_PILOTS) is equal to five (see 2.6.3.1.7 and 2.7.1.3.1.3) so that up to five additional pilots may be reported in any access probe, and
 - The number of alternative service option numbers (NUM_ALT_SO) is less than or equal to the maximum alternative service option numbers (MAX_NUM_ALT_SO_S).
- If PACA_S is equal to enabled, the mobile station shall set the PACA_REORIG field of the *Origination Message* to '1'; otherwise, the mobile station shall set the field to '0'.

While in this substate, the mobile station shall monitor the Paging Channel or the Forward Common Control Channel. The mobile station may perform an access probe handoff or an access handoff as described in 2.6.3.1.3.2 and 2.6.3.1.3.3. If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel (see 2.6.2.1.1.4) during an access attempt, the mobile station may perform an access probe handoff; otherwise, it shall declare an access attempt failure and shall perform the following:

- If the mobile station is monitoring the Paging Channel, the mobile station shall set SYS_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.

- 1 • If the mobile station is monitoring the Forward Common Control Channel, the
2 mobile station shall set MC_RR_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.
- 3 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
4 PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the
5 user that the PACA call has been canceled.
- 6 • If NDSS_ORIG_S is equal to enabled, the mobile station shall set NDSS_ORIG_S to
7 disabled, and should indicate to the user that the call origination is canceled.
- 8 • The mobile station shall update its registration variables as specified in 2.6.5.5.3.2.
- 9 • The mobile station shall disable its transmitter and enter the *Mobile Station Idle*
10 *State*.

11 If the mobile station receives confirmation of delivery of any message sent by the mobile
12 station in this substate, the mobile station shall perform an access handoff if all of the
13 following conditions hold:

- 14 • The mobile station declares a loss of the Paging Channel or the Forward Common
15 Control Channel,
- 16 • The mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2) and
17 there are pilots other than the active pilot in the access handoff list (see
18 2.6.3.1.3.2).

19 If the mobile station declares a loss of the Paging Channel or the Forward Common Control
20 Channel and does not perform an access handoff, the mobile station shall perform the
21 following:

- 22 • If the mobile station is monitoring the Paging Channel, the mobile station shall set
23 SYS_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.
- 24 • If the mobile station is monitoring the Forward Common Control Channel, the
25 mobile station shall set MC_RR_PAR_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL.
- 26 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
27 PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the
28 user that the PACA call has been canceled.
- 29 • If NDSS_ORIG_S is equal to enabled, the mobile station shall set NDSS_ORIG_S to
30 disabled and should indicate to the user that the call origination is canceled.
- 31 • The mobile station shall disable its transmitter and enter the *Mobile Station Idle*
32 *State*.

33 If the mobile station receives confirmation of delivery of the *Origination Message*, the
34 mobile station shall update its registration variables with respect to the base station to
35 which the first access probe was transmitted after entering the *System Access State* as
36 specified in 2.6.5.5.3.1.

37 The mobile station shall set and disable the *System Access State* timer as follows:

- 1 • The mobile station shall disable the timer whenever it begins an access attempt.
- 2 • The mobile station shall set the timer to T_{42m} seconds whenever it ends an access attempt.
- 3
- 4 • The mobile station shall disable the timer whenever it exits the *System Access State*.
- 5

6 If the *System Access State* timer expires while in this substate, the mobile station shall
7 perform the following:

- 8 • If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled and
9 $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the
10 user that the PACA call has been canceled.
- 11 • If $NDSS_ORIG_S$ is equal to enabled, the mobile station shall set $NDSS_ORIG_S$ to
12 disabled, and should indicate to the user that the call origination is canceled.
- 13 • If the mobile station is monitoring the Paging Channel, the mobile station shall
14 set $SYS_PAR_MSG_SEQ_S$ and $ACC_MSG_SEQ_S$ to NULL and enter the *Mobile Station*
15 *Idle State*.
- 16 • If the mobile station is monitoring the Forward Common Control Channel, the
17 mobile station shall set $MC_RR_PAR_MSG_SEQ_S$ and $ACC_MSG_SEQ_S$ to NULL and
18 enter the *Mobile Station Idle State*.

19 If the mobile station is directed by the user to disconnect the call, the mobile station shall
20 perform the following actions:

- 21 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any
22 access attempt in progress.
- 23 • The mobile station shall send the *Release Order* (normal release) in assured mode
24 requiring confirmation of delivery.
- 25 • After receiving confirmation of delivery of the *Release Order*, the mobile station
26 shall enter the *System Determination Substate* of the *Mobile Station Initialization State*
27 with a release indication (see 2.6.1.1).

28 If the mobile station is directed by the user to power off, the mobile station shall perform
29 the following actions:

- 30 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any
31 access attempt in progress.
- 32 • The mobile station shall send the *Release Order* (with power-down indication) in
33 assured mode requiring confirmation of delivery.
- 34 • After receiving confirmation of delivery of the *Release Order*, the mobile station
35 shall perform power-down registration procedures (see 2.6.5.1.2).
- 36 • The mobile station may power off.

If the mobile station receives a *Channel Assignment Message* or the *Extended Channel Assignment Message*, Layer 3 shall send a *dedicated channel assignment* indication to Layer 2 (see 2.1.2.1.2 of [4]). If the mobile station has not received confirmation of delivery of the *Origination Message* before receiving the *Channel Assignment Message* or the *Extended Channel Assignment Message*, the mobile station shall update its registration variables with respect to the base station to which the first access probe was transmitted after entering the *System Access State*, as specified in 2.6.5.5.3.1.

If the mobile station is to exit the *System Access State* as a result of processing Layer 3 fields of a message requiring an acknowledgment, the mobile station shall exit the *System Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to the message has been sent and acknowledged.

If Layer 3 receives a message other than a *Channel Assignment Message* or an *Extended Channel Assignment Message* with an indication from Layer 2 that an access attempt for a message being transmitted was not terminated as a result of processing the Layer 2 fields of the received message, the mobile station shall ignore the received message.

The following directed messages and orders can be received. If any field value of the message or order is outside its permissible range, the mobile station may send a *Mobile Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

1. *Authentication Challenge Message*: The mobile station shall respond to the message as specified in 2.3.12.1.4, regardless of the value of AUTH_S.
2. *Base Station Challenge Confirmation Order*: The mobile station shall respond to the message as specified in 2.3.12.1.5.
3. *Channel Assignment Message*: The mobile station shall process the message as follows:
 - If ASSIGN_MODE_T equals '000', the mobile station shall perform the following actions:
 - The mobile station shall set CH_IND_S to '01'.
 - The mobile station shall store the frame offset (FRAME_OFFSET_S = FRAME_OFFSET_T), the message encryption mode indicator (ENCRYPT_MODE_S = ENCRYPT_MODE_T), and, if FREQ_INCL_T equals '1', the Frequency Assignment (CDMACH_S = CDMA_FREQ_T).
 - If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call is proceeding.
 - The mobile station shall initialize the CODE_CHAN_LIST as described in 2.6.8, shall set SERV_NEG_S to disabled, and shall enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

- 1 • If ASSIGN_MODE_r equals '001', the mobile station shall perform the following
2 actions:
 - 3 – If the message requires acknowledgement, the mobile station shall wait
4 until Layer 3 receives an indication from Layer 2 that the acknowledgement
5 to the message has been sent and acknowledged.
 - 6 – If a CDMA channel (CDMA_FREQ) is specified in the assignment, the mobile
7 station shall set CDMACH_s = CDMA_FREQ_r, tune to the new Frequency
8 Assignment, and measure the strength of each pilot listed in the
9 assignment using the Neighbor Set search procedures specified in 2.6.6.2.1
10 and 2.6.6.2.2.
 - 11 – The mobile station shall set CONFIG_MSG_SEQ_s and ACC_MSG_SEQ_s to
12 NULL (see 2.6.2.2) and shall set PILOT_PN_s to the pilot PN sequence offset of
13 the strongest pilot in the list.
 - 14 – If the mobile station has not stored configuration parameters for the
15 Primary Paging Channel of the new base station, or if the stored information
16 is not current (see 2.6.2.2), the mobile station shall set
17 SYS_PAR_MSG_SEQ_s, NGHBR_LST_MSG_SEQ_s,
18 EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s,
19 CHAN_LST_MSG_SEQ_s, EXT_CHAN_LST_MSG_SEQ_s,
20 EXT_SYS_PAR_MSG_SEQ_s, USER_ZONE_ID_MSG_SEQ_s,
21 PRI_NGHBR_LIST_MSG_SEQ_s, GLOB_SERV_REDIR_MSG_SEQ_s, and
22 EXT_GLOB_SERV_REDIR_MSG_SEQ_s to NULL.
 - 23 – If the mobile station has not stored configuration parameters for the
24 Primary Forward Common Control Channel of the new base station, or if the
25 stored information is not current (see 2.6.2.2), the mobile station shall set
26 EXT_NGHBR_LST_MSG_SEQ_s, GEN_NGHBR_LST_MSG_SEQ_s,
27 EXT_CHAN_LST_MSG_SEQ_s, EXT_SYS_PAR_MSG_SEQ_s,
28 USER_ZONE_ID_MSG_SEQ_s, PRI_NGHBR_LIST_MSG_SEQ_s,
29 GLOB_SERV_REDIR_MSG_SEQ_s, A41_SYS_PAR_MSG_SEQ_s,
30 MC_RR_PAR_MSG_SEQ_s, UNIV_NGHBR_LIST_MSG_SEQ_s and
31 EXT_GLOB_SERV_REDIR_MSG_SEQ_s to NULL.
 - 32 – The mobile station shall set PAGE_CHAN_s to '1' and PAGECH_s to the Primary
33 Paging Channel. The mobile station shall then begin monitoring the
34 Primary Paging Channel of the selected base station.
 - 35 – The mobile station shall set FCCCH_CHAN_s to '1' and FCCCH_ID_s to the
36 Primary Forward Common Control Channel. The mobile station shall then
37 begin monitoring the Primary Forward Common Control Channel of the
38 selected base station.

- 1 – If RESPOND_r is equal to '1', the mobile station shall enter the *Update*
- 2 *Overhead Information Substate* with an origination indication.
- 3 • If ASSIGN_MODE_r equals '010', the mobile station shall perform the following
- 4 actions:
- 5 – If the mobile station does not support analog operation in the requested band
- 6 class, the mobile station shall send a *Mobile Station Reject Order* with the
- 7 ORDQ field set to '00000110' (capability not supported by the mobile station)
- 8 and the mobile station shall remain in the *Mobile Station Origination Attempt*
- 9 *Substate*.
- 10 – If the mobile station supports analog operation in the requested band class
- 11 and RESPOND_r equals '1', the mobile station shall perform the following
- 12 actions:
- 13 + If USE_ANALOG_SYS_r equals '0', the mobile station shall perform the
- 14 following actions:
- 15 o If PACA_s is equal to enabled, the mobile station shall set PACA_s to
- 16 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
- 17 and should indicate to the user that the PACA call has been
- 18 canceled.
- 19 o The mobile station shall enter the analog Initialization Task with an
- 20 origination indication (see 2.6.1).
- 21 + If USE_ANALOG_SYS_r equals '1', the mobile station shall perform the
- 22 following actions:
- 23 o The mobile station shall set SERVSYS_s to SYS_A if ANALOG_SYS_r is
- 24 equal to '0', or shall set SERVSYS_s to SYS_B if ANALOG_SYS_r is equal
- 25 to '1'.
- 26 o If PACA_s is equal to enabled, the mobile station shall set PACA_s to
- 27 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
- 28 and should indicate to the user that the PACA call has been
- 29 canceled.
- 30 o The mobile station shall then enter the analog Initialization Task
- 31 with an origination indication (see 2.6.1).
- 32 • If ASSIGN_MODE_r equals '011', the mobile station shall perform the following
- 33 actions:
- 34 – If the mobile station does not support analog operation in the requested band
- 35 class, the mobile station shall send a *Mobile Station Reject Order* with the
- 36 ORDQ field set to '00000110' (capability not supported by the mobile station)
- 37 and the mobile station shall remain in the *Mobile Station Origination Attempt*
- 38 *Substate*.

- 1 – If the mobile station supports analog operation in the requested band class:
- 2 + If the analog channel type is '00', the mobile station shall perform the
- 3 following actions:
- 4 o The mobile station shall store the system identification ($SID_S =$
- 5 SID_P), the voice mobile station attenuation code ($VMAC_S = VMAC_P$),
- 6 the voice channel number ($ANALOG_CHAN_S = ANALOG_CHAN_P$), the
- 7 SAT color code ($SCC_S = SCC_P$), and the message encryption mode
- 8 indicator ($MEM_S = MEM_P$).
- 9 o The mobile station shall set DTX_S to '00'.
- 10 o If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to
- 11 disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer,
- 12 and should indicate to the user that the PACA call is proceeding.
- 13 o The mobile station shall enter the Confirm Initial Voice Channel
- 14 Task (see 2.6.4.2) with an origination indication.
- 15 + If the analog channel type is not '00', the mobile station shall perform
- 16 the following actions:
- 17 o If the mobile supports narrow analog mode, the mobile station shall
- 18 perform the following actions:
- 19 ◇ The mobile station shall store the system identification ($SID_S =$
- 20 SID_P), the voice mobile station attenuation code ($VMAC_S =$
- 21 $VMAC_P$), the voice channel number ($ANALOG_CHAN_S =$
- 22 $ANALOG_CHAN_P$), the message encryption mode indicator ($MEM_S =$
- 23 MEM_P), the analog channel type ($AN_CHAN_TYPE_S =$
- 24 $AN_CHAN_TYPE_P$) and the digital SAT code ($DSCC_S = DSCC_MSB_P$
- 25 $\times 4 + SCC_P$).
- 26 ◇ The mobile station shall set DTX_S to '00'.
- 27 ◇ If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$
- 28 to disabled, shall disable the PACA state timer, and should
- 29 indicate to the user that the PACA call is proceeding.
- 30 ◇ The mobile station shall enter the Confirm Initial Narrow Analog
- 31 Voice Channel Task (see 2.6.5.2A of [22]) with an origination
- 32 indication.
- 33 o If the mobile station does not support narrow analog mode, the
- 34 mobile station shall send a *Mobile Station Reject Order* with the ORDQ
- 35 field set to '00000110' (capability not supported by the mobile station)
- 36 and the mobile station shall remain in the *Mobile Station Origination*
- 37 *Attempt Substate* of the *System Access State*.

- 1 • If ASSIGN_MODE_r equals '100', the mobile station shall perform the following
2 actions:
 - 3 – The mobile station shall set CH_IND_s to '01'.
 - 4 – If GRANTED_MODE_r equals '00', and the multiplex option or radio
5 configuration specified in the DEFAULT_CONFIG field is not supported by the
6 mobile station, the mobile station shall send a *Mobile Station Reject Order*
7 with ORDQ field set to '00000110' (capability not supported by the mobile
8 station) and remain in *Mobile Station Origination Attempt Substate*.
 - 9 – If FREQ_INCL_r equals '0', the mobile station shall perform the following
10 actions:
 - 11 + The mobile station shall store the frame offset (FRAME_OFFSET_s =
12 FRAME_OFFSET_r), the message encryption mode indicator
13 (ENCRYPT_MODE_s = ENCRYPT_MODE_r), the granted mode
14 (GRANTED_MODE_s = GRANTED_MODE_r), and the default configuration
15 (DEFAULT_CONFIG_s = DEFAULT_CONFIG_r).
 - 16 + The mobile station shall set SERV_NEG_s to enabled.
 - 17 + If PACA_s is equal to enabled, the mobile station shall set PACA_s equal to
18 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
19 and should indicate to the user that the PACA call is proceeding.
 - 20 + The mobile station shall initialize CODE_CHAN_LIST as described in
21 2.6.8.
 - 22 + The mobile station shall then enter the *Traffic Channel Initialization*
23 *Substate* of the *Mobile Station Control on the Traffic Channel State*.
 - 24 – If FREQ_INCL_r equals '1', the mobile station shall perform the following
25 actions:
 - 26 + If the band class is not supported by the mobile station, the mobile
27 station shall send a *Mobile Station Reject Order* with ORDQ field set to
28 '00000110' (capability not supported by the mobile station) and remain in
29 the *Mobile Station Origination Attempt Substate*.
 - 30 + If the band class is supported by the mobile station, the mobile station
31 shall perform the following actions:

- o The mobile station shall store the frame offset ($\text{FRAME_OFFSET}_S = \text{FRAME_OFFSET}_T$), the message encryption mode indicator ($\text{ENCRYPT_MODE}_S = \text{ENCRYPT_MODE}_T$), the granted mode ($\text{GRANTED_MODE}_S = \text{GRANTED_MODE}_T$), the default configuration ($\text{DEFAULT_CONFIG}_S = \text{DEFAULT_CONFIG}_T$), the band class ($\text{CDMABAND}_S = \text{BAND_CLASS}_T$), and the Frequency Assignment ($\text{CDMACH}_S = \text{CDMA_FREQ}_T$).
 - o The mobile station shall set SERV_NEG_S to enabled.
 - o If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call is proceeding.
 - o The mobile station shall initialize the CODE_CHAN_LIST as described in 2.6.8.
 - o The mobile station shall then tune to the new Frequency Assignment and enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.
- If ASSIGN_MODE_T equals '101', the mobile station shall perform the following actions:
 - If FREQ_INCL_T equals '0', the mobile station shall perform the following actions:
 - + If the message requires acknowledgement, the mobile station shall wait until Layer 3 receives an indication from Layer 2 that the acknowledgement to the message has been sent and acknowledged.
 - + The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL (see 2.6.2.2) and shall set PILOT_PN_S to the pilot PN sequence offset of the strongest pilot in the list (PILOT_PN_T).
 - + If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set SYS_PAR_MSG_SEQ_S , $\text{NGHBR_LST_MSG_SEQ}_S$, $\text{EXT_NGHBR_LST_MSG_SEQ}_S$, $\text{GEN_NGHBR_LST_MSG_SEQ}_S$, $\text{CHAN_LST_MSG_SEQ}_S$, $\text{EXT_CHAN_LST_MSG_SEQ}_S$, $\text{EXT_SYS_PAR_MSG_SEQ}_S$, $\text{USER_ZONE_ID_MSG_SEQ}_S$, $\text{PRI_NGHBR_LST_MSG_SEQ}_S$, $\text{GLOB_SERV_REDIR_MSG_SEQ}_S$, and $\text{EXT_GLOB_SERV_REDIR_MSG_SEQ}_S$ to NULL.

- 1 + If the mobile station has not stored configuration parameters for the
2 Primary Paging Channel of the new base station, or if the stored
3 information is not current (see 2.6.2.2), the mobile station shall set
4 EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S,
5 EXT_CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S,
6 USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S,
7 GLOB_SERV_REDIR_MSG_SEQ_S, A41_SYS_PAR_MSG_SEQ_S,
8 MC_RR_PAR_MSG_SEQ_S, UNIV_NGBHR_LST_MSG_SEQ_S, and
9 EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL.
- 10 + The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
11 Primary Paging Channel. The mobile station shall then begin
12 monitoring the Primary Paging Channel of the selected base station.
- 13 + The mobile station shall set FCCCH_CHAN_S to '1' and FCCCH_ID_S to the
14 Primary Forward Common Control Channel. The mobile station shall
15 then begin monitoring the Primary Forward Common Control Channel of
16 the selected base station.
- 17 + If RESPOND_r is equal to '1', the mobile station shall perform the
18 following:
 - 19 o If the *Channel Assignment Message* does not require an
20 acknowledgment, the mobile station shall enter the *Update Overhead*
21 *Information Substate* with a page response retransmission indication
22 within T_{34m} seconds after receiving the *Channel Assignment*
23 *Message*.
 - 24 o If the *Channel Assignment Message* requires an acknowledgment, the
25 mobile station shall enter the *Update Overhead Information Substate*
26 with a page response retransmission indication within T_{34m} seconds
27 after Layer 3 receives an indication from Layer 2 that the
28 acknowledgement to the *Channel Assignment Message* has been sent
29 and acknowledged.
- 30 – If FREQ_INCL_r equals '1', the mobile station shall perform the following
31 actions:
 - 32 + If the band class is not supported by the mobile station, the mobile
33 station shall send a *Mobile Station Reject Order* with ORDQ field set to
34 '00000110' (capability not supported by the mobile station) and remain in
35 the *Mobile Station Origination Attempt Substate*.
 - 36 + If the band class is supported by the mobile station, the mobile station
37 shall perform the following actions:

- o If the message requires acknowledgement, the mobile station shall wait until Layer 3 receives an indication from Layer 2 that the acknowledgement to the message has been sent and acknowledged.
- o The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to NULL (see 2.6.2.2) and shall set PILOT_PN_S to the pilot PN sequence offset of the strongest pilot in the list (PILOT_PN_P).
- o If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S, EXT_NGHBR_LST_MSG_SEQ_S, GEN_NGHBR_LST_MSG_SEQ_S, CHAN_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S, EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S, PRI_NGHBR_LST_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, and EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL.
- o The mobile station shall store the band class (CDMABAND_S = BAND_CLASS_P) and the Frequency Assignment (CDMACH_S = CDMA_FREQ_P).
- o The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the Primary Paging Channel. The mobile station shall then begin monitoring the Primary Paging Channel of the selected base station.
- o If RESPOND_P is equal to '1', the mobile station shall perform the following:
 - ◊ If the *Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after receiving the *Channel Assignment Message*.
 - ◊ If the *Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Channel Assignment Message* has been sent and acknowledged.

4. *Data Burst Message*

5. *Extended Channel Assignment Message*: The mobile station shall process the message as follows:

- 1 • If ASSIGN_MODE_r equals '000', the mobile station shall perform the following
2 actions:
 - 3 – The mobile station shall set CH_IND_s to '01'.
 - 4 – If P_REV_IN_USE_s is equal to or greater than six, the mobile station shall
5 store the Forward Fundamental Channel Radio Configuration
6 (FOR_FCH_RC_s = FOR_FCH_RC_r) and the Reverse Fundamental Channel
7 Radio Configuration (REV_FCH_RC_s = REV_FCH_RC_r)
 - 8 – If FREQ_INCL_r equals '0', the mobile station shall perform the following
9 actions:
 - 10 + The mobile station shall store the frame offset (FRAME_OFFSET_s =
11 FRAME_OFFSET_r), the message encryption mode indicator
12 (ENCRYPT_MODE_s = ENCRYPT_MODE_r), the granted mode
13 (GRANTED_MODE_s = GRANTED_MODE_r), the default configuration
14 (DEFAULT_CONFIG_s = DEFAULT_CONFIG_r), and the occurrences of
15 PILOT_PN and PWR_COMB for each included member of the Active Set.
 - 16 + The mobile station shall set SERV_NEG_s to enabled.
 - 17 + If PACA_s is equal to enabled, the mobile station shall set PACA_s equal to
18 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
19 and should indicate to the user that the PACA call is proceeding.
 - 20 + The mobile station shall initialize CODE_CHAN_LIST as described in
21 2.6.8.
- 22 The mobile station shall set FPC_FCH_INIT_SETPT_s to
23 FPC_FCH_INIT_SETPT_r, FPC_FCH_CURR_SETPT_s to
24 FPC_FCH_INIT_SETPT_s, FPC_FCH_FER_s to FPC_FCH_FER_r,
25 FPC_FCH_MIN_SETPT_s to FPC_FCH_MIN_SETPT_r,
26 FPC_FCH_MAX_SETPT_s to FPC_FCH_MAX_SETPT_r, and FPC_PRI_CHAN_s
27 to '0' if the mobile station supports any Radio Configuration greater than
28 2.
 - 29 + The mobile station shall set FPC_SUBCHAN_GAIN_s to
30 FPC_SUBCHAN_GAIN_r.
 - 31 + The mobile station shall set REV_FCH_GATING_MODE_s to
32 REV_FCH_GATING_MODE_r.
 - 33 + The mobile station shall set REV_PWR_CNTL_DELAY_s to
34 REV_PWR_CNTL_DELAY_r if REV_PWR_CNTL_DELAY_INCL_r is equal to '1'.
 - 35 + The mobile station shall set RLGAIN_ADJ_s to RLGAIN_ADJ_r.

- 1 + The mobile station shall then enter the *Traffic Channel Initialization*
- 2 *Substate of the Mobile Station Control on the Traffic Channel State.*
- 3 – If FREQ_INCL_r equals '1', the mobile station shall perform the following
- 4 actions:
- 5 + If the band class is not supported by the mobile station, the mobile
- 6 station shall send a *Mobile Station Reject Order* with ORDQ field set to
- 7 '00000110' (capability not supported by the mobile station) and remain in
- 8 the *Mobile Station Origination Attempt Substate*.
- 9 + If the band class is supported by the mobile station, the mobile station
- 10 shall perform the following actions:
- 11 o The mobile station shall store the frame offset ($\text{FRAME_OFFSET}_s =$
- 12 FRAME_OFFSET_r); the message encryption mode indicator
- 13 ($\text{ENCRYPT_MODE}_s = \text{ENCRYPT_MODE}_r$); the granted mode
- 14 ($\text{GRANTED_MODE}_s = \text{GRANTED_MODE}_r$); the default configuration
- 15 ($\text{DEFAULT_CONFIG}_s = \text{DEFAULT_CONFIG}_r$); the band class
- 16 ($\text{CDMABAND}_s = \text{BAND_CLASS}_r$); the Frequency Assignment
- 17 ($\text{CDMACH}_s = \text{CDMA_FREQ}_r$); and the occurrences of PILOT_PN and
- 18 PWR_COMB_IND for each included member of the Active Set.
- 19 o The mobile station shall set SERV_NEG_s to enabled.
- 20 o The mobile station shall initialize CODE_CHAN_LIST as described in
- 21 2.6.8.
- 22 o The mobile station shall set $\text{FPC_FCH_INIT_SETPT}_s$ to
- 23 $\text{FPC_FCH_INIT_SETPT}_r$, $\text{FPC_FCH_CURR_SETPT}_s$ to
- 24 $\text{FPC_FCH_INIT_SETPT}_s$, FPC_FCH_FER_s to FPC_FCH_FER_r ,
- 25 $\text{FPC_FCH_MIN_SETPT}_s$ to $\text{FPC_FCH_MIN_SETPT}_r$,
- 26 $\text{FPC_FCH_MAX_SETPT}_s$ to $\text{FPC_FCH_MAX_SETPT}_r$, and
- 27 FPC_PRI_CHAN_s to '0' if the mobile station supports any Radio
- 28 Configuration greater than 2.
- 29 o The mobile station shall set $\text{FPC_SUBCHAN_GAIN}_s$ to
- 30 $\text{FPC_SUBCHAN_GAIN}_r$.
- 31 o The mobile station shall set RLGAIN_ADJ_s to RLGAIN_ADJ_r .
- 32 o The mobile station shall set $\text{REV_FCH_GATING_MODE}_s$ to
- 33 $\text{REV_FCH_GATING_MODE}_r$.
- 34 o The mobile station shall set $\text{REV_PWR_CNTL_DELAY}_s$ to
- 35 $\text{REV_PWR_CNTL_DELAY}_r$ if $\text{REV_PWR_CNTL_DELAY_INCL}_r$ is equal to
- 36 '1'.

- 1 o The mobile station shall then tune to the new Frequency
- 2 Assignment and enter the *Traffic Channel Initialization Substate* of the
- 3 *Mobile Station Control on the Traffic Channel State*.
- 4 – If GRANTED_MODE_T equals '00', and the multiplex option and radio
- 5 configuration specified in the DEFAULT_CONFIG field is not supported by the
- 6 mobile station, the mobile station shall send a *Mobile Station Reject Order*
- 7 with ORDQ field set to '00000110' (capability not supported by the mobile
- 8 station) and remain in the *Mobile Station Origination Attempt Substate*.
- 9 – If GRANTED_MODE_T equals '00' and DEFAULT_CONFIG_T is not equal to '100',
- 10 the mobile station shall send a *Mobile Station Reject Order* with the ORDQ
- 11 field set to '00001110' (RC does not match with DEFAULT_CONFIG_T) and
- 12 shall remain in the *Mobile Station Origination Attempt Substate* if any of the
- 13 following conditions is true:
- 14 + FOR_FCH_RC_T is not equal to the Radio Configuration associated with
- 15 DEFAULT_CONFIG_T (see Table 3.7.2.3.2.21-2).
- 16 + REV_FCH_RC_T is not equal to the Radio Configuration associated with
- 17 DEFAULT_CONFIG_T (see Table 3.7.2.3.2.21-2).
- 18 – If the mobile station does not support either of the Fundamental Channel
- 19 Radio Configurations (FOR_FCH_RC or REV_FCH_RC), the mobile shall send
- 20 a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability
- 21 not supported by the mobile station) and remain in the *Mobile Station*
- 22 *Origination Attempt Substate*.
- 23 • If ASSIGN_MODE_T equals '001', the mobile station shall perform the following
- 24 actions:
- 25 – If FREQ_INCL_T equals '0', the mobile station shall perform the following
- 26 actions:
- 27 + If the message requires acknowledgement, the mobile station shall wait
- 28 until Layer 3 receives an indication from Layer 2 that the
- 29 acknowledgement to the message has been sent and acknowledged.
- 30 + The mobile station shall set CONFIG_MSG_SEQ_S and ACC_MSG_SEQ_S to
- 31 NULL (see 2.6.2.2) and shall set PILOT_PN_S to the pilot PN sequence
- 32 offset of the strongest pilot in the list (PILOT_PN_T).

- 1 + If the mobile station has not stored configuration parameters for the
- 2 Primary Paging Channel of the new base station, or if the stored
- 3 information is not current (see 2.6.2.2), the mobile station shall set
- 4 SYS_PAR_MSG_SEQ_S, NGHBR_LST_MSG_SEQ_S,
- 5 EXT_NGHRBR_LST_MSG_SEQ_S, GEN_NGHRBR_LST_MSG_SEQ_S,
- 6 CHAN_LST_MSG_SEQ_S, EXT_CHAN_LST_MSG_SEQ_S,
- 7 EXT_SYS_PAR_MSG_SEQ_S, USER_ZONE_ID_MSG_SEQ_S,
- 8 PRI_NGHRBR_LST_MSG_SEQ_S, GLOB_SERV_REDIR_MSG_SEQ_S, and
- 9 EXT_GLOB_SERV_REDIR_MSG_SEQ_S to NULL.

- 10 + The mobile station shall set PAGE_CHAN_S to '1' and PAGECH_S to the
- 11 Primary Paging Channel. The mobile station shall then begin
- 12 monitoring the Primary Paging Channel of the selected base station.

- 13 + If RESPOND_r is equal to '1', the mobile station shall perform the
- 14 following:
 - 15 o If the *Extended Channel Assignment Message* does not require an
 - 16 acknowledgment, the mobile station shall enter the *Update Overhead*
 - 17 *Information Substate* with a page response retransmission indication
 - 18 within T_{34m} seconds after receiving the *Extended Channel*
 - 19 *Assignment Message*.

 - 20 o If the *Extended Channel Assignment Message* requires an
 - 21 acknowledgment, the mobile station shall enter the *Update Overhead*
 - 22 *Information Substate* with a page response retransmission indication
 - 23 within T_{34m} seconds after Layer 3 receives an indication from Layer
 - 24 2 that the acknowledgement to the *Extended Channel Assignment*
 - 25 *Message* has been sent and acknowledged.

- 26 – If FREQ_INCL_r equals '1', the mobile station shall perform the following
- 27 actions:
 - 28 + If the band class is not supported by the mobile station, the mobile
 - 29 station shall send a *Mobile Station Reject Order* with ORDQ field set to
 - 30 '00000110' (capability not supported by the mobile station) and remain in
 - 31 the *Mobile Station Origination Attempt Substate*.

 - 32 + If the band class is supported by the mobile station, the mobile station
 - 33 shall perform the following actions:
 - 34 o If the message requires acknowledgement, the mobile station shall
 - 35 wait until Layer 3 receives an indication from Layer 2 that the
 - 36 acknowledgement to the message has been sent and acknowledged.

 - 37 o The mobile station shall set CONFIG_MSG_SEQ_S and
 - 38 ACC_MSG_SEQ_S to NULL (see 2.6.2.2) and shall set PILOT_PN_S to the
 - 39 pilot PN sequence offset of the strongest pilot in the list (PILOT_PN_r).

- o If the mobile station has not stored configuration parameters for the Primary Paging Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set $SYS_PAR_MSG_SEQ_S$, $NGHBR_LST_MSG_SEQ_S$, $EXT_NGHBR_LST_MSG_SEQ_S$, $GEN_NGHBR_LST_MSG_SEQ_S$, $CHAN_LST_MSG_SEQ_S$, $EXT_CHAN_LST_MSG_SEQ_S$, $EXT_SYS_PAR_MSG_SEQ_S$, $USER_ZONE_ID_MSG_SEQ_S$, $PRI_NGHBR_LST_MSG_SEQ_S$, $GLOB_SERV_REDIR_MSG_SEQ_S$, and $EXT_GLOB_SERV_REDIR_MSG_SEQ_S$ to NULL. The mobile station shall store the band class ($CDMABAND_S = BAND_CLASS_r$) and the Frequency Assignment ($CDMACH_S = CDMA_FREQ_r$).
 - o The mobile station shall set $PAGE_CHAN_S$ to '1' and $PAGECH_S$ to the Primary Paging Channel. The mobile station shall then begin monitoring the Primary Paging Channel of the selected base station.
 - o If $RESPOND_r$ is equal to '1', the mobile station shall perform the following:
 - ◊ If the *Extended Channel Assignment Message* does not require an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after receiving the *Extended Channel Assignment Message*.
 - ◊ If the *Extended Channel Assignment Message* requires an acknowledgment, the mobile station shall enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after Layer 3 receives an indication from Layer 2 that the acknowledgement to the *Extended Channel Assignment Message* has been sent and acknowledged.
- If $ASSIGN_MODE_r$ equals '010', the mobile station shall perform the following actions:
 - If the mobile station does not support analog operation in the requested band class, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00000110' (capability not supported by the mobile station) and remain in the *Mobile Station Origination Attempt Substate*.
 - If the mobile station supports analog operation in the requested band class, the mobile station shall perform the following actions:
 - + If $RESPOND_r$ equals '1' and $USE_ANALOG_SYS_r$ equals '0', the mobile station shall enter the analog Initialization Task with an origination indication (see 2.6.1).

- 1 + If RESPOND_r equals '1' and USE_ANALOG_SYS_r equals '1', the mobile
2 station shall perform the following actions:
 - 3 o The mobile station shall set SERVSYS_s to SYS_A if ANALOG_SYS_r is
4 equal to '0', or set SERVSYS_s to SYS_B if ANALOG_SYS_r is equal to '1'.
 - 5 o The mobile station shall then enter the analog Initialization Task
6 with an origination indication (see 2.6.1).
- 7 • If ASSIGN_MODE_r equals '011', the mobile station shall perform the following
8 actions:
 - 9 – If the mobile station does not support analog operation in the requested band
10 class, the mobile station shall send a *Mobile Station Reject Order* with the
11 ORDQ field set to '00000110' (capability not supported by the mobile station)
12 and the mobile station shall remain in the *Mobile Station Origination Attempt*
13 *Substate*.
 - 14 – If the mobile station supports analog operation in the requested band class,
15 the mobile station shall perform the following actions:
 - 16 + If the analog channel type is '00', the mobile station shall perform the
17 following actions:
 - 18 o The mobile station shall store the system identification (SID_s =
19 SID_r), voice mobile station attenuation code (VMAC_s = VMAC_r), voice
20 channel number (ANALOG_CHAN_s = ANALOG_CHAN_r), SAT color
21 code (SCC_s = SCC_r), and message encryption mode indicator (MEM_s =
22 MEM_r).
 - 23 o The mobile station shall set DTX_s to '00'.
 - 24 o If PACA_s is equal to enabled, the mobile station shall set PACA_s to
25 disabled and PACA_CANCEL to '0', shall disable the PACA state timer,
26 and should indicate to the user that the PACA call is proceeding.
 - 27 o The mobile station shall enter the Confirm Initial Voice Channel
28 Task (see 2.6.4.2) with an origination indication.
 - 29 + If the analog channel type is not '00', the mobile station shall perform
30 the following actions:
 - 31 o If the mobile supports narrow analog mode, the mobile station shall
32 perform the following actions:

- 1 ◇ The mobile station shall store the system identification ($SID_S =$
2 SID_T), voice mobile station attenuation code ($VMAC_S = VMAC_T$),
3 voice channel number ($ANALOG_CHAN_S = ANALOG_CHAN_T$),
4 message encryption mode indicator ($MEM_S = MEM_T$), analog
5 channel type ($AN_CHAN_TYPE_S = AN_CHAN_TYPE_T$) and the
6 digital SAT code ($DSCC_S = DSCC_MSB_T \times 4 + SCC_T$).
- 7 ◇ The mobile station shall set DTX_S to '00'.
- 8 ◇ If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$
9 to disabled and $PACA_CANCEL$ to '0', shall disable the PACA state
10 timer, and should indicate to the user that the PACA call is
11 proceeding.
- 12 ◇ The mobile station shall enter the Confirm Initial Narrow Analog
13 Voice Channel Task (see 2.6.5.2A of [22]) with an origination
14 indication.
- 15 o If the mobile station does not support narrow analog mode, the
16 mobile station shall send a *Mobile Station Reject Order* with the ORDQ
17 field set to '00000110' (capability not supported by the mobile station)
18 and the mobile station shall remain in the *Mobile Station Origination*
19 *Attempt Substate* of the *System Access State*.
- 20 • If $ASSIGN_MODE_T$ equals '100', the mobile station shall perform the following
21 actions:
 - 22 – If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled
23 and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should
24 indicate to the user that the PACA call has been canceled.
 - 25 – If $GRANTED_MODE_T$ equals '00' and the multiplex option and radio
26 configuration specified in the $DEFAULT_CONFIG_T$ field are not supported by
27 the mobile station, the mobile station shall send a *Mobile Station Reject Order*
28 with ORDQ field set to '00000110' (capability not supported by the mobile
29 station) and shall remain in the *Mobile Station Origination Attempt Substate*.
 - 30 – If $GRANTED_MODE_T$ equals '00' and $DEFAULT_CONFIG_T$ is not equal to '100',
31 the mobile station shall send a *Mobile Station Reject Order* with ORDQ field
32 set to '00001110' (RC does not match with $DEFAULT_CONFIG$) and shall
33 remain in the *Mobile Station Origination Attempt Substate* if one of the
34 following conditions is true:
 - 35 + FOR_RC_T is not equal to the Radio Configuration associated with
36 $DEFAULT_CONFIG_T$ as specified in Table 3.7.2.3.2.21-2.
 - 37 + REV_RC_T is not equal to the Radio Configuration associated with
38 $DEFAULT_CONFIG_T$ as specified in Table 3.7.2.3.2.21-2.

- 1 – If the mobile station does not support either of the Radio Configurations
2 (FOR_RC or REV_RC), the mobile station shall send a *Mobile Station Reject*
3 *Order* with the ORDQ field set to '00000110' (capability not supported by the
4 mobile station) and remain in the *Mobile Station Origination Attempt Substate*.
- 5 – If CH_IND_r = '01' and the mobile station does not support the Fundamental
6 Channel, the mobile station shall send a *Mobile Station Reject Order* with the
7 ORDQ field set to '00000110' (capability not supported by the mobile station)
8 and remain in the *Mobile Station Origination Attempt Substate*.
- 9 – If CH_IND_r = '10' and the mobile station does not support the Dedicated
10 Control Channel, the mobile station shall send a *Mobile Station Reject Order*
11 with the ORDQ field set to '00000110' (capability not supported by the mobile
12 station) and remain in the *Mobile Station Origination Attempt Substate*.
- 13 – If CH_IND_r = '11' and the mobile station does not support the Dedicated
14 Control Channel and Fundamental Channel concurrently, the mobile
15 station shall send a *Mobile Station Reject Order* with the ORDQ field set to
16 '00000110' (capability not supported by the mobile station) and remain in the
17 *Mobile Station Origination Attempt Substate*.
- 18 – If FREQ_INCL_r equals '1' and if the band class (BAND_CLASS_r) is not
19 supported by the mobile station, the mobile station shall send a *Mobile*
20 *Station Reject Order* with ORDQ field set to '00000110' (capability not
21 supported by the mobile station) and remain in the *Mobile Station Origination*
22 *Attempt Substate*.
- 23 – If the mobile station does not send a Mobile Station Reject Order as specified
24 above, it shall continue to perform the actions specified below.
- 25 – If FREQ_INCL_r equals '1', the mobile station shall set
26 + CDMABAND_s = BAND_CLASS_r
27 + CDMACH_s = CDMA_FREQ_r
- 28 – The mobile station shall store the bypass indicator
29 (BYPASS_ALERT_ANSWER_s = BYPASS_ALERT_ANSWER_r).
- 30 – The mobile station shall store granted mode (GRANTED_MODE_s =
31 GRANTED_MODE_r)
- 32 – The mobile station shall store the default configuration (DEFAULT_CONFIG_s
33 = DEFAULT_CONFIG_r).
- 34 – The mobile station shall store the Forward Traffic Channel Radio
35 Configuration (FOR_RC_s = FOR_RC_r) and the Reverse Traffic Channel Radio
36 Configuration (REV_RC_s = REV_RC_r).

- 1 – The mobile station shall store the frame offset ($FRAME_OFFSET_S =$
2 $FRAME_OFFSET_R$).
- 3 – The mobile station shall store the message encryption mode indicator
4 ($ENCRYPT_MODE_S = ENCRYPT_MODE_R$).
- 5 – The mobile station shall store the Forward power control subchannel
6 relative gain ($FPC_SUBCHAN_GAIN_S = FPC_SUBCHAN_GAIN_R$).
- 7 – The mobile station shall set $RLGAIN_ADJ_S$ to $RLGAIN_ADJ_R$.
- 8 – The mobile station shall set $REV_FCH_GATING_MODE_S$ to
9 $REV_FCH_GATING_MODE_R$.
- 10 – The mobile station shall set $REV_PWR_CNTL_DELAY_S$ to
11 $REV_PWR_CNTL_DELAY_R$ if $REV_PWR_CNTL_DELAY_INCL_R$ is equal to '1'.
- 12 – If $3XFL_1XRL_INCL_R$ is equal to '1', the mobile station shall set
13 $1XRL_FREQ_OFFSET_S$ to $1XRL_FREQ_OFFSET_R$.
- 14 – The mobile station shall store the channel indicator ($CH_IND_S = CH_IND_R$)
15 and the mobile station shall perform the following actions:
 - 16 + If CH_IND_R equals '01', the mobile station shall set
17 $FPC_FCH_INIT_SETPT_S$ to $FPC_FCH_INIT_SETPT_R$,
18 $FPC_FCH_CURR_SETPT_S$ to $FPC_FCH_INIT_SETPT_S$, $FPC_FCH_FER_S$ to
19 $FPC_FCH_FER_R$, $FPC_FCH_MIN_SETPT_S$ to $FPC_FCH_MIN_SETPT_R$,
20 $FPC_FCH_MAX_SETPT_S$ to $FPC_FCH_MAX_SETPT_R$, and $FPC_PRI_CHAN_S$
21 to '0' if the mobile station supports any Radio Configuration greater than
22 2. Then for each included member of the Active Set, the mobile station
23 shall store the following:
 - 24 o Set the $PILOT_PN$ field to $PILOT_PN_R$.
 - 25 o Set the $ADD_PILOT_REC_INCL$ field to $ADD_PILOT_REC_INCL_R$. If
26 $ADD_PILOT_REC_INCL_R$ equals '1', the mobile station shall store the
27 following:
28 Set the $PILOT_REC_TYPE$ field of $PILOT_REC$ to $PILOT_REC_TYPE_R$.
29 If $PILOT_REC_TYPE_R$ equals '000', the mobile station shall set the
30 TD_POWER_LEVEL field of $PILOT_REC$ to $TD_POWER_LEVEL_R$ and
31 set the TD_MODE field of $PILOT_REC$ to TD_MODE_R .
32 If $PILOT_REC_TYPE_R$ is equal to '001', the mobile station shall
33
 - Set the AUX_PILOT_QOF field of $PILOT_REC$ to QOF_R .

- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:

- Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to AUX_TD_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- Set the AUX_TD_POWER_LEVEL field of PILOT_REC to AUX_TD_POWER_LEVEL_r.
- Set the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.

If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.
- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

- 1 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1
2 field of PILOT_REC to QOF1_r and set the
3 AUX_PILOT_WALSH_CODE1 field of PILOT_REC to
4 AUX_PILOT_WALSH1_r with the Walsh Code length specified by
5 WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field
6 of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1
7 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh
8 Code length specified by WALSH_LENGTH_r.
- 9 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2
10 field of PILOT_REC to QOF2_r and set the
11 AUX_PILOT_WALSH_CODE2 field of PILOT_REC to
12 AUX_PILOT_WALSH2_r with the Walsh Code length specified by
13 WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field
14 of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2
15 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh
16 Code length specified by WALSH_LENGTH_r.
- 17 o Set the PWR_COMB_IND field to PWR_COMB_IND_r.
- 18 o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.
- 19 o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.
- 20 + If CH_IND_r equals '01' and 3X_FCH_INFO_INCL_r equals to '1', for each
21 included member of the Active Set, the mobile station store the
22 following:
 - 23 o If 3X_FCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_FCH_LOW
24 field to QOF_MASK_ID_FCH_LOW_r and the CODE_CHAN_FCH_LOW
25 field to CODE_CHAN_FCH_LOW_r. Otherwise, set the
26 QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_r and the
27 CODE_CHAN_FCH_LOW to CODE_CHAN_FCH_r.
 - 28 o If 3X_FCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_FCH_HIGH
29 field to QOF_MASK_ID_FCH_HIGH_r and the CODE_CHAN_FCH_HIGH
30 field to CODE_CHAN_FCH_HIGH_r. Otherwise, set the
31 QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_r and the
32 CODE_CHAN_FCH_HIGH to CODE_CHAN_FCH_r.

+ If CH_IND_r equals '10', the mobile station shall set
 $FPC_DCCH_INIT_SETPT_s$ to $FPC_DCCH_INIT_SETPT_r$,
 $FPC_DCCH_CURR_SETPT_s$ to $FPC_DCCH_INIT_SETPT_s$,
 $FPC_DCCH_FER_s$ to $FPC_DCCH_FER_r$, $FPC_DCCH_MIN_SETPT_s$ to
 $FPC_DCCH_MIN_SETPT_r$, $FPC_DCCH_MAX_SETPT_s$ to
 $FPC_DCCH_MAX_SETPT_r$, and $FPC_PRI_CHAN_s$ to '1' if the mobile station
supports any Radio Configuration greater than 2. Then for each
included member of the Active Set, the mobile station shall store the
following:

- o Set the $PILOT_PN$ to $PILOT_PN_r$.
- o Set the $ADD_PILOT_REC_INCL$ field to $ADD_PILOT_REC_INCL$. If
 $ADD_PILOT_REC_INCL$ is equal to '1', the mobile station shall store
the following:

Set the $PILOT_REC_TYPE$ field of $PILOT_REC$ to $PILOT_REC_TYPE_r$.

If $PILOT_REC_TYPE_r$ equals '000', the mobile station shall set the
 TD_POWER_LEVEL field of $PILOT_REC$ to $TD_POWER_LEVEL_r$ and
set the TD_MODE field of $PILOT_REC$ to TD_MODE_r .

If $PILOT_REC_TYPE_r$ is equal to '001', the mobile station shall

- Set the AUX_PILOT_QOF field of $PILOT_REC$ to QOF_r .
- Set the $AUX_PILOT_WALSH_CODE$ field of $PILOT_REC$ to
 $AUX_PILOT_WALSH_r$ with the Walsh Code length specified by
 $WALSH_LENGTH_r$.

If $PILOT_REC_TYPE_r$ is equal to '010', the mobile station shall:

- Set the $AUX_PILOT_TD_QOF$ field of $PILOT_REC$ to QOF_r .
- Set the $AUX_PILOT_TD_WALSH_CODE$ field of $PILOT_REC$ to
 $AUX_TD_WALSH_r$ with the Walsh Code length specified by
 $WALSH_LENGTH_r$.
- Set the $AUX_TD_POWER_LEVEL$ field of $PILOT_REC$ to
 $AUX_TD_POWER_LEVEL_r$.
- Set the TD_MODE field of $PILOT_REC$ to TD_MODE_r .

If $PILOT_REC_TYPE_r$ is equal to '011', the mobile station shall:

- Set the $SR3_PRIMARY_PILOT$ field of $PILOT_REC$ to
 $SR3_PRIMARY_PILOT_r$.
- Set the $SR3_PILOT_POWER1$ field of $PILOT_REC$ to
 $SR3_PILOT_POWER1_r$.

- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.

If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.
- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code length specified by WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code length specified by WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- o Set the PWR_COMB_IND field to PWR_COMB_IND_r.
- o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.
- o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.
- o Set the DCCH_INCL field to DCCH_INCL_r. If DCCH_INCL_r equals '1', the mobile station shall store the following:
 - ◊ Set the CODE_CHAN_DCCH field to CODE_CHAN_DCCH_r.

- 1 ◇ Set the QOF_MASK_ID_DCCH field to QOF_MASK_ID_DCCH_r.
- 2 + If CH_IND_r equals '10' and 3X_DCCH_INFO_INCL_r equals to '1', for each
- 3 included member of the Active Set, the mobile station shall store the
- 4 following:
- 5 o If 3X_DCCH_LOW_INCL_r equals '1', set the
- 6 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_DCCH_LOW_r and
- 7 the CODE_CHAN_DCCH_LOW field to CODE_CHAN_DCCH_LOW_r.
- 8 Otherwise, set the QOF_MASK_ID_DCCH_LOW field to
- 9 QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_LOW to
- 10 CODE_CHAN_FCH_r.
- 11 o If 3X_DCCH_HIGH_INCL_r equals '1', set the
- 12 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_DCCH_HIGH_r and
- 13 the CODE_CHAN_DCCH_HIGH field to CODE_CHAN_DCCH_HIGH_r.
- 14 Otherwise, set the QOF_MASK_ID_DCCH_HIGH field to
- 15 QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_HIGH to
- 16 CODE_CHAN_FCH_r.
- 17 + If CH_IND_r equals '11', the mobile station shall set
- 18 FPC_FCCH_INIT_SETPT_s to FPC_FCH_INIT_SETPT_r,
- 19 FPC_FCH_CURR_SETPT_s to FPC_FCH_INIT_SETPT_s, FPC_FCH_FER_s to
- 20 FPC_FCH_FER_r, FPC_FCH_MIN_SETPT_s to FPC_FCH_MIN_SETPT_r,
- 21 FPC_FCH_MAX_SETPT_s to FPC_FCH_MAX_SETPT_r,
- 22 FPC_DCCH_INIT_SETPT_s to FPC_DCCH_INIT_SETPT_r,
- 23 FPC_DCCH_CURR_SETPT_s to FPC_DCCH_INIT_SETPT_s,
- 24 FPC_DCCH_FER_s to FPC_DCCH_FER_r, FPC_DCCH_MIN_SETPT_s to
- 25 FPC_DCCH_MIN_SETPT_r, FPC_DCCH_MAX_SETPT_s to
- 26 FPC_DCCH_MAX_SETPT_r and FPC_PRI_CHAN_s to FPC_PRI_CHAN_r. Then
- 27 for each included member of the Active Set, the mobile station shall
- 28 store the following:
- 29 o Set the PILOT_PN to PILOT_PN_r.
- 30 o Set the ADD_PILOT_REC_INCL field to ADD_PILOT_REC. If
- 31 ADD_PILOT_REC_INCL is equal to '1', the mobile station shall store
- 32 the following:
- 33 Set the PILOT_REC_TYPE field of PILOT_REC to PILOT_REC_TYPE_r.
- 34 If PILOT_REC_TYPE_r equals '000', the mobile station shall set the
- 35 TD_POWER_LEVEL field of PILOT_REC to TD_POWER_LEVEL_r and
- 36 set the TD_MODE field of PILOT_REC to TD_MODE_r.
- 37 If PILOT_REC_TYPE_r is equal to '001', the mobile station shall

- 1 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 2 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
- 3 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 4 WALSH_LENGTH_r.

5 If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:

- 6 – Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- 7 – Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to
- 8 AUX_TD_WALSH_r with the Walsh Code length specified by
- 9 WALSH_LENGTH_r.
- 10 – Set the AUX_TD_POWER_LEVEL field of PILOT_REC to
- 11 AUX_TD_POWER_LEVEL_r.
- 12 – Set the TD_MODE field of PILOT_REC to TD_MODE_r.

13 If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- 14 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
- 15 SR3_PRIMARY_PILOT_r.
- 16 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
- 17 SR3_PILOT_POWER1_r.
- 18 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
- 19 SR3_PILOT_POWER2_r.

20 If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- 21 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
- 22 SR3_PRIMARY_PILOT_r.
- 23 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
- 24 SR3_PILOT_POWER1_r.
- 25 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
- 26 SR3_PILOT_POWER2_r.
- 27 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 28 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
- 29 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 30 WALSH_LENGTH_r.

- 1 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1

2 field of PILOT_REC to QOF1_r and set the

3 AUX_PILOT_WALSH_CODE1 field of PILOT_REC to

4 AUX_PILOT_WALSH1_r with the Walsh Code length specified by

5 WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field

6 of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1

7 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh

8 Code length specified by WALSH_LENGTH_r.
- 9 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2

10 field of PILOT_REC to QOF2_r and set the

11 AUX_PILOT_WALSH_CODE2 field of PILOT_REC to

12 AUX_PILOT_WALSH2_r with the Walsh Code length specified by

13 WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field

14 of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2

15 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh

16 Code length specified by WALSH_LENGTH_r.
- 17 o Set the PWR_COMB_IND field to PWR_COMB_IND_r
- 18 o Set the CODE_CHAN_FCH field to CODE_CHAN_FCH_r.
- 19 o Set the QOF_MASK_ID_FCH field to QOF_MASK_ID_FCH_r.
- 20 o Set the CODE_CHAN_DCCH field to CODE_CHAN_DCCH_r.
- 21 o Set the QOF_MASK_ID_DCCH field to QOF_MASK_ID_DCCH_r.
- 22 + If CH_IND_r equals '11' and 3X_FCH_INFO_INCL_r equals to '1', for each

23 included member of the Active Set, the mobile station store the

24 following:
- 25 o If 3X_FCH_LOW_INCL_r equals '1', set the QOF_MASK_ID_FCH_LOW

26 field to QOF_MASK_ID_FCH_LOW_r and the CODE_CHAN_FCH_LOW

27 field to CODE_CHAN_FCH_LOW_r. Otherwise, set the

28 QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_r and the

29 CODE_CHAN_FCH_LOW to CODE_CHAN_FCH_r.
- 30 o If 3X_FCH_HIGH_INCL_r equals '1', set the QOF_MASK_ID_FCH_HIGH

31 field to QOF_MASK_ID_FCH_HIGH_r and the CODE_CHAN_FCH_HIGH

32 field to CODE_CHAN_FCH_HIGH_r. Otherwise, set the

33 QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_r and the

34 CODE_CHAN_FCH_HIGH to CODE_CHAN_FCH_r.

- 1 + If CH_IND_r equals '11' and 3X_DCCH_INFO_INCL_r equals to '1', for each
- 2 included member of the Active Set, the mobile station store the
- 3 following:
- 4 o If 3X_DCCH_LOW_INCL_r equals '1', set the
- 5 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_DCCH_LOW_r and
- 6 the CODE_CHAN_DCCH_LOW field to CODE_CHAN_DCCH_LOW_r.
- 7 Otherwise, set the QOF_MASK_ID_DCCH_LOW field to
- 8 QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_LOW to
- 9 CODE_CHAN_FCH_r.
- 10 o If 3X_DCCH_HIGH_INCL_r equals '1', set the
- 11 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_DCCH_HIGH_r and
- 12 the CODE_CHAN_DCCH_HIGH field to CODE_CHAN_DCCH_HIGH_r.
- 13 Otherwise, set the QOF_MASK_ID_DCCH_HIGH field to
- 14 QOF_MASK_ID_FCH_r and the CODE_CHAN_DCCH_HIGH to
- 15 CODE_CHAN_FCH_r.
- 16 – The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8,
- 17 and shall set SERV_NEG_s to enabled.
- 18 – If FREQ_INCL_r equals '1', the mobile station shall then tune to the new
- 19 frequency assignment.
- 20 – The mobile station shall then enter the *Traffic Channel Initialization Substate*
- 21 of the *Mobile Station Control on the Traffic Channel State*.
- 22 6. *Feature Notification Message*: If RELEASE_r is equal to '1', the mobile station shall
- 23 enter the *Mobile Station Idle State* or the *System Determination Substate* of the *Mobile*
- 24 *Station Initialization State* with a release indication (see 2.6.1.1).
- 25 7. *Intercept Order*: The mobile station shall enter the *Mobile Station Idle State*.
- 26 8. *Local Control Order*
- 27 9. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and
- 28 record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-
- 29 permanent memory (LCKRSN_P_{s-p} equals the least significant four bits of ORDQ_r).
- 30 The mobile station should notify the user of the locked condition. The mobile
- 31 station shall enter the *System Determination Substate* of the *Mobile Station*
- 32 *Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System*
- 33 *Access State* again until after the next mobile station power-up or until it has
- 34 received an *Unlock Order*. This requirement shall take precedence over any other
- 35 mobile station requirement specifying entry to the *System Access State*.
- 36 10. *Maintenance Required Order*: The mobile station shall record the reason for the
- 37 *Maintenance Required Order* in the mobile station's semi-permanent memory
- 38 (MAINTRSN_{s-p} equals the least significant four bits of ORDQ_r). The mobile station

shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.

11. *PACA Message*: If $P_REV_IN_USE_S$ is less than or equal to four and the mobile station does not support PACA capability, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (message requires a capability that is not supported by the mobile station); otherwise, the mobile station shall process the message as follows:

- If $PACA_S$ is equal to disabled, the mobile station shall perform the following actions:
 - If the purpose of the message is to respond to an *Origination Message* ($PURPOSE_T$ is equal to '0000'), the mobile station shall perform the following actions:
 - + The mobile station shall set $PACA_S$ to enabled and shall set $PACA_SID_S$ to SID_S .
 - + The mobile station shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of $PACA_TIMEOUT_S$.
 - + The mobile station should indicate to the user that the call has been queued as a PACA call, and should indicate the current queue position (Q_POS_T) of the call.
 - + The mobile station shall enter the *Mobile Station Idle State*.
 - If the purpose of the message is to cancel the PACA call ($PURPOSE_T$ is equal to '0011'), the mobile station shall perform the following actions:
 - + The mobile station shall set $PACA_S$ to disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.
 - + The mobile station shall enter the *Mobile Station Idle State*.
 - If the purpose of the message is anything else ($PURPOSE_T$ is not equal to '0000' or '0011'), the mobile station shall ignore the message. The mobile station shall remain in the *Mobile Station Origination Attempt Substate*.
- If $PACA_S$ is equal to enabled, the mobile station shall perform the following actions:
 - If the purpose of the message is to respond to an *Origination Message* ($PURPOSE_T$ is equal to '0000'), the mobile station shall perform the following actions:
 - + The mobile station should indicate to the user that the PACA call is still queued, and should indicate to the user the current queue position (Q_POS_T) of the call.

- 1 + The mobile station shall set the PACA state timer to the duration shown
- 2 in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_S.
- 3 + The mobile station shall enter the *Mobile Station Idle State*.
- 4 – If the purpose of the message is to provide the queue position of the PACA
- 5 call (PURPOSE_T is equal to '0001'), the mobile station shall perform the
- 6 following actions:
- 7 + The mobile station should indicate to the user that the PACA call is still
- 8 queued, and should indicate the current queue position (Q_POS_T) of the
- 9 call.
- 10 + The mobile station shall set the PACA state timer to the duration shown
- 11 in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_S.
- 12 + The mobile station shall enter the *Mobile Station Idle State*.
- 13 – If the purpose of the message is to instruct the mobile station to re-
- 14 originate the PACA call (PURPOSE_T is equal to '0010'), the mobile station
- 15 shall remain in the *Mobile Station Origination Attempt Substate*.
- 16 – If the purpose of the message is to cancel the PACA call (PURPOSE_T is equal
- 17 to '0011'), the mobile station shall perform the following actions:
- 18 + The mobile station shall set PACA_S to disabled, shall disable the PACA
- 19 state timer, and should indicate to the user that the PACA call has been
- 20 canceled.
- 21 + The mobile station shall enter the *Mobile Station Idle State*.

22 12. *Registration Accepted Order:*

- 23 • If ORDQ_T = '00000101', the mobile station shall set ROAM_INDI_S = ROAM_INDI_T
- 24 and should display the roaming condition.
- 25 • If ORDQ_T = '00000111', the mobile station shall perform the following
- 26 – The mobile station shall set ROAM_INDI_S = ROAM_INDI_T and should display
- 27 the roaming condition.
- 28 – The mobile station shall set SIG_ENCRYPT_MODE_S = SIG_ENCRYPT_MODE_T
- 29 and start encrypting the signaling messages sent on r-dsch and r-csch
- 30 using the encryption algorithm specified by SIG_ENCRYPT_MODE_T (see
- 31 Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_T (see Table 3.7.4.5-
- 32 2).

- 1 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key
2 generated at the most recent registration for encryption of signaling and
3 user information. The mobile station shall store the session key in
4 KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall increment the variable
5 KEY_SEQ_NEW_{S-p} by one (modulo 16).
- 6 - If USE_NEW_KEY is set to '0' then the mobile station shall use
7 KEY[KEY_SEQ_r] as the session key.
- 8 13. *Registration Rejected Order*: This order indicates that normal service is not available
9 on this system. The mobile station shall disable the full-TMSI timer. If the
10 received order specifies to delete the TMSI (ORDQ = '00000100'), the mobile station
11 shall set all the bits of the TMSI_CODE_{S-p} to '1'. The mobile station shall enter the
12 *System Determination Substate of the Mobile Station Initialization State* with a
13 registration rejected indication (see 2.6.1.1).
- 14 14. *Release Order*: If NDSS_ORIG_S is equal to enabled, the mobile station shall set
15 NDSS_ORIG_S to disabled, and should indicate to the user that the call origination
16 has been canceled. The mobile station shall enter the *Mobile Station Idle State* or
17 the *System Determination Substate of the Mobile Station Initialization State* with a
18 release indication (see 2.6.1.1). If the mobile station enters the *Mobile Station Idle State*,
19 and if PACA_S is equal to enabled, the mobile station shall set PACA_S to
20 disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should
21 indicate to the user that the PACA call has been canceled.
- 22 15. *Reorder Order*: If NDSS_ORIG_S is equal to enabled, the mobile station shall set
23 NDSS_ORIG_S to disabled, and should indicate to the user that the call origination
24 has been canceled. If PACA_S is equal to enabled, the mobile station shall set PACA_S
25 to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should
26 indicate to the user that the PACA call has been canceled. The mobile station shall
27 enter the *Mobile Station Idle State*.
- 28 16. *Retry Order*: This order indicates that the origination is rejected and specifies the
29 time before which the mobile station shall not send an *Origination Message*
30 containing the same packet data Service Option. The mobile station shall process
31 the order as follows:

 - 32 • If RETRY_TYPE_r is equal to '000', the mobile station shall set
33 RETRY_DELAY_S[RETRY_TYPE] to 0, where RETRY_TYPE is equal to '001', '010', or
34 '011'.
 - 35 • If RETRY_TYPE_r is equal to '001', then the mobile station shall perform the
36 following:

 - 37 – If RETRY_DELAY_r is equal to '00000000', then the mobile station shall set
38 RETRY_DELAY_S[RETRY_TYPE_r] to 0.

- 1 – If RETRY_DELAY_r is not equal to '00000000' the mobile station shall set
2 RETRY_DELAY_s as follows:
 - 3 + If the most significant bit of the RETRY_DELAY_r is '0', set
4 $\text{RETRY_DELAY_UNIT}_s$ to 1000ms. If the most significant bit of the
5 RETRY_DELAY_r is '1', set $\text{RETRY_DELAY_UNIT}_s$ to 60000ms.
 - 6 + The mobile station shall set $\text{RETRY_DELAY_VALUE}_s$ to the seven least
7 significant bits of RETRY_DELAY_r .
 - 8 + The mobile station shall store the next system time 80 ms boundary +
9 $\text{RETRY_DELAY_VALUE}_s \times \text{RETRY_DELAY_UNIT}_s$ ms as
10 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$.
 - 11 + If NDSS_ORIG_s is equal to enabled, the mobile station shall set
12 NDSS_ORIG_s to disabled, and should indicate to the user that the call
13 origination has been canceled. If PACA_s is equal to enabled, the mobile
14 station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable
15 the PACA state timer, and should indicate to the user that the PACA call
16 has been canceled.
 - 17 + The mobile station shall enter the *Mobile Station Idle State*.
- 18 17. *Security Mode Command Message*: The mobile station shall process the message as
19 follows:
 - 20 • The mobile station shall set $\text{SIG_ENCRYPT_MODE}_s$ to $\text{SIG_ENCRYPT_MODE}_r$.
 - 21 • If USE_NEW_KEY is set to '1' the mobile station shall use the session key
22 generated at the most recent registration for encryption of signaling and user
23 information. The mobile station shall store the session key in
24 $\text{KEY}_s[\text{KEY_SEQ_NEW}_{s-p}]$. The mobile station shall then increment the variable
25 KEY_SEQ_NEW_{s-p} by one (modulo 16).
 - 26 • If USE_NEW_KEY is set to '0' then the mobile station shall use $\text{KEY}[\text{KEY_SEQ}_r]$ as
27 the session key.
- 28 18. *Service Redirection Message*: The mobile station shall process the message as
29 follows:
 - 30 • If the mobile station is directed to an unsupported operation mode or band class,
31 the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ
32 equal to '00000110' (message requires a capability that is not supported by the
33 mobile station).
 - 34 • If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
35 TMSI_CODE_{s-p} to '1'.
 - 36 • The mobile station shall disable the full-TMSI timer.

- 1 • The mobile station shall set RETURN_IF_FAIL_S = RETURN_IF_FAIL_R.
- 2 • If RECORD_TYPE_R is '00000000', the mobile station shall set RETURN_IF_FAIL_S =
- 3 RETURN_IF_FAIL_R, and enter the *System Determination Substate* of the *Mobile*
- 4 *Station Initialization State* with an NDSS off indication (see 2.6.1.1); otherwise:
- 5 – if REDIRECT_TYPE_R is '0', the mobile station shall store the redirection
- 6 record received in the message as REDIRECT_REC_S and shall enter the
- 7 System Determination Substate of the *Mobile Station Initialization State* with
- 8 a redirection indication (see 2.6.1.1).
- 9 – if REDIRECT_TYPE_R is '1', the mobile station shall store the redirection
- 10 record received in the message as REDIRECT_REC_S and shall enable
- 11 NDSS_ORIG_S, and shall record the dialed digits. The mobile station shall
- 12 enter the System Determination Substate of the *Mobile Station Initialization*
- 13 *State* with a redirection indication (see 2.6.1.1).
- 14 19. *SSD Update Message*: The mobile station shall respond to the message as specified
- 15 in 2.3.12.1.5.
- 16 20. *Status Request Message*: The mobile station shall disable the *System Access State*
- 17 timer and respond to the message. If P_REV_IN_USE_S is less than or equal to three,
- 18 the mobile station shall respond with a *Status Response Message*. If P_REV_IN_USE_S
- 19 is greater than three, the mobile station shall respond with an *Extended Status*
- 20 *Response Message*. If the message does not specify any qualification information
- 21 (QUAL_INFO_TYPE_R is equal to '00000000'), the mobile station shall include the
- 22 requested information records in the response. If the message specifies a band
- 23 class (QUAL_INFO_TYPE_R is equal to '00000001'), the mobile station shall only
- 24 include the requested information records for the specified band class
- 25 (BAND_CLASS_R) in the response. If the message specifies a band class and an
- 26 operating mode (QUAL_INFO_TYPE_R is equal to '00000010'), the mobile station shall
- 27 only include the requested information records for the specified band class
- 28 (BAND_CLASS_R) and operating mode (OP_MODE_R) in the response. If the message
- 29 specifies a band class or a band class and an operating mode which are not
- 30 supported by the mobile station, the mobile station shall send a *Mobile Station Reject*
- 31 *Order* with ORDQ set to '00000110' (message requires a capability that is not
- 32 supported by the mobile station). If the response to this message exceeds the
- 33 allowable length, the mobile station shall send a *Mobile Station Reject Order* with
- 34 ORDQ set to '00001000' (response message would exceed the allowable length). If
- 35 the message specifies an information record which is not supported by the mobile
- 36 station for the specified band class and operating mode, the mobile station shall
- 37 send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is
- 38 not supported for the specified band class and operating mode).
- 39 21. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code
- 40 as follows:

- 1 • The mobile station shall store the length of the TMSI zone field by setting
2 ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r,
- 3 • The mobile station shall store the assigning TMSI zone number by setting the
4 ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of
5 ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- 6 • The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to
7 TMSI_CODE_r.

8 The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p}
9 to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The
10 mobile station shall then respond with a *TMSI Assignment Completion Message*
11 within T_{56m} seconds.

12 22. *User Zone Reject Message*

13 23. *Any other message:* If the mobile station receives any other message specified in
14 Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all
15 other messages.

16 If the mobile station performs an access probe handoff or access handoff and receives any
17 of the following messages, it shall process the message as specified in 2.6.3.1.3:

- 18 1. *System Parameters Message*
- 19 2. *Access Parameters Message*
- 20 3. *Neighbor List Message*
- 21 4. *Extended System Parameters Message*
- 22 5. *Extended Neighbor List Message*
- 23 6. *General Neighbor List Message*
- 24 7. *Global Service Redirection Message*
- 25 8. *Extended Global Service Redirection Message*

26 2.6.3.6 Registration Access Substate

27 In this substate, the mobile station sends a *Registration Message*. If the base station
28 responds with an authentication request, the mobile station responds in this substate.

29 Upon entering the *Registration Access Substate*, the mobile station shall send the
30 *Registration Message*.

31 If a message received from the base station requires a Layer 2 acknowledgment and does
32 not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is
33 outstanding (see 2.1.1.2.2.1 of [4]).

If a message received from the base station requires a Layer 2 acknowledgment and also a Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see 2.1.1.2.2.1 of [4]).

When transmitting a response to a message received from the base station, Layer 3 shall indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous message (i.e., a message that is not sent as a response to a message received from the base station) other than the *Registration Message*, Layer 3 shall indicate to Layer 2 that the type of the message is a request other than a registration request or a message transmission request (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous *Registration Message* (i.e., it is not sent as a response to a *Registration Request Order* received from the base station), Layer 3 shall indicate to Layer 2 that the type of the message is a request that is a registration (see 2.1.1.2.2.1 of [4]).

While in this substate, the mobile station shall monitor the Paging Channel or the Forward Common Control Channel. If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel (see 2.6.2.1.1.4), the mobile station shall perform the following:

- If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.
- The mobile station shall declare an access attempt failure and update its registration variables as specified in 2.6.5.5.3.2.
- The mobile station shall disable its transmitter and enter the *Mobile Station Idle State*.

If the mobile station receives confirmation of delivery of any message sent by the mobile station in this substate, it shall then enter the *Mobile Station Idle State* unless:

- If the registration access was initiated due to a user direction to power down, the mobile station shall update registration variables as specified in 2.6.5.5.3.3 and may power down.
- If the mobile station has included the ENC_SEQ_H field in the *Registration Message*, then the mobile station should set this field to one plus the previous value of this field (if any).
- If the mobile station has included the ENC_SEQ_H field in the *Registration Message*, then the mobile station shall set $EXT_ENC_SEQ_S$ to $265 \times ENC_SEQ_H$.
- If the message requires a response, the mobile station shall send a response to the message in this substate.

If the mobile station receives confirmation of delivery of the *Registration Message*, the mobile station shall update its registration variables as specified in 2.6.5.5.3.1.

If the mobile station is directed by the user to originate a call, the mobile station may process the origination request as follows:

- 1 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any
2 access attempt in progress.
- 3 • If PACA_S is equal to enabled, the mobile station shall set PACA_S to disabled and
4 PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the
5 user that the PACA call has been canceled.
- 6 • The mobile station shall enter the *Mobile Station Origination Attempt Substate* with
7 an origination indication.

8 If PACA_S is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the
9 user directs the mobile station to cancel a PACA call.

10 If the mobile station receives a mobile-station-addressed page, the mobile station may
11 determine if there is a page match (see 2.6.2.3). If a match is declared, the mobile station
12 shall perform the following:

- 13 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any
14 access attempt in progress.
- 15 • The mobile station shall enter the *Page Response Substate*.

16 If the mobile station is to exit the *System Access State* as a result of processing Layer 3
17 fields of a message requiring an acknowledgment, the mobile station shall exit the *System*
18 *Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to
19 the message has been sent and acknowledged.

20 If Layer 3 receives a message with an indication from Layer 2 that an access attempt for a
21 message being transmitted was not terminated as a result of processing the Layer 2 fields
22 of the received message, the mobile station shall ignore the received message.

23 The following directed messages and orders can be received. If any field value of the
24 message or order is outside its permissible range, the mobile station may send a *Mobile*
25 *Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

- 26 1. *Authentication Challenge Message*: If the registration access was initiated due to a
27 user direction to power down, the mobile station shall ignore the message;
28 otherwise, the mobile station shall respond to the message as specified in
29 2.3.12.1.4, regardless of the value of AUTH_S.
- 30 2. *Base Station Challenge Confirmation Order*: If the registration access was initiated
31 due to a user direction to power down, the mobile station shall ignore the message;
32 otherwise, the mobile station shall respond to the message as specified in
33 2.3.12.1.5.
- 34 3. *Data Burst Message*
- 35 4. *Feature Notification Message*
- 36 5. *Local Control Order*
- 37 6. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and
38 record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-

permanent memory (LCKRSN_{P_s-p} equals the least significant four bits of ORDQ_r). The mobile station should notify the user of the locked condition. The mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System Access State* again until after the next mobile station power-up or until it has received an *Unlock Order*. This requirement shall take precedence over any other mobile station requirement specifying entry to the *System Access State*.

7. *Maintenance Required Order*: The mobile station shall record the reason for the *Maintenance Required Order* in the mobile station's semi-permanent memory (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_r). The mobile station shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.
8. *PACA Message*: If P_REV_IN_USE_s is less than or equal to four and the mobile station does not support PACA capability, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (message requires a capability that is not supported by the mobile station); otherwise, the mobile station shall process the message as follows:
 If PACA_s is equal to disabled, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
 If PACA_s is equal to enabled, the mobile station shall perform the following:
 - If the purpose of the message is to respond to an *Origination Message* (PURPOSE_r is equal to '0000'), the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
 - If the purpose of the message is to provide the queue position of the PACA call (PURPOSE_r is equal to '0001'), the mobile station shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_s, should indicate to the user that the PACA call is still queued, and should indicate to the user the current queue position (Q_POS_r) of the call.
 - If the purpose of the message is to instruct the mobile station to re-originate the PACA call (PURPOSE_r is equal to '0010'), Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress, shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_s, and shall enter the *Mobile Station Origination Attempt Substate* with a PACA response indication.
 - If the purpose of the message is to cancel the PACA call (PURPOSE_r is equal to '0011'), the mobile station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.

9. *Registration Accepted Order*:

- 1 • If $ORDQ_r = '00000101'$, the mobile station shall set $ROAM_INDI_s = ROAM_INDI_r$
2 and should display the roaming condition.
- 3 • If $ORDQ_r = '00000111'$, the mobile station shall perform the following
 - 4 - The mobile station shall set $ROAM_INDI_s = ROAM_INDI_r$ and should display
5 the roaming condition.
 - 6 - The mobile station shall set $SIG_ENCRYPT_MODE_s = SIG_ENCRYPT_MODE_r$
7 and start encrypting the signaling messages sent on r-dsch and r-csch
8 using the encryption algorithm specified by $SIG_ENCRYPT_MODE_r$ (see
9 Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (see Table 3.7.4.5-
10 2).
 - 11 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key
12 generated at the most recent registration for encryption of signaling and
13 user information. The mobile station shall store the session key in
14 $KEY_s[KEY_SEQ_NEW_{s-p}]$. The mobile station shall increment the variable
15 $KEY_SEQ_NEW_{s-p}$ by one (modulo 16).
 - 16 - If USE_NEW_KEY is set to '0' then the mobile station shall use
17 $KEY[KEY_SEQ_r]$ as the session key.
- 18 10. *Registration Rejected Order*: This order indicates that normal service is not available
19 on this system. The mobile station shall disable the full-TMSI timer. If the
20 received order specifies to delete the TMSI ($ORDQ = '00000100'$), the mobile station
21 shall set all the bits of the $TMSI_CODE_{s-p}$ to '1'. The mobile station shall enter the
22 *System Determination Substate* of the *Mobile Station Initialization State* with a
23 registration rejected indication (see 2.6.1.1).
- 24 11. *Release Order*: If $NDSS_ORIG_s$ is equal to enabled, the mobile station shall set
25 $NDSS_ORIG_s$ to disabled, and should indicate to the user that the call origination
26 has been canceled. The mobile station shall enter the *Mobile Station Idle State* or
27 the *System Determination Substate* of the *Mobile Station Initialization State* with a
28 release indication (see 2.6.1.1). If the mobile station enters the *Mobile Station Idle*
29 *State*, and if $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ to
30 disabled and $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should
31 indicate to the user that the PACA call has been canceled.
- 32 12. *Retry Order*: The mobile station shall process the message as follows:
 - 33 • If $RETRY_TYPE_r$ is equal to '000', the mobile station shall set
34 $RETRY_DELAY_s[RETRY_TYPE]$ to 0, where $RETRY_TYPE$ is equal to '001', '010', or
35 '011'.
 - 36 • If $RETRY_TYPE_r$ is equal to '001', the mobile station shall perform the following:
 - 37 – If $RETRY_DELAY_r$ is equal to '00000000', then the mobile station shall set
38 $RETRY_DELAY_s[RETRY_TYPE_r]$ to 0.

- If RETRY_DELAY_r is not equal to '00000000', the mobile station shall set $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$ as follows:
 - + If the most significant bit of the RETRY_DELAY_r is '0', set $\text{RETRY_DELAY_UNIT}_s$ to 1000ms. If the most significant bit of the RETRY_DELAY_r is '1', set $\text{RETRY_DELAY_UNIT}_s$ to 60000ms.
 - + The mobile station shall set $\text{RETRY_DELAY_VALUE}_s$ to the seven least significant bits of RETRY_DELAY_r .
 - + The mobile station shall store the next system time 80 ms boundary + $\text{RETRY_DELAY_VALUE}_s \times \text{RETRY_DELAY_UNIT}_s$ ms as $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$.

13. *Security Mode Command Message*: The mobile station shall process the message as follows:

- The mobile station shall set $\text{SIG_ENCRYPT_MODE}_s$ to $\text{SIG_ENCRYPT_MODE}_r$.
- If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated at the most recent registration for encryption of signaling and user information. The mobile station shall store the session key in $\text{KEY}_s[\text{KEY_SEQ_NEW}_{s-p}]$. The mobile station shall then increment the variable KEY_SEQ_NEW_{s-p} by one (modulo 16).
- If USE_NEW_KEY is set to '0' then the mobile station shall use $\text{KEY}[\text{KEY_SEQ}_r]$ as the session key.

14. *Service Redirection Message*: The mobile station shall process the message as follows:

- If the mobile station is directed to an unsupported operation mode or band class, the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ equal to '00000110' (message requires a capability that is not supported by the mobile station).
- If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of TMSI_CODE_{s-p} to '1'. The mobile station shall disable the full-TMSI timer.
- The mobile station shall set $\text{RETURN_IF_FAIL}_s = \text{RETURN_IF_FAIL}_r$.
- If RECORD_TYPE_r is equal to '00000000', the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with an NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the redirection record received in the message as REDIRECT_REC_s and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a redirection indication (see 2.6.1.1).

15. *SSD Update Message*: If the registration access was initiated due to a user direction to power down, the mobile station shall ignore the message. Otherwise, the mobile station shall respond to the message as specified in 2.3.12.1.5.

16. *Status Request Message*: The mobile station shall disable the *System Access State* timer and respond to the message. If $P_REV_IN_USE_s$ is less than or equal to three, the mobile station shall respond with a *Status Response Message*. If $P_REV_IN_USE_s$ is greater than three, the mobile station shall respond with an *Extended Status Response Message*. If the message does not specify any qualification information ($QUAL_INFO_TYPE_r$ is equal to '00000000'), the mobile station shall include the requested information records in the response. If the message specifies a band class ($QUAL_INFO_TYPE_r$ is equal to '00000001'), the mobile station shall only include the requested information records for the specified band class ($BAND_CLASS_r$) in the response. If the message specifies a band class and an operating mode ($QUAL_INFO_TYPE_r$ is equal to '00000010'), the mobile station shall only include the requested information records for the specified band class ($BAND_CLASS_r$) and operating mode (OP_MODE_r) in the response.

If the message specifies a band class or a band class and an operating mode which are not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ set to '00000110' (message requires a capability that is not supported by the mobile station). If the response to this message exceeds the allowable length, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ set to '00001000' (response message would exceed the allowable length). If the message specifies an information record which is not supported by the mobile station for the specified band class and operating mode, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ set to '00001001' (information record is not supported for the specified band class and operating mode).

17. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code as follows:

- The mobile station shall store the length of the TMSI zone field by setting $ASSIGNING_TMSI_ZONE_LEN_{s-p}$ to $TMSI_ZONE_LEN_r$;
- The mobile station shall store the assigning TMSI zone number by setting the $ASSIGNING_TMSI_ZONE_LEN_{s-p}$ least significant octets of $ASSIGNING_TMSI_ZONE_{s-p}$ to $TMSI_ZONE_r$, and
- The mobile station shall store the TMSI code by setting $TMSI_CODE_{s-p}$ to $TMSI_CODE_r$.

The mobile station shall set the TMSI expiration time by setting $TMSI_EXP_TIME_{s-p}$ to $TMSI_EXP_TIME_r$. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

18. *User Zone Reject Message*

19. *Any other message:* If the mobile station receives any other message specified in Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all other messages.

2.6.3.7 Mobile Station Message Transmission Substate

In this substate, the mobile station sends a *Data Burst Message* or a *Device Information Message*. If the base station responds with an authentication request, the mobile station responds in this substate.

Support of this substate is optional.

If a message received from the base station requires a Layer 2 acknowledgment and does not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is outstanding (see 2.1.1.2.2.1 of [4]).

If a message received from the base station requires a Layer 2 acknowledgment and also a Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see 2.1.1.2.2.1 of [4]).

When transmitting a response to a message received from the base station, Layer 3 shall indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous message (i.e., a message that is not sent as a response to a message received from the base station) other than the *Data Burst Message*, Layer 3 shall indicate to Layer 2 that the message is a request other than a registration request or a message transmission request (see 2.1.1.2.2.1 of [4]).

When transmitting an autonomous *Data Burst Message*, Layer 3 shall indicate to Layer 2 that the type of the message is a request that is a message transmission (see 2.1.1.2.2.1 of [4]).

Upon entering the *Mobile Station Message Transmission Substate*, the mobile station shall transmit the message as follows:

- If the mobile station entered this substate with a message transmission indication, the mobile station shall transmit the *Data Burst Message* to the base station.
- If the mobile station entered this substate with a hook status indication, the mobile station shall set the autonomous message timer equal to `AUTO_MSG_INTERVALS` and shall start the timer. The mobile station shall transmit the *Device Information Message* to the base station, with the `RECORD_TYPE` field of the message set to 00011110 and the Hook Indicator field set to the current hook status.

While in this substate, the mobile station shall monitor the Paging Channel or the Forward Common Control Channel. If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel (see 2.6.2.1.1.4), the mobile station shall perform the following:

- 1 • If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_S$ to disabled and
2 $PACA_CANCEL$ to '0', shall disable the PACA state timer, and should indicate to the
3 user that the PACA call has been canceled.
- 4 • The mobile station shall declare an access attempt failure and update its
5 registration variables as specified in 2.6.5.5.3.2.
- 6 • The mobile station shall disable its transmitter and enter the *Mobile Station Idle*
7 *State*.

8 If the mobile station receives confirmation of any message sent by the mobile station in
9 this substate, it shall send a response in this substate if required and shall then enter the
10 *Mobile Station Idle State*.

11 If $PACA_S$ is equal to enabled, the mobile station shall set $PACA_CANCEL$ to '1' when the
12 user directs the mobile station to cancel a PACA call.

13 If the mobile station receives a mobile-station-addressed page, the mobile station may
14 determine whether there is a page match (see 2.6.2.3). If a match is declared, the mobile
15 station shall perform the following:

- 16 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any
17 access attempt in progress.
- 18 • The mobile station shall enter the *Page Response Substate*.
- 19 • If the mobile station entered this substate with a message transmission indication,
20 the mobile station may store the *Data Burst Message* for later transmission.

21 If the mobile station is to exit the *System Access State* as a result of processing Layer 3
22 fields of a message requiring an acknowledgment, the mobile station shall exit the *System*
23 *Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to
24 the message has been sent and acknowledged.

25 If Layer 3 receives a message with an indication from Layer 2 that an access attempt for a
26 message being transmitted was not terminated as a result of processing the Layer 2 fields
27 of the received message, the mobile station shall ignore the received message.

28 The following directed messages and orders can be received. If any field value of the
29 message or order is outside its permissible range, the mobile station may send a *Mobile*
30 *Station Reject Order* with $ORDQ$ equal to '00000100' (message field not in valid range).

- 31 1. *Authentication Challenge Message*: The mobile station shall respond to the message
32 as specified in 2.3.12.1.4, regardless of the value of $AUTH_S$.
- 33 2. *Base Station Challenge Confirmation Order*: The mobile station shall respond to the
34 message as specified in 2.3.12.1.5.
- 35 3. *Data Burst Message*
- 36 4. *Local Control Order*
- 37 5. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and
38 record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-

permanent memory (LCKRSN_{P-S-p} equals the least significant four bits of ORDQ_r). The mobile station should notify the user of the locked condition. The mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System Access State* again until after the next mobile station power-up or until it has received an *Unlock Order*. This requirement shall take precedence over any other mobile station requirement specifying entry to the *System Access State*.

6. *Maintenance Required Order*: The mobile station shall record the reason for the *Maintenance Required Order* in the mobile station's semi-permanent memory (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_r). The mobile station shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.
7. *PACA Message*: If P_REV_IN_USE_s is less than or equal to four and the mobile station does not support PACA capability, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (message requires a capability that is not supported by the mobile station); otherwise, the mobile station shall process the message as follows:
 If PACA_s is equal to disabled, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
 If PACA_s is equal to enabled, the mobile station shall perform the following:
 - If the purpose of the message is to respond to an *Origination Message* (PURPOSE_r is equal to '0000'), the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).
 - If the purpose of the message is to provide the queue position of the PACA call (PURPOSE_r is equal to '0001'), the mobile station shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_s, should indicate to the user that the PACA call is still queued, and should indicate to the user the current queue position (Q_POS_r) of the call.
 - If the purpose of the message is to instruct the mobile station to re-originate the PACA call (PURPOSE_r is equal to '0010'), Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress, shall set the PACA state timer to the duration shown in Table 3.7.2.3.2.20-2 corresponding to the value of PACA_TIMEOUT_s, and shall enter the *Mobile Station Origination Attempt Substate* with a PACA response indication.
 - If the purpose of the message is to cancel the PACA call (PURPOSE_r is equal to '0011'), the mobile station shall set PACA_s to disabled and PACA_CANCEL to '0', shall disable the PACA state timer, and should indicate to the user that the PACA call has been canceled.
8. *Registration Accepted Order*:

- 1 • If $ORDQ_r = '00000101'$, the mobile station shall set $ROAM_INDI_s = ROAM_INDI_r$
2 and should display the roaming condition.
- 3 • If $ORDQ_r = '00000111'$, the mobile station shall perform the following
 - 4 - The mobile station shall set $ROAM_INDI_s = ROAM_INDI_r$ and should display
5 the roaming condition.
 - 6 - The mobile station shall set $SIG_ENCRYPT_MODE_s = SIG_ENCRYPT_MODE_r$
7 and start encrypting the signaling messages sent on r-dsch and r-csch
8 using the encryption algorithm specified by $SIG_ENCRYPT_MODE_r$ (see
9 Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (see Table 3.7.4.5-
10 2).
 - 11 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key
12 generated at the most recent registration for encryption of signaling and
13 user information. The mobile station shall store the session key in
14 $KEY_s[KEY_SEQ_NEW_{s-p}]$. The mobile station shall increment the variable
15 $KEY_SEQ_NEW_{s-p}$ by one (modulo 16).
 - 16 - If USE_NEW_KEY is set to '0' then the mobile station shall use
17 $KEY[KEY_SEQ_r]$ as the session key.
- 18 9. *Registration Rejected Order*: This order indicates that normal service is not available
19 on this system. The mobile station shall disable the full-TMSI timer. If the
20 received order specifies to delete the TMSI ($ORDQ = '00000100'$), the mobile station
21 shall set all the bits of the $TMSI_CODE_{s-p}$ to '1'. The mobile station shall enter the
22 *System Determination Substate* of the *Mobile Station Initialization State* with a
23 registration rejected indication (see 2.6.1.1).
- 24 10. *Retry Order*: The mobile station shall process the message as follows:
 - 25 • If $RETRY_TYPE_r$ is equal to '000', the mobile station shall set
26 $RETRY_DELAY_s[RETRY_TYPE]$ to 0, where $RETRY_TYPE$ is equal to '001', '010', or
27 '011'.
 - 28 • If $RETRY_TYPE_r$ is equal to '001', the mobile station shall perform the following:
 - 29 - If $RETRY_DELAY_r$ is equal to '00000000', then the mobile station shall set
30 $RETRY_DELAY_s[RETRY_TYPE_r]$ to 0.
 - 31 - If $RETRY_DELAY_r$ is not equal to '00000000', the mobile station shall set
32 $RETRY_DELAY_s[RETRY_TYPE_r]$ as follows:
 - 33 + If the most significant bit of the $RETRY_DELAY_r$ is '0', set
34 $RETRY_DELAY_UNIT_s$ to 1000ms. If the most significant bit of the
35 $RETRY_DELAY_r$ is '1', set $RETRY_DELAY_UNIT_s$ to 60000ms.

- 1 + The mobile station shall set $\text{RETRY_DELAY_VALUE}_S$ to the seven least
2 significant bits of RETRY_DELAY_T .
- 3 + The mobile station shall store the next system time 80 ms boundary +
4 $\text{RETRY_DELAY_VALUE}_S \times \text{RETRY_DELAY_UNIT}_S$ ms as
5 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}_T]$.
- 6 11. *Security Mode Command Message*: The mobile station shall process the message as
7 follows:
- 8 • The mobile station shall set $\text{SIG_ENCRYPT_MODE}_S$ to $\text{SIG_ENCRYPT_MODE}_T$.
- 9 • If USE_NEW_KEY is set to '1' the mobile station shall use the session key
10 generated at the most recent registration for encryption of signaling and user
11 information. The mobile station shall store the session key in
12 $\text{KEY}_S[\text{KEY_SEQ_NEW}_{S-p}]$. The mobile station shall then increment the variable
13 KEY_SEQ_NEW_{S-p} by one (modulo 16).
- 14 • If USE_NEW_KEY is set to '0' then the mobile station shall use $\text{KEY}[\text{KEY_SEQ}_T]$ as
15 the session key.
- 16 12. *Service Redirection Message*: The mobile station shall process the message as
17 follows:
- 18 • If the mobile station is directed to an unsupported operation mode or band class,
19 the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ
20 equal to '00000110' (message requires a capability that is not supported by the
21 mobile station).
- 22 • If DELETE_TMSI_T is equal to '1', the mobile station shall set all the bits of
23 TMSI_CODE_{S-p} to '1'. The mobile station shall disable the full-TMSI timer.
- 24 • The mobile station shall set $\text{RETURN_IF_FAIL}_S = \text{RETURN_IF_FAIL}_T$.
- 25 • If RECORD_TYPE_T is equal to '00000000', the mobile station shall enter the
26 *System Determination Substate* of the *Mobile Station Initialization State* with an
27 NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the
28 redirection record received in the message as REDIRECT_REC_S and shall enter
29 the *System Determination Substate* of the *Mobile Station Initialization State* with a
30 redirection indication (see 2.6.1.1).
- 31 13. *SSD Update Message*: The mobile station shall respond to the message as specified
32 in 2.3.12.1.5.
- 33 14. *Status Request Message*: The mobile station shall disable the *System Access State*
34 timer and respond to the message. If P_REV_IN_USE_S is less than or equal to three,
35 the mobile station shall respond with a *Status Response Message*. If P_REV_IN_USE_S
36 is greater than three, the mobile station shall respond with an *Extended Status*
37 *Response Message*. If the message does not specify any qualification information

1 (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall include the
 2 requested information records in the response. If the message specifies a band
 3 class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only
 4 include the requested information records for the specified band class
 5 (BAND_CLASS_r) in the response. If the message specifies a band class and an
 6 operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall
 7 only include the requested information records for the specified band class
 8 (BAND_CLASS_r) and operating mode (OP_MODE_r) in the response.

9 If the message specifies a band class or a band class and an operating mode which
 10 is not supported by the mobile station, the mobile station shall send a *Mobile Station*
 11 *Reject Order* with ORDQ set to '00000110' (message requires a capability that is not
 12 supported by the mobile station). If the response to this message exceeds the
 13 allowable length, the mobile station shall send a *Mobile Station Reject Order* with
 14 ORDQ set to '00001000' (response message would exceed the allowable length). If
 15 the message specifies an information record which is not supported by the mobile
 16 station for the specified band class and operating mode, the mobile station shall
 17 send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is
 18 not supported for the specified band class and operating mode).

19 15. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code
 20 as follows:

- 21 • The mobile station shall store the length of the TMSI zone field by setting
 22 ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r.
- 23 • The mobile station shall store the assigning TMSI zone number by setting the
 24 ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of
 25 ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- 26 • The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to
 27 TMSI_CODE_r.

28 The mobile station shall set the TMSI expiration time by setting
 29 TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the
 30 full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment*
 31 *Completion Message* within T_{56m} seconds.

32 16. *Any other message*: If the mobile station receives any other message specified in
 33 Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all
 34 other messages.

35 2.6.3.8 PACA Cancel Substate

36 In this substate, the mobile station sends a *PACA Cancel Message*. If the base station
 37 responds with an authentication request, the mobile station responds in this substate.

1 Upon entering the *PACA Cancel Substate*, the mobile station shall transmit the *PACA Cancel*
2 *Message*.

3 If a message received from the base station requires a Layer 2 acknowledgment and does
4 not require a Layer 3 response, Layer 3 shall indicate to Layer 2 that no response is
5 outstanding (see 2.1.1.2.2.1 of [4]).

6 If a message received from the base station requires a Layer 2 acknowledgment and also a
7 Layer 3 response, Layer 3 shall indicate to Layer 2 that a response is outstanding (see
8 2.1.1.2.2.1 of [4]).

9 When transmitting a response to a message received from the base station, Layer 3 shall
10 indicate to Layer 2 that the type of the message is a response (see 2.1.1.2.2.1 of [4]).

11 When transmitting an autonomous message (i.e., a message that is not sent as a response
12 to a message received from the base station), Layer 3 shall indicate to Layer 2 that the
13 type of the message is a request other than a registration request or a message
14 transmission request (see 2.1.1.2.2.1 of [4]).

15 While in this substate, the mobile station shall monitor the Paging Channel or the Forward
16 Common Control Channel. If the mobile station declares a loss of the Paging Channel or
17 the Forward Common Control Channel (see 2.6.2.1.1.4), it shall declare an access attempt
18 failure and update its registration variables as specified in 2.6.5.5.3.2, disable its
19 transmitter and enter the *Mobile Station Idle State*. If the mobile station receives
20 confirmation of any message sent by the mobile station in this substate, it shall send a
21 response in this substate if required and shall then enter the *Mobile Station Idle State*.

22 If the mobile station receives a mobile-station-addressed page, the mobile station may
23 determine if there is a page match (see 2.6.2.3). If a match is declared, Layer 3 shall send
24 an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress
25 and shall enter the *Page Response Substate*.

26 If the mobile station is to exit the *System Access State* as a result of processing Layer 3
27 fields of a message requiring an acknowledgment, the mobile station shall exit the *System*
28 *Access State* after Layer 3 receives an indication from Layer 2 that the acknowledgment to
29 the message has been sent and acknowledged.

30 If Layer 3 receives a message with an indication from Layer 2 that an access attempt for a
31 message being transmitted was not terminated as a result of processing the Layer 2 fields
32 of the received message, the mobile station shall ignore the received message.

33 The following directed messages and orders can be received. If any field value of the
34 message or order is outside its permissible range, the mobile station may send a *Mobile*
35 *Station Reject Order* with ORDQ equal to '00000100' (message field not in valid range).

36 1. *Authentication Challenge Message*: The mobile station shall respond to the message
37 as specified in 2.3.12.1.4, regardless of the value of AUTH_S.

38 2. *Base Station Challenge Confirmation Order*: The mobile station shall respond to the
39 message as specified in 2.3.12.1.5.

40 3. *Data Burst Message*

4. *Local Control Order*

5. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter and record the reason for the *Lock Until Power-Cycled Order* in the mobile station's semi-permanent memory (LCKRSN_{P-S-p} equals the least significant four bits of ORDQ_T).

The mobile station should notify the user of the locked condition. The mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a lock indication (see 2.6.1.1), and shall not enter the *System Access State* again until after the next mobile station power-up or until it has received an *Unlock Order*. This requirement shall take precedence over any other mobile station requirement specifying entry to the *System Access State*.

6. *Maintenance Required Order*: The mobile station shall record the reason for the *Maintenance Required Order* in the mobile station's semi-permanent memory (MAINTRSN_{S-p} equals the least significant four bits of ORDQ_T). The mobile station shall remain in the unlocked condition. The mobile station should notify the user of the maintenance required condition.

7. *PACA Message*: The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000010' (message not accepted in this state).

8. *Registration Accepted Order*:

- If ORDQ_T = '00000101', the mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_T} and should display the roaming condition.
- If ORDQ_T = '00000111', the mobile station shall perform the following
 - The mobile station shall set ROAM_IND_{I_S} = ROAM_IND_{I_T} and should display the roaming condition.
 - The mobile station shall set SIG_ENCRYPT_MODE_S = SIG_ENCRYPT_MODE_T and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by SIG_ENCRYPT_MODE_T (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_T (see Table 3.7.4.5-2).
 - If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated at the most recent registration for encryption of signaling and user information. The mobile station shall store the session key in KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall increment the variable KEY_SEQ_NEW_{S-p} by one (modulo 16).
 - If USE_NEW_KEY is set to '0' then the mobile station shall use KEY[KEY_SEQ_T] as the session key.

9. *Registration Rejected Order*: This order indicates that normal service is not available on this system. The mobile station shall disable the full-TMSI timer. If the received order specifies to delete the TMSI (ORDQ = '00000100'), the mobile station

shall set all the bits of the TMSI_CODE_{S-p} to '1'. The mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a registration rejected indication (see 2.6.1.1).

10. *Retry Order*: The mobile station shall process the message as follows:

- If RETRY_TYPE_r is equal to '000', the mobile station shall set RETRY_DELAY_S[RETRY_TYPE] to 0, where RETRY_TYPE is equal to '001', '010', or '011'.
- If RETRY_TYPE_r is equal to '001', the mobile station shall perform the following:
 - If RETRY_DELAY_r is equal to '00000000', then the mobile station shall set RETRY_DELAY_S[RETRY_TYPE_r] to 0.
 - If RETRY_DELAY_r is not equal to '00000000', the mobile station shall set RETRY_DELAY_S[RETRY_TYPE_r] as follows:
 - + If the most significant bit of the RETRY_DELAY_r is '0', set RETRY_DELAY_UNIT_S to 1000ms. If the most significant bit of the RETRY_DELAY_r is '1', set RETRY_DELAY_UNIT_S to 60000ms.
 - + The mobile station shall set RETRY_DELAY_VALUE_S to the seven least significant bits of RETRY_DELAY_r.
 - + The mobile station shall store the next system time 80 ms boundary + RETRY_DELAY_VALUE_S × RETRY_DELAY_UNIT_S ms as RETRY_DELAY_S[RETRY_TYPE_r].

11. *Security Mode Command Message*: The mobile station shall process the message as follows:

- The mobile station shall set SIG_ENCRYPT_MODE_S to SIG_ENCRYPT_MODE_r.
- If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated at the most recent registration for encryption of signaling and user information. The mobile station shall store the session key in KEY_S[KEY_SEQ_NEW_{S-p}]. The mobile station shall then increment the variable KEY_SEQ_NEW_{S-p} by one (modulo 16).
- If USE_NEW_KEY is set to '0' then the mobile station shall use KEY[KEY_SEQ_r] as the session key.

12. *Service Redirection Message*: The mobile station shall process the message as follows:

- If the mobile station is directed to an unsupported operation mode or band class, the mobile station shall respond with a *Mobile Station Reject Order* with ORDQ equal to '00000110' (message requires a capability that is not supported by the mobile station).

- 1 • If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
- 2 TMSI_CODE_{s-p} to '1'. The mobile station shall disable the full-TMSI timer.
- 3 • The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
- 4 • If RECORD_TYPE_r is equal to '00000000', the mobile station shall enter the
- 5 *System Determination Substate* of the *Mobile Station Initialization State* with an
- 6 NDSS off indication (see 2.6.1.1); otherwise, the mobile station shall store the
- 7 redirection record received in the message as REDIRECT_REC_s and shall enter
- 8 the *System Determination Substate* of the *Mobile Station Initialization State* with a
- 9 redirection indication (see 2.6.1.1).
- 10 13. *SSD Update Message*: The mobile station shall respond to the message as specified
- 11 in 2.3.12.1.5.
- 12 14. *Status Request Message*: The mobile station shall disable the *System Access State*
- 13 timer and respond to the message. If P_REV_IN_USE_s is less than or equal to three,
- 14 the mobile station shall respond with a *Status Response Message*. If P_REV_IN_USE_s
- 15 is greater than three, the mobile station shall respond with an *Extended Status*
- 16 *Response Message*. If the message does not specify any qualification information
- 17 (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall include the
- 18 requested information records in the response. If the message specifies a band
- 19 class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only
- 20 include the requested information records for the specified band class
- 21 (BAND_CLASS_r) in the response. If the message specifies a band class and an
- 22 operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall
- 23 only include the requested information records for the specified band class
- 24 (BAND_CLASS_r) and operating mode (OP_MODE_r) in the *Status Response Message*.
- 25 If the message specifies a band class or a band class and an operating mode which
- 26 is not supported by the mobile station, the mobile station shall send a *Mobile Station*
- 27 *Reject Order* with ORDQ set to '00000110' (message requires a capability that is not
- 28 supported by the mobile station). If the response to this message exceeds the
- 29 allowable length, the mobile station shall send a *Mobile Station Reject Order* with
- 30 ORDQ set to '00001000' (response message would exceed the allowable length). If
- 31 the message specifies an information record which is not supported by the mobile
- 32 station for the specified band class and operating mode, the mobile station shall
- 33 send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is
- 34 not supported for the specified band class and operating mode).
- 35 15. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code
- 36 as follows:
- 37 • The mobile station shall store the length of the TMSI zone field by setting
- 38 ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r,

- The mobile station shall store the assigning TMSI zone number by setting the ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.

The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

16. *Any other message:* If the mobile station receives any other message specified in Table 3.7.2.3-1, it shall ignore all Layer 3 fields. The mobile station shall ignore all other messages.

2.6.4 Mobile Station Control on the Traffic Channel State

In this state, the mobile station communicates with the base station using the Forward and Reverse Traffic Channels.

As illustrated in Figure 2.6.4-1, the *Mobile Station Control on the Traffic Channel State* consists of the following substates:

- *Traffic Channel Initialization Substate* - In this substate, the mobile station verifies that it can receive the Forward Traffic Channel and begins transmitting on the Reverse Traffic Channel.
- *Traffic Channel Substate* - In this substate, the mobile station exchanges Traffic Channel frames with the base station in accordance with the current service configuration. The mobile station may perform the gating operation of Reverse Pilot Channel. While in this substate, one or more Call Control instances can be activated (see 2.6.10).
- *Release Substate* - In this substate, the mobile station disconnects the calls and the physical channels.

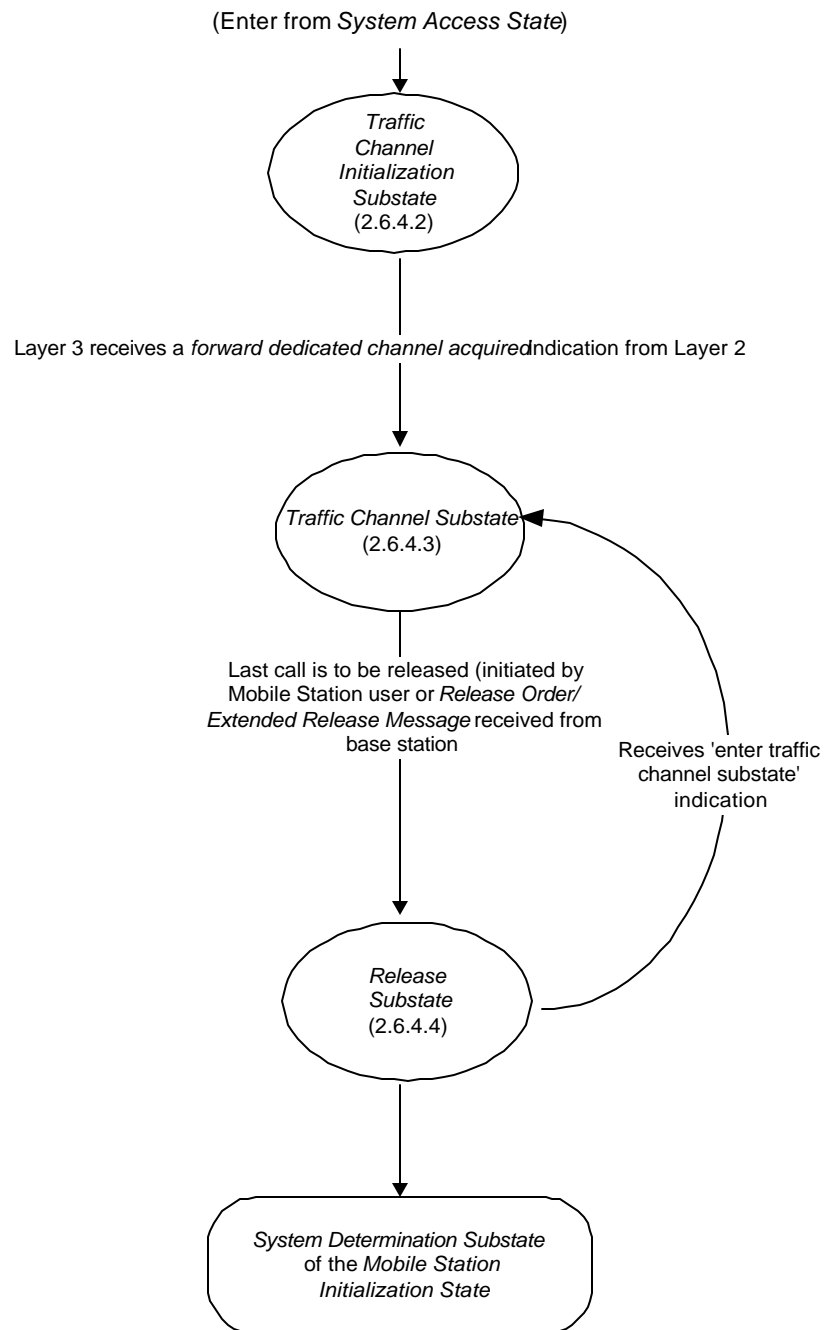


Figure 2.6.4-1. Mobile Station Control on the Traffic Channel State

2.6.4.1 Special Functions and Actions

The mobile station performs special functions and actions in one or more of the substates of the *Mobile Station Control on the Traffic Channel State*.

2.6.4.1.1 Forward Traffic Channel Power Control

The mobile station uses FPC_MODE_NO_SCH_S as FPC_MODE_S except during the forward Supplemental Channel assignment interval. During the forward Supplemental Channel assignment interval, the mobile station uses FPC_MODE_SCH_S as FPC_MODE_S.

To support Forward Traffic Channel power control, the mobile station reports frame error rate statistics to the base station. If the base station enables periodic reporting, the mobile station reports frame error rate statistics at specified intervals. If the base station enables threshold reporting, the mobile station reports frame error rate statistics when the frame error rate reaches a specified threshold.¹²

The mobile station shall maintain the following frame counters:

- A counter (TOT_FRAMES_S) for the total number of frames received on the Forward Fundamental Channel.
- A counter (BAD_FRAMES_S) for the number of bad frames detected on the Forward Fundamental Channel.
- A counter (DCCH_TOT_FRAMES_S) for the total number of frames received on the Forward Dedicated Control Channel, when the Dedicated Control Channel is assigned.
- A counter (DCCH_BAD_FRAMES_S) for the total number of bad frames received on the Forward Dedicated Control Channel, when the Dedicated Control Channel is assigned.

The mobile station shall maintain the following counters for each Supplemental Channel assigned, if FOR_SCH_FER_REP_S corresponding to the Supplemental Channel is equal to '1':

- A counter (SCH_TOT_FRAMES_S) for the number of frames received on the assigned Supplemental Channel.
- A counter (SCH_BAD_FRAMES_S) for the number of bad frames received on the assigned Supplemental Channel.

¹² Periodic reporting and threshold reporting may be independently enabled or disabled by the base station.

- 1 The mobile station shall increment the counter by 1 at every 20 ms interval if a 20ms
 2 frame or at least one 5ms frame is received from the Forward Fundamental Channel or
 3 Dedicated Control Channel:
- 4 • If the received frame is from the Fundamental Channel, the mobile station shall
 5 perform the following:
 - 6 – Increment TOT_FRAMES_S by 1.
 - 7 – If the received 20ms frame is bad or one of the 5ms frames is bad, the mobile
 8 station shall increment BAD_FRAMES_S by 1.
 - 9 • If the received frame is from the Forward Dedicated Control Channel, the mobile
 10 station shall perform the following:
 - 11 – Increment DCCH_TOT_FRAMES_S by 1.
 - 12 – If the received 20ms frame is bad or one of the 5ms frames is bad, the mobile
 13 station shall increment DCCH_BAD_FRAMES_S by 1.
 - 14 • If either
 - 15 – PWR_THRESH_ENABLE_S is equal to '1' and if one of the following conditions is
 16 true:
 - 17 + The Fundamental Channel carries the Power Control Subchannel
 18 [FPC_PRI_CHAN_S = '0'], and BAD_FRAMES_S is equal to PWR_REP_THRESH_S or
 - 19 + The Dedicated Control Channel carries the Power Control Subchannel
 20 [FPC_PRI_CHAN_S = '1'], and DCCH_BAD_FRAMES_S is equal to
 21 PWR_REP_THRESH_S.
 - 22 or
 - 23 – PWR_PERIOD_ENABLE_S is equal to '1' and if one of the following conditions is
 24 true:
 - 25 + The Fundamental Channel carries the Power Control Subchannel
 26 [FPC_PRI_CHAN_S = '0'], and TOT_FRAMES_S is equal to
 27 $\lfloor (2(\text{PWR_REP_FRAMES}_S/2) \times 5) \rfloor$, or
 - 28 + The Dedicated Control Channel carries the Power Control Subchannel
 29 [FPC_PRI_CHAN_S = '1'], and DCCH_TOT_FRAMES_S is equal to
 30 $\lfloor (2(\text{PWR_REP_FRAMES}_S/2) \times 5) \rfloor$,

then the mobile station shall send a *Power Measurement Report Message* to the base station. The mobile station should send the *Power Measurement Report Message* in unassured mode. After sending a *Power Measurement Report Message*, the mobile station shall set TOT_FRAMES_S , BAD_FRAMES_S to zero, and if the Dedicated Control Channel is assigned, shall set $DCCH_TOT_FRAMES_S$ and $DCCH_BAD_FRAMES_S$ to zero. The mobile station shall not increment the counters for a period of $PWR_REP_DELAY_S \times 4$ frames following the first transmission of the message.

- If $FPC_PRI_CHAN_S$ is equal to '0' and TOT_FRAMES_S is equal to $\lfloor (2(PWR_REP_FRAMES_S/2) \times 5) \rfloor$, the mobile station shall perform the following:
 - Set TOT_FRAMES_S and BAD_FRAMES_S to zero.
 - Set $DCCH_TOT_FRAMES_S$ and $DCCH_BAD_FRAMES_S$ to zero, if the Dedicated Control Channel is assigned.
- If $FPC_PRI_CHAN_S$ is equal to '1' and $DCCH_TOT_FRAMES_S$ is equal to $\lfloor (2(PWR_REP_FRAMES_S/2) \times 5) \rfloor$, the mobile station shall set TOT_FRAMES_S , BAD_FRAMES_S , $DCCH_TOT_FRAMES_S$, and $DCCH_BAD_FRAMES_S$ to zero.

For each received frame from an assigned Supplemental Channel, the mobile station shall perform the following, if $FOR_SCH_FER_REP_S$ corresponding to the Supplemental Channel is equal to '1':

- Increment $SCH_TOT_FRAMES_S$ by 1.
- If the received frame is bad, increment $SCH_BAD_FRAMES_S$ by 1.

At the end of a burst on each assigned Supplemental Channel, if $FOR_SCH_FER_REP_S$ corresponding to the Supplemental Channel is equal to '1', the mobile station shall report the total number of frames received on this Supplemental Channel ($SCH_TOT_FRAMES_S$) and the bad frames detected ($SCH_BAD_FRAMES_S$) with the fields $SCH_PWR_MEAS_FRAMES$ and $SCH_ERRORS_DETECTED$ in the *Power Measurement Report Message* respectively. After sending the *Power Measurement Report Message* for the Supplemental Channel, the mobile station shall set $SCH_TOTAL_FRAMES_S$ and $SCH_BAD_FRAMES_S$ of the reported SCH to zero.

Both Forward Fundamental Channel and the Forward Dedicated Control Channel are assigned to the mobile station and the mobile station supports the Radio Configurations greater than two, the mobile station shall perform the following:

- The mobile station shall set $FPC_DELTA_SETPT_S$ to $(FPC_CURR_FCH_SETPT_S - FPC_CURR_DCCH_SETPT_S)$.

- 1 • For each received frame, if $|FPC_CURR_FCH_SETPT_S - FPC_CURR_DCCH_SETPT_S - FPC_DELTA_SETPT_S|$ is equal to or greater than its assigned threshold
- 2 $FPC_SETPT_THRESH_S$, the mobile station shall send the *Outer Loop Report Message*
- 3 requiring acknowledgment to the base station, and the mobile station shall then
- 4 set $FPC_DELTA_SETPT_S$ to $(FPC_CURR_FCH_SETPT_S - FPC_CURR_DCCH_SETPT_S)$.
- 5

For each of the supplemental channels assigned to the mobile station and FPC_MODE_S is set to '000', the mobile station shall perform the following:

- 8 • The mobile station shall set $FPC_DELTA_SCH_SETPT_S$ to
- 9 $(FPC_FCH_CURR_SETPT_S - FPC_SCH_CURR_SETPT_S)$ if $FPC_PRI_CHAN_S$ is equal to
- 10 '0'.
- 11 • The mobile station shall set $FPC_DELTA_SCH_SETPT_S$ to
- 12 $(FPC_DCCH_CURR_SETPT_S - FPC_SCH_CURR_SETPT_S)$ if $FPC_PRI_CHAN_S$ is equal
- 13 to '1'.
- 14 • For each received frame, if $FPC_PRI_CHAN_S$ is equal to '0' and
- 15 $|FPC_FCH_CURR_SETPT_S - FPC_SCH_CURR_SETPT_S - FPC_DELTA_SCH_SETPT_S|$
- 16 is equal to or greater than its assigned threshold $FPC_SETPT_THRESH_SCH_S$, the
- 17 mobile station shall send the *Outer Loop Report Message* in assured mode, and the
- 18 mobile station shall then set $FPC_DELTA_SCH_SETPT_S$ to $(FPC_FCH_CURR_SETPT_S -$
- 19 $FPC_SCH_CURR_SETPT_S)$.
- 20 • For each received frame, if $FPC_PRI_CHAN_S$ is equal to '1' and
- 21 $|FPC_DCCH_CURR_SETPT_S - FPC_SCH_CURR_SETPT_S -$
- 22 $FPC_DELTA_SCH_SETPT_S|$ is equal to or greater than its assigned threshold
- 23 $FPC_SETPT_THRESH_SCH_S$, the mobile station shall send the *Outer Loop Report*
- 24 *Message* in assured mode, and the mobile station shall then set
- 25 $FPC_DELTA_SCH_SETPT_S$ to $(FPC_DCCH_CURR_SETPT_S -$
- 26 $FPC_SCH_CURR_SETPT_S)$.

If the Supplemental channels are assigned to the mobile station and FPC_MODE_S is set to '001', '010', '101', or '110', for each additional Forward Supplemental Channel other than the Forward Supplemental Channel specified by $FPC_SEC_CHAN_S$, the mobile station shall perform the following:

- 31 • The mobile station shall set $FPC_DELTA_SCH_SETPT_S$ to
- 32 $(FPC_SCH_CURR_SETPT_S[FPC_SEC_CHAN_S] - FPC_SCH_CURR_SETPT_S)$ for the
- 33 Supplemental Channel.

- For each received frame, if $|FPC_SCH_CURR_SETPT_S[FPC_SEC_CHAN_S] - FPC_SCH_CURR_SETPT_S - FPC_DELTA_SCH_SETPT_S|$ is equal to or greater than its assigned threshold $FPC_SETPT_THRESH_SCH_S$, the mobile station shall send the *Outer Loop Report Message* in assured mode, and the mobile station shall then set $FPC_DELTA_SCH_SETPT_S$ to $(FPC_SCH_CURR_SETPT_S[FPC_SEC_CHAN_S] - FPC_SCH_CURR_SETPT_S)$.

2.6.4.1.1.1 Forward Traffic Channel Power Control Initialization

To initialize Forward Traffic Channel power control, the mobile station shall set TOT_FRAMES_S , BAD_FRAMES_S , $DCCH_TOT_FRAMES_S$, and $DCCH_BAD_FRAMES_S$ to zero. The mobile station shall initialize the frame counters $SCH_TOT_FRAMES_S$ and $SCH_BAD_FRAMES_S$ for each assigned Supplemental Channel to zero. The mobile station shall initialize $FOR_SCH_FER_REP_S$ to zero.

2.6.4.1.1.2 Processing the Power Control Parameters Message

The mobile station shall store the following parameters from the *Power Control Parameters Message*:

- Power control reporting threshold ($PWR_REP_THRESH_S = PWR_REP_THRESH_T$)
- Power control reporting frame count ($PWR_REP_FRAMES_S = PWR_REP_FRAMES_T$)
- Threshold report mode indicator
($PWR_THRESH_ENABLE_S = PWR_THRESH_ENABLE_T$)
- Periodic report mode indicator
($PWR_PERIOD_ENABLE_S = PWR_PERIOD_ENABLE_T$)
- Power report delay ($PWR_REP_DELAY_S = PWR_REP_DELAY_T$)

The mobile station shall set TOT_FRAMES_S and BAD_FRAMES_S to zero.

2.6.4.1.1.3 Processing the Power Control Message

The mobile station shall send a *Mobile Station Reject Order* with the *ORDQ* field set to '00000110' (message requires a capability that is not supported by the mobile station) if any of the following conditions are detected:

- If the mobile station does not support any Radio Configuration greater than 2 and FPC_MODE_T is not supported by the mobile station.
- If the mobile station does not support Supplemental Channel and FPC_MODE_T is set to the '001', '010', '101', or '110'.
- If $PWR_CNTL_STEP_T$ corresponds to a power control step size (see 2.1.2.3.2 of [2]) is not supported by the mobile station.

1 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to
 2 '00000111' (message cannot be handled by the current mobile station configuration) if any
 3 of the following conditions are detected:

- 4 • FPC_PRI_CHAN_r is set to '1' and only the Fundamental Channel is assigned.
- 5 • FPC_PRI_CHAN_r is set to '0' and only the Dedicated Control Channel is assigned.

6 If none of the above conditions are true, the mobile station shall process the message as
 7 follows at the action time (see 2.6.4.1.5) specified in the message:

- 8 • The mobile station shall store the power control step size (PWR_CNTL_STEP_s =
 9 PWR_CNTL_STEP_r).
- 10 • If FPC_INCL_r is equal to '1', the mobile station shall perform the following:
 - 11 – The mobile station shall set FPC_MODE_NO_SCH_s = FPC_MODE_r.
 - 12 – The mobile station shall set FPC_MODE_s = FPC_MODE_NO_SCH_s if there is no
 13 forward Supplemental Channel burst in progress (see 2.6.6.2.5.1.1).
 - 14 – The mobile station shall set FPC_PRI_CHAN_s to FPC_PRI_CHAN_r.
 - 15 – If FPC_OLPC_FCH_INCL is equal to '1', the mobile station shall:
 - 16 + Set FPC_FCH_FER_s to FPC_FCH_FER_r.
 - 17 + If FPC_FCH_MIN_SETPT_r is not equal to '11111111', set
 18 FPC_FCH_MIN_SETPT_s to FPC_FCH_MIN_SETPT_r; otherwise, set
 19 FPC_FCH_MIN_SETPT_s to FPC_FCH_CURR_SETPT_s.
 - 20 + If FPC_FCH_MAX_SETPT_r is not equal to '11111111', set
 21 FPC_FCH_MAX_SETPT_s to FPC_FCH_MAX_SETPT_r; otherwise, set
 22 FPC_FCH_MAX_SETPT_s to FPC_FCH_CURR_SETPT_s.
 - 23 – If FPC_OLPC_DCCH_INCL is equal to '1', the mobile station shall:
 - 24 + Set FPC_DCCH_FER_s to FPC_DCCH_FER_r.
 - 25 + If FPC_DCCH_MIN_SETPT_r is not equal to '11111111', set
 26 FPC_DCCH_MIN_SETPT_s to FPC_DCCH_MIN_SETPT_r; otherwise, set
 27 FPC_DCCH_MIN_SETPT_s to FPC_DCCH_CURR_SETPT_s.
 - 28 + If FPC_DCCH_MAX_SETPT_r is not equal to '11111111', set
 29 FPC_DCCH_MAX_SETPT_s to FPC_DCCH_MAX_SETPT_r; otherwise, set
 30 FPC_DCCH_MAX_SETPT_s to FPC_DCCH_CURR_SETPT_s.
 - 31 – If FPC_INCL is equal to '1' and FPC_MODE is equal to '001', '010', '101', or '110',
 32 the mobile station shall:
 - 33 + Set FPC_SEC_CHAN_s to FPC_SEC_CHAN_r.

- 1 – If NUM_SUP_T is not equal to '00', for each Supplemental Channel included in the
- 2 message, the mobile station shall:
- 3 + Set SCH_ID_S to SCH_ID_T.
- 4 + Set FPC_SCH_FER_S[SCH_ID_S] to FPC_SCH_FER_T.
- 5 + If FPC_SCH_MIN_SETPT_T is not equal to '11111111', set
- 6 FPC_SCH_MIN_SETPT_S[SCH_ID_S] to FPC_SCH_MIN_SETPT_T; otherwise, set
- 7 FPC_SCH_MIN_SETPT_S[SCH_ID_S] to FPC_SCH_CURR_SETPT_S.
- 8 + If FPC_SCH_MAX_SETPT_T is not equal to '11111111', set
- 9 FPC_SCH_MAX_SETPT_S[SCH_ID_S] to FPC_SCH_MAX_SETPT_T; otherwise, set
- 10 FPC_SCH_MAX_SETPT_S[SCH_ID_S] to FPC_SCH_CURR_SETPT_S.
- 11 – If FPC_THRESH_INCL is equal to '1', the mobile station shall set
- 12 FPC_SETPT_THRESH_S to FPC_SETPT_THRESH_T.
- 13 – If FPC_THRESH_SCH_INCL is equal to '1', the mobile station shall set
- 14 FPC_SETPT_THRESH_SCH_S to FPC_SETPT_THRESH_SCH_T.
- 15 • If RPC_INCL_T is equal to '1' and the mobile station supports any Radio Configuration
- 16 greater than 2, the mobile station shall perform the following:
- 17 – If RPC_ADJ_REC_TYPE is equal to '0000', the mobile station shall update the
- 18 Reverse Channel Adjustment Gain Table (see 2.1.2.3.3.2 of [2]) containing an
- 19 offset relative to the Reverse Pilot Channel power for each reverse link code
- 20 channel received in this message.
- 21 – If RPC_ADJ_REC_TYPE is equal to '0001' or '0010', the mobile station shall
- 22 update the Reverse Link Attribute Adjustment Gain Table (see 2.1.2.3.3.2 of [2])
- 23 containing an offset relative to the Reverse Pilot Channel power for each
- 24 transmission rate, frame length, coding type received in this message.

25 2.6.4.1.2 Service Configuration and Negotiation

26 During Traffic Channel operation, the mobile station and base station communicate
 27 through the exchange of Forward and Reverse Traffic Channel frames. The mobile station
 28 and base station use a common set of attributes for building and interpreting Traffic
 29 Channel frames. This set of attributes, referred to as a service configuration, consists of
 30 both negotiable and non-negotiable parameters.

31 The set of negotiable service configuration parameters consists of the following:

- 32 1. *Forward and Reverse Multiplex Options:* These control the way in which the
- 33 information bits of the Forward and Reverse Traffic Channel frames, respectively,
- 34 are divided into various types of traffic, such as signaling traffic, primary traffic
- 35 and secondary traffic. A multiplex option together with a radio configuration
- 36 specifies the frame structures and transmission rates (see [3]). The multiplex
- 37 options which support Supplemental Code Channel transmission and

Supplemental Channel transmission on the Forward and Reverse Traffic Channels are included in [3]. Multiplex Options 3 through 16 also indicate the capability for supporting Supplemental Code Channel transmission on the Forward and Reverse Traffic Channels. Invocation of Supplemental Code Channel operation on the Forward or Reverse Traffic Channels occurs by the *Supplemental Channel Request Message*, the *Supplemental Channel Assignment Message*, and the *General Handoff Direction Message*. Invocation of Supplemental Channel operation on the Forward or Reverse Traffic Channels occurs by the *Supplemental Channel Request Mini Message*, the *Extended Supplemental Channel Assignment Message*, the *Forward Supplemental Channel Assignment Mini Message*, *Universal Handoff Direction Message*, and the *Reverse Supplemental Channel Assignment Mini Message*. The multiplex option used for the Forward Traffic Channel can be the same as that used for the Reverse Traffic Channel, or it can be different.

2. *Forward and Reverse Traffic Channel Configurations*: These include the Radio Configurations and other necessary attributes for the Forward and Reverse Traffic Channels. The Traffic Channel Configuration used can be different for the Forward and Reverse Traffic Channels or it can be the same.

3. *Forward and Reverse Traffic Channel Transmission Rates*: These are the transmission rates actually used for the Forward and Reverse Traffic Channels respectively. The transmission rates for the Forward Traffic Channel can include all of the transmission rates supported by the radio configuration associated with the Forward Traffic Channel multiplex option, or a subset of the supported rates. Similarly, the transmission rates used for the Reverse Traffic Channel can include all rates supported by the radio configuration associated with the Reverse Traffic Channel multiplex option, or a subset of the supported rates. The transmission rates used for the Forward Traffic Channel can be the same as those used for the Reverse Traffic Channel, or they can be different.

4. *Service Option Connections*: These are the services in use on the Traffic Channel. There can be multiple service option connections. It is also possible that there is no service option connection, in which case the mobile station uses the Reverse Traffic Channel as follows:

- Sends null traffic on the Reverse Fundamental Channel, if the Fundamental Channel is present.
- Sends signaling traffic on the Reverse Traffic Channel where r-dsch is mapped to.

Associated with each service option connection are a service option, a Forward Traffic Channel traffic type, a Reverse Traffic Channel traffic type, and a service option connection reference. The associated service option formally defines the way in which traffic bits are processed by the mobile station and base station. The associated Forward and Reverse Traffic Channel traffic types specify the types of traffic used to support the service option. A service option can require the use of a particular type of traffic, such as primary or secondary, or it can accept more than

one traffic type. A service option can be one-way, in which case it can be supported on the Forward Traffic Channel only or the Reverse Traffic Channel only. Alternatively, a service option can be two-way, in which case it can be supported on the Forward and Reverse Traffic Channels simultaneously. Connected service options can also invoke operation on Supplemental Code Channels in either one or both of the Forward and Reverse Traffic Channels by negotiating a multiplex option that supports operation on Supplemental Code Channels (see [3] for Multiplex options applicable to Supplemental Code Channels), and by using the appropriate Supplemental Code Channel related messages (i.e., the *Supplemental Channel Request Message*, the *Supplemental Channel Assignment Message*, and the *General Handoff Direction Message*). After Supplemental Code Channels have been assigned by the base station, the connected service option can transmit primary and/or secondary traffic on Supplemental Code Channels. Connected service options can also invoke operation on Supplemental Channels in either one or both of the Forward and Reverse Traffic Channels by negotiating a multiplex option that supports operation on Supplemental Channels (see [3] for Multiplex Options applicable to Supplemental Channel) and by using the appropriate Supplemental Channel related messages (i.e., the *Supplemental Channel Request Mini Message*, the *Extended Supplemental Channel Assignment Message*, the *Forward Supplemental Channel Assignment Mini Message*, the *Reverse Supplemental Channel Assignment Mini Message*, and the *Universal Handoff Direction Message*). After Supplemental Channels have been assigned by the base station, the connected service option can transmit primary and/or secondary traffic on Supplemental Channels. The associated service option connection reference provides a means for uniquely identifying the service option connection. The reference serves to resolve ambiguity when there are multiple service option connections in use.

The non-negotiable service configuration parameters are sent from the base station to the mobile stations only, and consists of the following:

1. *Reverse Pilot Gating Rate*: This controls the way in which the reverse pilot is gated on the Reverse Pilot Channel. The base station specifies the reverse pilot gating rate to be used in the *Service Connect Message*, the *General Handoff Direction Message*, and the *Universal Handoff Direction Message*.
2. *Forward and Reverse Power Control Parameters*: These consist of forward power control operation mode, outer loop power control parameters (e.g. target frame error rate, minimum E_b/N_t setpoint, and maximum E_b/N_t setpoint) for the Forward Fundamental Channel and Forward Dedicated Control Channel, and Power Control Subchannel indicator which indicates where the mobile station is to perform the primary inner loop estimation and the base station is to multiplex the Power Control Subchannel.
3. *Logical to Physical Mapping*: This is a table of logical to physical mapping entries, consisting of service reference identifier, logical resource, physical resource, forward flag, reverse flag, and priority.

1 The mobile station can request a default service configuration associated with a service
 2 option at call origination, and can request new service configurations during Traffic
 3 Channel operation. A requested service configuration can differ greatly from its
 4 predecessor or can be very similar. For example, the mobile station can request a service
 5 configuration in which all of the service option connections are different from those of the
 6 existing configuration; or the mobile station can request a service configuration in which
 7 the existing service option connections are maintained with only minor changes, such as
 8 a different set of transmission rates or a different mapping of service option connections to
 9 Forward and Reverse Traffic Channel traffic types.

10 If the mobile station requests a service configuration that is acceptable to the base station,
 11 they both begin using the new service configuration. If the mobile station requests a
 12 service configuration that is not acceptable to the base station, the base station can reject
 13 the requested service configuration or propose an alternative service configuration. If the
 14 base station proposes an alternative service configuration, the mobile station can accept
 15 or reject the base station's proposed service configuration, or propose yet another service
 16 configuration. This process, called service negotiation, ends when the mobile station and
 17 the base station find a mutually acceptable service configuration, or when either the
 18 mobile station or the base station rejects a service configuration proposed by the other.

19 It is also possible for the base station to request a default service configuration associated
 20 with a service option when paging the mobile station and to request new service
 21 configurations during Traffic Channel operation. The service negotiation proceeds as
 22 described above, but with the roles of the mobile station and base station reversed.

23 For CDMA mode operation in Band Class 0, the mobile station and base station can also
 24 use an alternative method for negotiating a service configuration known as service option
 25 negotiation. Service option negotiation is similar to service negotiation, but offers less
 26 flexibility for specifying the attributes of the service configuration. During service option
 27 negotiation, the base station or the mobile station specifies only which service option is to
 28 be used. There is no facility for explicitly specifying the multiplex options, traffic types or
 29 transmission rates to be used on the Forward and Reverse Traffic Channels in conjunction
 30 with the service option. Instead, implicit service configuration attributes are assumed. In
 31 particular, the Forward and Reverse multiplex options and transmission rates are assumed
 32 to be the default multiplex options and transmission rates associated with the requested
 33 service option, and the traffic type for both the Forward and Reverse Traffic Channels is
 34 assumed to be primary traffic; furthermore, a service configuration established using
 35 service option negotiation is restricted to having only a single service option connection.

36 At mobile station origination and termination, the type of negotiation to use, either
 37 service negotiation or service option negotiation, is indicated in the *Channel Assignment*
 38 *Message*. Service negotiation is always used after the mobile station receives an *Extended*
 39 *Channel Assignment Message*. If a CDMA-to-CDMA hard handoff occurs during the call, the
 40 type of negotiation to use following the handoff is indicated in the *Extended Handoff*
 41 *Direction Message*, the *General Handoff Direction Message*, or the *Universal Handoff Direction*
 42 *Message*.

43 For CDMA mode operation in Band Class 1, only service negotiation is to be used.

The following messages are used to support service negotiation:

1. *Service Request Message*: The mobile station can use this message to propose a service configuration, or to accept or reject a service configuration proposed in a *Service Response Message*. The base station can use this message to propose a service configuration, or to reject a service configuration proposed in a *Service Response Message*.
2. *Service Response Message*: The mobile station can use this message to accept or reject a service configuration proposed in a *Service Request Message*, or to propose an alternative service configuration. The base station can use this message to reject a service configuration proposed in a *Service Request Message*, or to propose an alternative service configuration.
3. *Service Connect Message*: The base station can use this message to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*, and to instruct the mobile station to begin using the service configuration.
4. *Service Connect Completion Message*: The mobile station can use this message to acknowledge the transition to a new service configuration.
5. *Service Option Control Message*: The mobile station and base station can use this message to invoke service-option-specific functions.
6. *Extended Channel Assignment Message*: The base station can use this message to accept or reject the initial service configuration proposed by the mobile station in an *Origination Message* or a *Page Response Message*.

The following messages are used to support service option negotiation:

1. *Service Option Request Order*: The mobile station and base station can use this message either to request a service option or to suggest an alternative service option.
2. *Service Option Response Order*: The mobile station and base station can use this message to accept or to reject a service option request.
3. *Service Option Control Order*: The mobile station and base station can use this message to invoke service option specific functions.

The following messages are used to support both service negotiation and service option negotiation:

1. *Origination Message*: The mobile station can use this message to propose an initial service configuration.
2. *Channel Assignment Message*: The base station can use this message to accept or to reject the initial service configuration proposed by the mobile station in an *Origination Message* or a *Page Response Message* and to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used during the call.

3. *Extended Handoff Direction Message*: The base station can use this message to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used following a CDMA-to-CDMA hard handoff.
4. *General Handoff Direction Message*: The base station can use this message to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used following a CDMA-to-CDMA hard handoff. The base station can use this message to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*. The base station can also use this message to instruct the mobile station to begin using the service configuration.
5. *General Page Message* or *Universal Page Message*: The base station can use a mobile-station-addressed page in a *General Page Message* or in a *Universal Page Message* to propose an initial service configuration.
6. *Page Response Message*: The mobile station can use this message to accept or to reject the initial service configuration proposed by the base station in a mobile-station-addressed page, or to propose an alternative initial service configuration.
7. *Status Request Message*: The base station can use this message to request service capability information from the mobile station.
8. *Status Response Message*: The mobile station can use this message to return the service capability information requested by the base station in a *Status Request Message*.
9. *Extended Status Response Message*: The mobile station can use this message to return the service capability information requested by the base station in a *Status Request Message*.
10. *Universal Handoff Direction Message*: The base station can use this message to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used following a CDMA-to-CDMA hard handoff. The base station can use this message to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*. The base station can also use this message to instruct the mobile station to begin using the service configuration.

2.6.4.1.2.1 Use of Variables

2.6.4.1.2.1.1 Maintaining the Service Request Sequence Number

The mobile station shall maintain a service request sequence number variable, $SERV_REQ_NUM_S$ for use with service negotiation. Upon entering the *Mobile Station Control on the Traffic Channel State*, the mobile station shall set $SERV_REQ_NUM_S$ to 0. Each time the mobile station sends a new *Service Request Message*, it shall set the $SERV_REQ_SEQ$ field of the message to the current value of $SERV_REQ_NUM_S$, and shall then set $SERV_REQ_NUM_S$ equal to $(SERV_REQ_NUM_S + 1)$ modulo 8.

2.6.4.1.2.1.2 Maintaining the Service Negotiation Indicator Variable

The mobile station shall maintain a service negotiation indicator variable, $SERV_NEG_S$, to indicate which type of negotiation to use, either service negotiation or service option negotiation. The mobile station shall set $SERV_NEG_S$ to enabled whenever service negotiation is to be used, and shall set $SERV_NEG_S$ to disabled whenever service option negotiation is to be used. The precise rules for setting $SERV_NEG_S$ are specified in 2.6.4.2 and 2.6.6.2.5.1.

For CDMA operation in Band Class 1, the mobile station shall set $SERV_NEG_S$ to enabled.

2.6.4.1.2.1.3 Maintaining the Service Option Request Number

The mobile station shall maintain a service option request number variable, SO_REQ_S , for use with service option negotiation. The mobile station shall set SO_REQ_S to a special value, NULL, if the mobile station does not have an outstanding service option request. If the mobile station has an outstanding service option request, the mobile station shall set SO_REQ_S to the number of the service option associated with the outstanding request.

2.6.4.1.2.2 Service Subfunctions

As illustrated in Figure 2.6.4.1.2.2-1, the mobile station supports service configuration and negotiation by performing the following set of service subfunctions:

- *Normal Service Subfunction* - While this subfunction is active, the mobile station processes service configuration requests from the user and from the base station.
- *Waiting for Service Request Message Subfunction* - While this subfunction is active, the mobile station waits to receive a *Service Request Message*.
- *Waiting for Service Response Message Subfunction* - While this subfunction is active, the mobile station waits to receive a *Service Response Message*.
- *Waiting for Service Connect Message Subfunction* - While this subfunction is active, the mobile station waits to receive a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message* containing a service configuration record.
- *Waiting for Service Action Time Subfunction* - While this subfunction is active, the mobile station waits for the action time associated with a new service configuration and then sends a *Service Connect Completion Message*.
- *SO Negotiation Subfunction* - While this subfunction is active, the mobile station supports service option negotiation with the base station. This subfunction is only used while operating in Band Class 0.

The *SO Negotiation Subfunction* supports service option negotiation. All of the other service subfunctions support service negotiation.

At any given time during Traffic Channel operation, only one of the service subfunctions is active. For example, when the mobile station first enters the *Traffic Channel Initialization*

1 *Substate of the Mobile Station Control on the Traffic Channel State, the Normal Service*
2 *Subfunction, the Waiting for Service Connect Message Subfunction or the SO Negotiation*
3 *Subfunction is active. Each of the other service subfunctions may become active in*
4 *response to various events which occur during the Traffic Channel substates. Typically,*
5 *the mobile station processes events pertaining to service configuration and negotiation in*
6 *accordance with the requirements for the active service subfunction, however, some*
7 *Traffic Channel substates do not allow for the processing of certain events pertaining to*
8 *service configuration and negotiation, or specify requirements for processing such events*
9 *which supersede the requirements of the active service subfunction.*

10

11

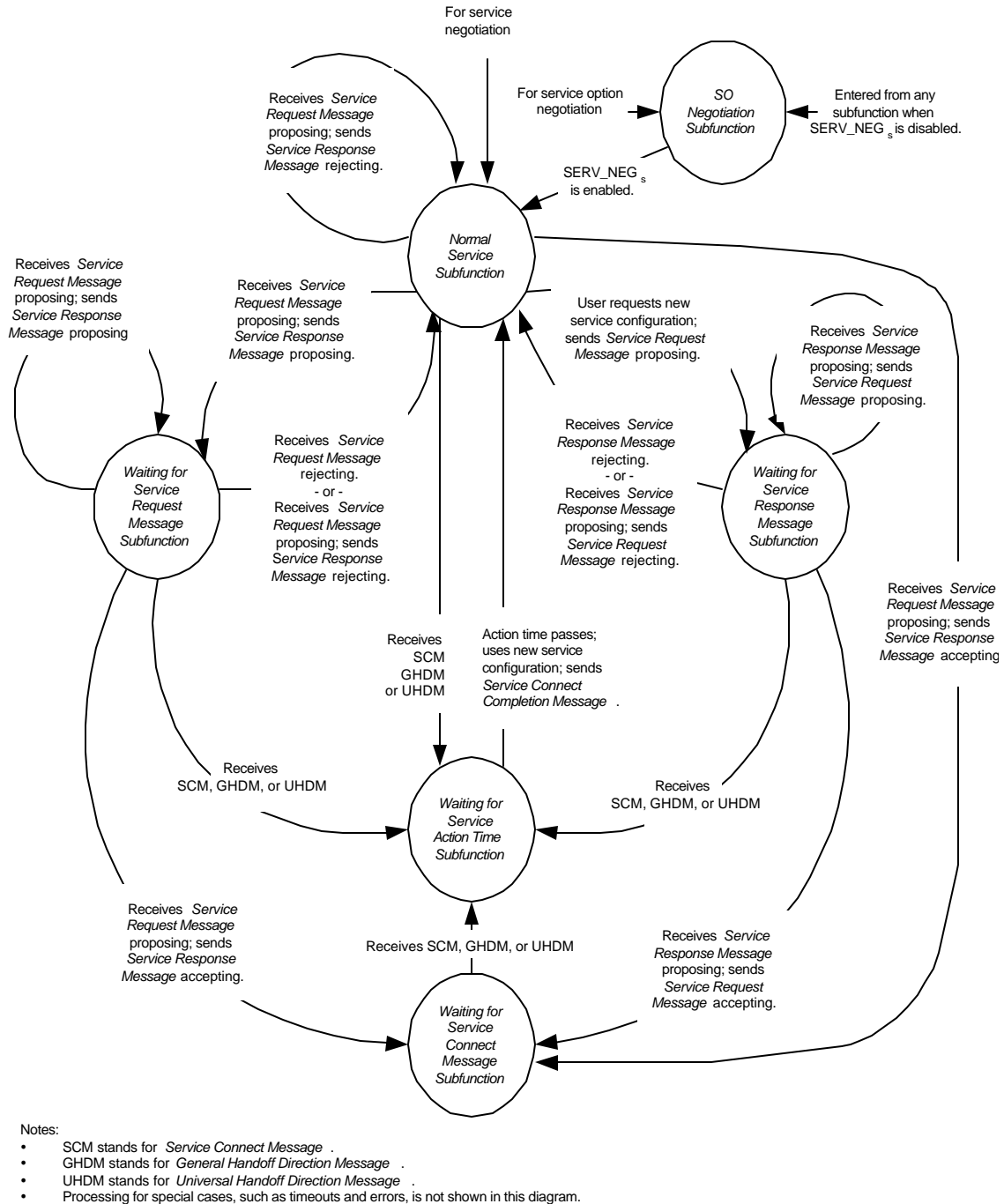


Figure 2.6.4.1.2.2-1. Mobile Station Service Subfunctions

2.6.4.1.2.2.1 Normal Service Subfunction

While this subfunction is active, the mobile station processes service configuration requests from the user and from the base station.

While the *Normal Service Subfunction* is active, the mobile station shall perform the following:

- The mobile station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The mobile station shall discard any Forward Traffic Channel frame which has a format that is not supported by the mobile station. The mobile station may discard any type of Forward Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- To initiate service negotiation for a new service configuration, the mobile station shall send a *Service Request Message* to propose the new service configuration. The mobile station shall activate the *Waiting for Service Response Message Subfunction*.
- For any service option connection that is part of the current service configuration, the mobile station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- If $SERV_NEG_S$ changes from enabled to disabled (see 2.6.6.2.5.1), the mobile station shall activate the *SO Negotiation Subfunction*.
- If the mobile station receives one of the following service negotiation messages, the mobile station shall process the message according to the specified requirements:
 1. *Service Connect Message*: The mobile station shall perform the following:
 - If $USE_OLD_SERV_CONFIG_r$ equals '0', the mobile station shall perform the following: If the mobile station accepts the service configuration specified in the message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall send a *Mobile Station Reject Order* ($ORDQ = '00000111'$) within T_{56m} seconds.
 - If $USE_OLD_SERV_CONFIG_r$ equals '1', the mobile station shall perform the following: If the mobile station accepts the service configuration currently stored at the mobile station, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall send a *Mobile Station Reject Order* ($ORDQ = '00000111'$) within T_{56m} seconds.

- 1 2. *Service Option Control Message*: If the service option connection specified by the
2 message is part of the current service configuration, and the service option
3 specified by the message is the same as the service option associated with the
4 service option connection, the mobile station shall interpret the action time of
5 the message as specified in 2.6.4.1.5, and shall process the message in
6 accordance with the requirements for the service option; otherwise, the mobile
7 station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m}
8 seconds.
- 9 3. *Service Request Message*: The mobile station shall process the message as
10 follows:
 - 11 – If the purpose of the message is to reject a proposed service configuration,
12 the mobile station shall send a *Mobile Station Reject Order* (ORDQ =
13 '00000010') within T_{56m} seconds.
 - 14 – If the purpose of the message is to propose a service configuration, the
15 mobile station shall process the message as follows:
 - 16 + If the mobile station accepts the proposed service configuration, the
17 mobile station shall send a *Service Response Message* to accept the
18 proposed service configuration within T_{59m} seconds. The mobile station
19 shall activate the *Waiting for Service Connect Message Subfunction*.
 - 20 + If the mobile station does not accept the proposed service configuration
21 and does not have an alternative service configuration to propose, the
22 mobile station shall send a *Service Response Message* to reject the
23 proposed service configuration within T_{59m} seconds.
 - 24 + If the mobile station does not accept the proposed service configuration
25 and has an alternative service configuration to propose, the mobile
26 station shall send a *Service Response Message* to propose the alternative
27 service configuration within T_{59m} seconds. The mobile station shall
28 activate the *Waiting for Service Request Message Subfunction*.
- 29 4. *Service Response Message*: The mobile station shall send a *Mobile Station Reject*
30 *Order* (ORDQ = '00000010') within T_{56m} seconds.
- 31 5. *General Handoff Direction Message*: If the SCR_INCLUDED field is included in
32 this message and is set to '1':
33 If the mobile station has not rejected this message, the mobile station shall
34 activate the *Waiting for Service Action Time Subfunction*.
- 35 6. *Universal Handoff Direction Message*: If the SCR_INCLUDED field is included in
36 this message and is set to '1':
37 If the mobile station has not rejected this message, the mobile station shall
38 activate the *Waiting for Service Action Time Subfunction*.

- If the mobile station receives one of the following service option negotiation messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds:

1. *Service Option Request Order*
2. *Service Option Response Order*
3. *Service Option Control Order*

2.6.4.1.2.2.2 Waiting for Service Request Message Subfunction

While this subfunction is active, the mobile station waits to receive a *Service Request Message*.

Upon activation of the *Waiting for Service Request Message Subfunction*, the mobile station shall set the subfunction timer for T_{68m} seconds.

While the *Waiting for Service Request Message Subfunction* is active, the mobile station shall perform the following:

- If the subfunction timer expires, the mobile station shall activate the *Normal Service Subfunction*.
- The mobile station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The mobile station shall discard any Forward Traffic Channel frame which has a format that is not supported by the mobile station. The mobile station may discard any type of Forward Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- The mobile station shall not initiate service negotiation for a new service configuration.
- For any service option connection that is part of the current service configuration, the mobile station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- If SERV_NEG_S changes from enabled to disabled (see 2.6.6.2.5.1), the mobile station shall activate the *SO Negotiation Subfunction*.
- If the mobile station receives one of the following service negotiation messages, the mobile station shall process the message according to the specified requirements:
 1. *Service Connect Message*: The mobile station shall perform the following:
 - If USE_OLD_SERV_CONFIG_r equals '0', the mobile station shall perform the following: If the mobile station accepts the service configuration specified in the message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall

1 send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m}
 2 seconds and shall activate the *Normal Service Subfunction*.

- 3 • If USE_OLD_SERV_CONFIG_r equals '1', the mobile station shall perform
 4 the following: If the mobile station accepts the service configuration
 5 currently stored at the mobile station, the mobile station shall activate
 6 the *Waiting for Service Action Time Subfunction*; otherwise, the mobile
 7 station shall send a *Mobile Station Reject Order* (ORDQ = '00000111')
 8 within T_{56m} seconds.

9 2. *Service Option Control Message*: If the service option connection specified by the
 10 message is part of the current service configuration, and the service option
 11 specified by the message is the same as the service option associated with the
 12 service option connection, the mobile station shall interpret the action time of
 13 the message as specified in 2.6.4.1.5, and shall process the message in
 14 accordance with the requirements for the service option; otherwise, the mobile
 15 station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m}
 16 seconds.

17 3. *Service Request Message*: The mobile station shall process the message as
 18 follows:

- 19 – If the purpose of the message is to reject a proposed service configuration,
 20 the mobile station shall activate the *Normal Service Subfunction*.
- 21 – If the purpose of the message is to propose a service configuration, the
 22 mobile station shall process the message as follows:
 - 23 + If the mobile station accepts the proposed service configuration, the
 24 mobile station shall send a *Service Response Message* to accept the
 25 proposed service configuration within T_{59m} seconds. The mobile station
 26 shall activate the *Waiting for Service Connect Message Subfunction*.
 - 27 + If the mobile station does not accept the proposed service configuration
 28 and does not have an alternative service configuration to propose, the
 29 mobile station shall send a *Service Response Message* to reject the
 30 proposed service configuration within T_{59m} seconds. The mobile station
 31 shall activate the *Normal Service Subfunction*.
 - 32 + If the mobile station does not accept the proposed service configuration
 33 and has an alternative service configuration to propose, the mobile
 34 station shall send a *Service Response Message* to propose the alternative
 35 service configuration within T_{59m} seconds. The mobile station shall
 36 reset the subfunction timer for T_{68m} seconds.

37 4. *Service Response Message*: The mobile station shall send a *Mobile Station Reject*
 38 *Order* (ORDQ = '00000010') within T_{56m} seconds.

1 5. *General Handoff Direction Message*: If the SCR_INCLUDED field is included in
2 this message and is set to '1':

3 If the mobile station has not rejected this message, the mobile station shall
4 activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile
5 station shall activate the *Normal Service Subfunction*.

6 6. *Universal Handoff Direction Message*: If the SCR_INCLUDED field is included in
7 this message and is set to '1':

8 If the mobile station has not rejected this message, the mobile station shall
9 activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile
10 station shall activate the *Normal Service Subfunction*.

11 • If the mobile station receives one of the following service option negotiation
12 messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ =
13 '00000010') within T_{56m} seconds:

- 14 1. *Service Option Request Order*
- 15 2. *Service Option Response Order*
- 16 3. *Service Option Control Order*

17 2.6.4.1.2.2.3 *Waiting for Service Response Message Subfunction*

18 While this subfunction is active, the mobile station waits to receive a *Service Response*
19 *Message*.

20 Upon activation of the *Waiting for Service Response Message Subfunction*, the mobile station
21 shall set the subfunction timer for T_{68m} seconds.

22 While the *Waiting for Service Response Message Subfunction* is active, the mobile station
23 shall perform the following:

- 24 • If the subfunction timer expires, the mobile station shall activate the *Normal Service*
25 *Subfunction*.
- 26 • The mobile station shall process Forward and Reverse Traffic Channel frames in
27 accordance with the current service configuration. The mobile station shall
28 discard any Forward Traffic Channel frame which has a format that is not supported
29 by the mobile station. The mobile station may discard any type of Forward Traffic
30 Channel traffic that is not signaling traffic and is not part of the current service
31 configuration.
- 32 • The mobile station shall not initiate service negotiation for a new service
33 configuration.
- 34 • For any service option connection that is part of the current service configuration,
35 the mobile station may send a *Service Option Control Message* to invoke a service
36 option specific function in accordance with the requirements for the associated
37 service option.

- 1 • If $SERV_NEG_S$ changes from enabled to disabled (see 2.6.6.2.5.1), the mobile station
2 shall activate the *SO Negotiation Subfunction*.
- 3 • If the mobile station receives one of the following service negotiation messages,
4 the mobile station shall process the message according to the specified
5 requirements:
 - 6 1. *Service Connect Message*: The mobile station shall perform the following:
 - 7 • If $USE_OLD_SERV_CONFIG_r$ equals '0', the mobile station shall perform the
8 following: If the mobile station accepts the service configuration specified in
9 the message, the mobile station shall activate the *Waiting for Service Action*
10 *Time Subfunction*; otherwise, the mobile station shall send a *Mobile Station*
11 *Reject Order* (ORDQ = '00000111') within T_{56m} seconds and shall activate the
12 *Normal Service Subfunction*.
 - 13 • If $USE_OLD_SERV_CONFIG_r$ equals '1', the mobile station shall perform the
14 following: If the mobile station accepts the service configuration currently
15 stored at the mobile station, the mobile station shall activate the *Waiting for*
16 *Service Action Time Subfunction*; otherwise, the mobile station shall send a
17 *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds.
 - 18 2. *Service Option Control Message*: If the service option connection specified by the
19 message is part of the current service configuration, and the service option
20 specified by the message is the same as the service option associated with the
21 service option connection, the mobile station shall interpret the action time of
22 the message as specified in 2.6.4.1.5, and shall process the message in
23 accordance with the requirements for the service option; otherwise, the mobile
24 station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m}
25 seconds.
 - 26 3. *Service Request Message*: The mobile station shall process the message as
27 follows:
 - 28 – If the purpose of the message is to reject a proposed service configuration,
29 the mobile station shall send a *Mobile Station Reject Order* (ORDQ =
30 '00000010') within T_{56m} seconds.
 - 31 – If the purpose of the message is to propose a service configuration, the mobile
32 station shall discontinue processing the service configuration requested by the
33 user and shall process the message as follows:
 - 34 + If the mobile station accepts the proposed service configuration, the
35 mobile station shall send a *Service Response Message* to accept the
36 proposed service configuration within T_{59m} seconds. The mobile station
37 shall activate the *Waiting for Service Connect Message Subfunction*.

- + If the mobile station does not accept the proposed service configuration and does not have an alternative service configuration to propose, the mobile station shall send a *Service Response Message* to reject the proposed service configuration within T_{59m} seconds. The mobile station shall activate the *Normal Service Subfunction*.
 - + If the mobile station does not accept the proposed service configuration and has an alternative service configuration to propose, the mobile station shall send a *Service Response Message* to propose the alternative service configuration within T_{59m} seconds. The mobile station shall activate the *Waiting for Service Request Message Subfunction*.
- 4. *Service Response Message*: The mobile station shall process the message as follows:
 - If the service request sequence number (SERV_REQ_SEQ_r) from the message does not match the sequence number of the *Service Request Message* for which the mobile station is expecting a response, the mobile station shall not process the other layer 3 fields of the message.
 - If the purpose of the message is to reject the service configuration proposed in the corresponding *Service Request Message*, the mobile station shall activate the *Normal Service Subfunction*. The mobile station may indicate to the user that the requested service configuration has been rejected.
 - If the purpose of the message is to propose a service configuration, the mobile station shall process the message as follows:
 - + If the mobile station accepts the proposed service configuration, the mobile station shall send a *Service Request Message* to accept the proposed service configuration within T_{59m} seconds. The mobile station shall activate the *Waiting for Service Connect Message Subfunction*.
 - + If the mobile station does not accept the proposed service configuration and does not have an alternative service configuration to propose, the mobile station shall send a *Service Request Message* to reject the proposed service configuration within T_{59m} seconds. The mobile station shall activate the *Normal Service Subfunction*.
 - + If the mobile station does not accept the proposed service configuration and has an alternative service configuration to propose, the mobile station shall send a *Service Request Message* to propose the alternative service configuration within T_{59m} seconds. The mobile station shall reset the subfunction timer for T_{68m} seconds.
- 5. *General Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile

station shall activate the *Normal Service Subfunction*.

6. *Universal Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall activate the *Normal Service Subfunction*.

- If the mobile station receives one of the following service option negotiation messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds:

1. *Service Option Request Order*
2. *Service Option Response Order*
3. *Service Option Control Order*

2.6.4.1.2.2.4 Waiting for Service Connect Message Subfunction

While this subfunction is active, the mobile station waits to receive a *Service Connect Message*.

Upon activation of the *Waiting for Service Connect Message Subfunction*, the mobile station shall set the subfunction timer for T_{65m} seconds.

While the *Waiting for Service Connect Message Subfunction* is active, the mobile station shall perform the following:

- If the subfunction timer expires, the mobile station shall activate the *Normal Service Subfunction*.
- The mobile station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The mobile station shall discard any Forward Traffic Channel frame which has a format that is not supported by the mobile station. The mobile station may discard any type of Forward Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- The mobile station shall not initiate service negotiation for a new service configuration.
- For any service option connection that is part of the current service configuration, the mobile station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- If SERV_NEG_S changes from enabled to disabled (see 2.6.6.2.5.1), the mobile station shall activate the *SO Negotiation Subfunction*.

- 1 • If the mobile station receives one of the following service negotiation messages,
2 the mobile station shall process the message according to the specified
3 requirements:
- 4 1. *Service Connect Message*: The mobile station shall perform the following:
 - 5 • If USE_OLD_SERV_CONFIG_r equals '0', the mobile station shall perform the
6 following: If the mobile station accepts the service configuration specified in
7 the message, the mobile station shall activate the *Waiting for Service Action*
8 *Time Subfunction*; otherwise, the mobile station shall send a *Mobile Station*
9 *Reject Order* (ORDQ = '00000111') within T_{56m} seconds and shall activate the
10 *Normal Service Subfunction*.
 - 11 • If USE_OLD_SERV_CONFIG_r equals '1', the mobile station shall perform the
12 following: If the mobile station accepts the service configuration currently
13 stored at the mobile station, the mobile station shall activate the *Waiting for*
14 *Service Action Time Subfunction*; otherwise, the mobile station shall send a
15 *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds.
- 16 2. *Service Option Control Message*: If the service option connection specified by the
17 message is part of the current service configuration, and the service option
18 specified by the message is the same as the service option associated with the
19 service option connection, the mobile station shall interpret the action time of
20 the message as specified in 2.6.4.1.5, and shall process the message in
21 accordance with the requirements for the service option; otherwise, the mobile
22 station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m}
23 seconds.
- 24 3. *Service Request Message*: The mobile station shall process the message as
25 follows:
 - 26 – If the purpose of the message is to reject a proposed service configuration,
27 the mobile station shall send a *Mobile Station Reject Order* (ORDQ =
28 '00000010') within T_{56m} seconds.
 - 29 – If the purpose of the message is to propose a service configuration, the mobile
30 station shall process the message as follows:
 - 31 + If the mobile station accepts the proposed service configuration, the
32 mobile station shall send a *Service Response Message* to accept the
33 proposed service configuration within T_{59m} seconds. The mobile station
34 shall reset the subfunction timer for T_{65m} seconds.
 - 35 + If the mobile station does not accept the proposed service configuration
36 and does not have an alternative service configuration to propose, the
37 mobile station shall send a *Service Response Message* to reject the
38 proposed service configuration within T_{59m} seconds. The mobile station
39 shall activate the *Normal Service Subfunction*.

- + If the mobile station does not accept the proposed service configuration and has an alternative service configuration to propose, the mobile station shall send a *Service Response Message* to propose the alternative service configuration within T_{59m} seconds. The mobile station shall activate the *Waiting for Service Request Message Subfunction*.

4. *Service Response Message*: The mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.

5. *General Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall activate the *Normal Service Subfunction*.

6. *Universal Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall activate the *Waiting for Service Action Time Subfunction*; otherwise, the mobile station shall activate the *Normal Service Subfunction*.

- If the mobile station receives one of the following service option negotiation messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds:

1. *Service Option Request Order*
2. *Service Option Response Order*
3. *Service Option Control Order*

2.6.4.1.2.2.5 Waiting for Service Action Time Subfunction

While this subfunction is active, the mobile station waits for the action time associated with a new service configuration. If the action time was specified by a *Service Connect Message*, the mobile station shall send the *Service Connect Completion Message* at the action time.

While the *Wait for Service Action Time Subfunction* is active, the mobile station shall perform the following:

- Prior to the action time associated with the *Service Connect Message*, *General Handoff Direction Message* (containing a service configuration record), or *Universal Handoff Direction Message* (containing a service configuration record), the mobile station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The mobile station shall discard any Forward Traffic Channel frame which has a format that is not supported by the mobile station. The mobile station may discard any type of Forward Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.

- 1 • At the action time associated with the *Service Connect Message*, *General Handoff*
2 *Direction Message* (containing a service configuration record) or *Universal Handoff*
3 *Direction Message* (containing a service configuration record), the mobile station
4 shall perform the following:
 - 5 – If this is a *Service Connect Message* with USE_OLD_SERV_CONFIG_r equals '1', the
6 mobile station shall perform the following:
 - 7 + Layer 3 shall terminate the Call Control instance identified by NULL.
 - 8 + For each service option connection (with corresponding connection
9 reference CON_REF_i) in the stored service configuration record, layer 3 shall
10 instantiate a Call Control instance (as specified in 2.6.10). The mobile
11 station shall identify this Call Control instance by CON_REF_i.
 - 12 + The mobile station shall begin to use the service configuration which was
13 stored by the mobile station when it left the *Mobile Station Control on the*
14 *Traffic Channel State* as the current service configuration and shall begin to
15 process Forward and Reverse Traffic Channel frames accordingly. The
16 mobile station shall send a *Service Connect Completion Message* within T_{56m}
17 seconds after the action time. The mobile station shall exit this subfunction
18 and activate the *Normal Service Subfunction*.
 - 19 – Otherwise, the mobile station shall perform the following:
 - 20 + The mobile station shall process the received Service Configuration Record
21 as specified in 2.6.4.1.12, shall process the received Non-negotiable Service
22 Configuration Record as specified in 2.6.4.1.13 (if included), and shall begin
23 to use the service configuration specified by the *Service Connect Message*,
24 *General Handoff Direction Message* or *Universal Handoff Direction Message*
25 containing a service configuration record as the current service
26 configuration and shall begin to process Forward and Reverse Traffic
27 Channel frames accordingly. If the action time was specified by a *Service*
28 *Connect Message*, the mobile station shall send a *Service Connect Completion*
29 *Message* within T_{56m} seconds after the action time. The mobile station
30 shall exit this subfunction and activate the *Normal Service Subfunction*.
 - 31 + If CC_INFO_INCL_r equals '1', then for each of the NUM_CALLS_ASSIGN_r
32 occurrences of the call control parameters included in the message, the
33 mobile station shall perform the following:
 - 34 o If RESPONSE_IND_r equals '1', and TAG_r matches any of the TAG values
35 contained in the list TAG_OUTSTANDING_LIST, the layer 3 shall
36 instantiate a Call Control instance (as specified in 2.6.10). The mobile
37 station shall identify this Call Control instance by CON_REF_r. The
38 mobile station shall remove the TAG value specified by TAG_r from the
39 list TAG_OUTSTANDING_LIST.

- o If RESPONSE_IND_r equals '0', the mobile station shall store the bypass indicator (BYPASS_ALERT_ANSWER_s = BYPASS_ALERT_ANSWER_r) and the layer 3 shall instantiate a Call Control instance (as specified in 2.6.10). The mobile station shall identify this Call Control instance by CON_REF_r.

- The mobile station shall not initiate service negotiation for a new service configuration.
- For any service option connection that is part of the current or pending service configuration, the mobile station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- If SERV_NEG_s changes from enabled to disabled (see 2.6.6.2.5.1), the mobile station shall activate the *SO Negotiation Subfunction*.
- If the mobile station receives one of the following service negotiation messages, the mobile station shall process the message according to the specified requirements:
 1. *Service Connect Message*: The mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.
 2. *Service Option Control Message*: If the service option connection specified by the message is part of the current or pending service configuration, and the service option specified by the message is the same as the service option associated with the service option connection, the mobile station shall interpret the action time of the message as specified in 2.6.4.1.5, and shall process the message in accordance with the requirements for the service option; otherwise, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds.
 3. *Service Request Message*: The mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.
 4. *Service Response Message*: The mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.
 5. *General Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall remain in this subfunction until the action time specified in the message, and shall begin to use the service configuration specified by the *General Handoff Direction Message* at the action time.
 6. *Universal Handoff Direction Message*: If the SCR_INCLUDED field is included in this message and is set to '1':

If the mobile station has not rejected this message, the mobile station shall

remain in this subfunction until the action time specified in the message, and shall begin to use the service configuration specified by the *Universal Handoff Direction Message* at the action time.

- If the mobile station receives one of the following service option negotiation messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds:
 1. *Service Option Request Order*
 2. *Service Option Response Order*
 3. *Service Option Control Order*

2.6.4.1.2.2.6 SO Negotiation Subfunction

The *SO Negotiation Subfunction* is only supported for mobile stations operating in Band Class 0.

Upon activation of the *SO Negotiation Subfunction*, the mobile station shall delete from the current service configuration any service option connection which does not use primary traffic on both the Forward and Reverse Traffic Channels.

While the *SO Negotiation Subfunction* is active, the mobile station shall perform the following:

- If the current service configuration includes a service option connection, the mobile station shall process the received primary traffic bits in accordance with the requirements for the service option associated with the service option connection; otherwise, the mobile station shall discard the received primary traffic bits.
- If the current service configuration includes a service option connection, the mobile station shall transmit primary traffic bits in accordance with the requirements for the service option associated with the service option connection; otherwise, the mobile station shall transmit null traffic on the Reverse Fundamental Channel, if the Fundamental Channel is present or transmit power control bits on the Reverse Pilot Channel, if only the Dedicated Control Channel is present.
- If the current service configuration includes a service option connection, the mobile station may send a *Service Option Control Order* to invoke a service option specific function in accordance with the requirements for the service option associated with the service option connection.
- To initiate service option negotiation, the mobile station shall set SO_REQ_S to the number of the requested service option and shall send a *Service Option Request Order* containing the requested service option number.
- If $SERV_NEG_S$ changes from disabled to enabled (see 2.6.6.2.5.1), the mobile station shall set SO_REQ_S to NULL and shall activate the *Normal Service Subfunction*.

- 1 • If the mobile station receives a *Service Option Request Order*, it shall process the
2 order as follows:
 - 3 – If the mobile station accepts the requested service option, the mobile station
4 shall set SO_REQ_S to NULL and shall send a *Service Option Response Order*
5 accepting the requested service option within T_{58m} seconds. The mobile
6 station shall interpret the message action time of the *Service Option Request*
7 *Order* in accordance with the requirements for the requested service option and
8 the mobile station shall begin using the service configuration implied by the
9 requested service option in accordance with those requirements. The implied
10 service configuration shall include the default Forward and Reverse multiplex
11 options and radio configurations associated with the requested service option,
12 and shall include one service option connection for which the service option
13 connection reference is 1, the service option is the requested service option,
14 and the Forward and Reverse Traffic Channel types are both primary traffic.
 - 15 – If the mobile station does not accept the requested service option and has an
16 alternative service option to request, the mobile station shall set SO_REQ_S to
17 the alternative service option number and shall send a *Service Option Request*
18 *Order* requesting the alternative service option within T_{58m} seconds.
 - 19 – If the mobile station does not accept the requested service option and does not
20 have an alternative service option to request, the mobile station shall set
21 SO_REQ_S to NULL and shall send a *Service Option Response Order* to reject the
22 request within T_{58m} seconds. The mobile station shall continue to use the
23 current service configuration.
- 24 • If the mobile station receives a *Service Option Response Order*, it shall process the
25 order as follows:
 - 26 – If the service option number specified in the order is equal to SO_REQ_S, the
27 mobile station shall set SO_REQ_S to NULL. The mobile station shall interpret
28 the message action time of the *Service Option Response Order* in accordance
29 with the requirements for the specified service option, and the mobile station
30 shall begin using the service configuration implied by the specified service
31 option in accordance with those requirements. The implied service
32 configuration shall include the default Forward and Reverse multiplex options
33 and radio configurations associated with the specified service option, and shall
34 include one service option connection for which the service option connection
35 reference is 1, the service option is the specified service option, and the
36 Forward and Reverse Traffic Channel types are both primary traffic.
 - 37 – If the order indicates a service option rejection, the mobile station shall set
38 SO_REQ_S to NULL. The mobile station shall continue to use the current service
39 configuration.

- 1 – If the order does not indicate a service option rejection and the service option
2 specified in the order is not equal to SO_REQ_S , the mobile station shall set
3 SO_REQ_S to NULL and shall send a *Mobile Station Reject Order* (ORDQ =
4 '00000100') within T_{58m} seconds. The mobile station shall continue to use the
5 current service configuration.
- 6 • If the mobile station receives a *Service Option Control Order*, it shall process the
7 order as follows:
 - 8 – If the current service configuration includes a service option connection, the
9 mobile station shall interpret the message action time of the *Service Option*
10 *Control Order* in accordance with the requirements for the service option
11 associated with the service option connection and the mobile station shall
12 process the *Service Option Control Order* in accordance with those requirements;
 - 13 – otherwise, the mobile station shall send a *Mobile Station Reject Order* (ORDQ =
14 '00000001') within T_{56m} seconds.
- 15 • If the mobile station receives one of the following service negotiation messages,
16 the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010')
17 within T_{56m} seconds:
 - 18 1. *Service Connect Message*
 - 19 2. *Service Option Control Message*
 - 20 3. *Service Request Message*
 - 21 4. *Service Response Message*

22 2.6.4.1.3 Ordering of Messages

23 The Layer 2 protocol does not guarantee delivery of messages in any order. If the mobile
24 station requires that the base station receive a set of messages in a certain order, the
25 mobile station shall send each message in assured mode requiring confirmation of
26 delivery and shall wait for the confirmation of delivery of each message before transmitting
27 the next message in the set.

28 2.6.4.1.4 Processing the In-Traffic System Parameters Message

29 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to the
30 specified value if the following conditions is true, and shall not perform any other action
31 described in this section for processing the *In-Traffic System Parameters Message*:

- 32 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to
33 '00000110' (capability not supported), if P_REV has been changed from 6 or lower to 7
34 or higher, or visa versa.

35 If the above condition is not true, the mobile station shall store the following parameters
36 from the *In-Traffic System Parameters Message*:

- 37 • System identification ($SID_S = SID_T$)

- 1 • Network identification ($NID_S = NID_T$)
- 2 • Search window size for the Active Set and the Candidate Set
- 3 ($SRCH_WIN_A_S = SRCH_WIN_A_T$)
- 4 • Search window size for the Neighbor Set ($SRCH_WIN_N_S = SRCH_WIN_N_T$)
- 5 • Search window size for the Remaining Set ($SRCH_WIN_R_S = SRCH_WIN_R_T$)
- 6 • Pilot detection threshold ($T_ADD_S = T_ADD_T$)
- 7 • Pilot drop threshold ($T_DROP_S = T_DROP_T$)
- 8 • Active Set versus Candidate Set comparison threshold ($T_COMP_S = T_COMP_T$)
- 9 • Drop timer value ($T_TDROP_S = T_TDROP_T$)
- 10 • Maximum age for retention of Neighbor Set members
- 11 ($NGHBR_MAX_AGE_S = NGHBR_MAX_AGE_T$)
- 12 • Protocol revision level ($P_REV_S = P_REV_T$), and protocol revision level currently in
- 13 use ($P_REV_IN_USE_S = \min(P_REV_S, MOB_P_REV_P \text{ of the current band class })$)
- 14 • Slope of the handoff add/drop criterion ($SOFT_SLOPE_S = SOFT_SLOPE_T$)
- 15 • Intercept of the handoff add criterion ($ADD_INTERCEPT_S = ADD_INTERCEPT_T$)
- 16 • Intercept of the handoff drop criterion ($DROP_INTERCEPT_S = DROP_INTERCEPT_T$)
- 17 • If included, Reverse Supplemental Code Channel or Reverse Supplemental Channel
- 18 transmission offset threshold ($T_MULCHAN_S = T_MULCHAN_T$)
- 19 • If included, Reverse Supplemental Code Channel beginning of transmission
- 20 preamble length ($BEGIN_PREAMBLE_S = BEGIN_PREAMBLE_T$)
- 21 • If included, Reverse Supplemental Code Channel discontinuous transmission
- 22 resumption preamble length ($RESUME_PREAMBLE_S = RESUME_PREAMBLE_T$)
- 23 • If included, Slotted Timer ($T_SLOTTED_S = T_SLOTTED_T$)
- 24 • If the mobile station supports packet data service options, the mobile station shall
- 25 store the packet data services zone identifier ($PACKET_ZONE_ID_S =$
- 26 $PACKET_ZONE_ID_T$).

27 The mobile station shall determine its roaming status (see 2.6.5.3). The mobile station
 28 should indicate to the user whether the mobile station is roaming.

29 2.6.4.1.5 Message Action Times

30 A Forward Traffic Channel message without a USE_TIME field or with a USE_TIME field set
 31 to '0' has an implicit action time. A message that has its USE_TIME field set to '1' has an
 32 explicit action time that is specified in the ACTION_TIME field of the message.

33 A message with an explicit action time is called a pending message.

Unless otherwise specified, a message having an implicit action time shall take effect no later than the first 80 ms boundary (relative to System Time) occurring at least 80 ms after the end of the frame containing the last bit of the message. A message with an explicit action time, except for a *Power Up Function Message*, shall take effect when System Time (in 80 ms units) modulo 64 becomes equal to the message's ACTION_TIME field. A *Power Up Function Message* shall take effect ACTION_TIME_FRAME frames after the time when System Time (in 80 ms units) modulo 64 becomes equal to the message's ACTION_TIME field. The difference in time between ACTION_TIME and the end of the frame containing the last bit of the message shall be at least 80 ms.

The mobile station shall support two pending messages at any given time, not including pending *Service Option Control Orders* or *Service Option Control Messages*. The number of pending *Service Option Control Orders* or *Service Option Control Messages* that the mobile station is required to support is specific to the service option (see the relevant service option description). In addition, the mobile station shall support one pending *Power Up Function Message*.

2.6.4.1.6 Long Code Transition Request Processing

The mobile station performs these procedures upon receiving a *Long Code Transition Request Order*.

If the *Long Code Transition Request Order* requests a transition to the private long code, and the mobile station is able to generate the private long code (see 2.3.12.3), and the mobile station accepts the request, the mobile station shall send a *Long Code Transition Response Order* (ORDQ = '00000011') within T_{56m} seconds. The mobile station shall use the private long code on both the Forward Traffic Channel and the Reverse Traffic Channel. The mobile station shall begin using the private long code at the explicit action time (see 2.6.4.1.5) specified in the message. At the action time of the message, the mobile station should indicate to the user that the voice privacy mode is active. If the *Long Code Transition Request Order* requests a private long code transition, and the mobile station is not able to generate the private long code or the mobile station does not accept the request, the mobile station shall send a *Long Code Transition Response Order* (ORDQ = '00000010') within T_{56m} seconds.

If the *Long Code Transition Request Order* requests a transition to the public long code and the mobile station accepts the request, the mobile station shall send a *Long Code Transition Response Order* (ORDQ = '00000010') within T_{56m} seconds. The mobile station shall use the public long code on both the Forward Traffic Channel and the Reverse Traffic Channel. The mobile station shall begin using the public long code at the explicit action time (see 2.6.4.1.5) specified in the message. At the action time of the message, the mobile station should indicate to the user that the voice privacy mode is inactive. If the *Long Code Transition Request Order* requests a public long code transition, and the mobile station does not accept the request, the mobile station shall send a *Long Code Transition Response Order* (ORDQ = '00000011') within T_{56m} seconds.

2.6.4.1.7 Power Up Function (PUF)

Figure 2.6.4.1.7-1 illustrates the general structure of a PUF attempt. A PUF pulse is the interval during which the mobile station transmits at the specified power level while executing the Power Up Function.

A PUF probe is one or more consecutive Traffic Channel frames. A PUF probe consists of three parts: PUF setup, PUF pulse, and PUF recovery. PUF_SETUP_SIZE is the duration of the PUF setup part, in power control groups. PUF_PULSE_SIZE is the duration of the PUF pulse, in power control groups. The PUF recovery period occupies the remainder of the last frame of the PUF probe.

A PUF attempt is a sequence of PUF probes sent by the mobile station in response to a *Power Up Function Message*. A PUF attempt begins at an offset frame boundary within 80 ms of the ACTION_TIME specified in the *Power Up Function Message*. A PUF attempt can be terminated in one of four ways:

- The mobile station receives a *Power Up Function Completion Message*.
- The mobile station has transmitted the maximum number of PUF probes specified in the *Power Up Function Message*.
- The mobile station has transmitted the maximum number of probes allowed at its maximum output power.
- The mobile station receives a new *Power Up Function Message*.

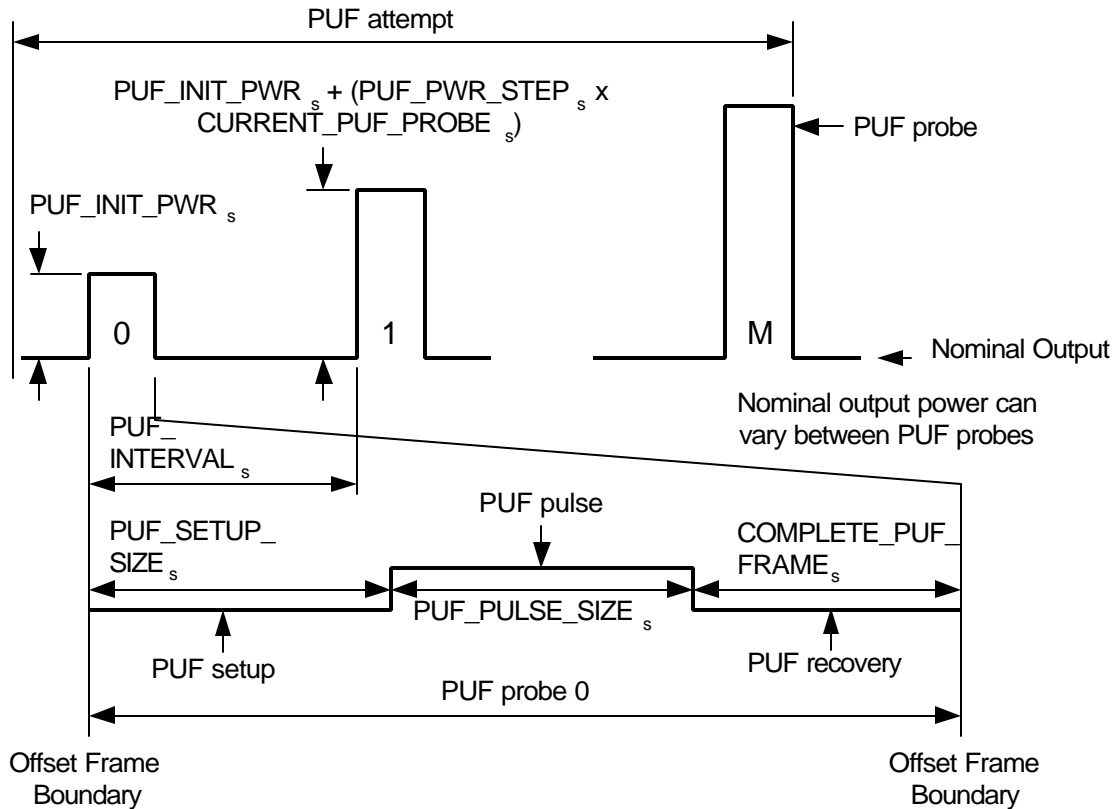


Figure 2.6.4.1.7-1. Structure of PUF Attempt

2.6.4.1.7.1 Processing the Power Up Function Message

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (message requires a capability that is not supported by the mobile station) if any of the following conditions are detected:

- $PUF_FREQ_INCL_r$ is set to '1' and $PUF_BAND_CLASS_r$ is not supported by the mobile station.
- $PUF_FREQ_INCL_r$ is set to '1' and the mobile station is unable to re-tune to the PUF Target Frequency during $(PUF_SETUP_SIZE_r + 1)$ power control groups.
- $MOB_P_REV_p$ is not equal to five and the mobile station does not support the Power Up Function.

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001100' (invalid Frequency Assignment), if the Frequency Assignment specified in the message is the same as the Serving Frequency ($PUF_FREQ_INCL_r$ is equal to '1', $PUF_BAND_CLASS_r$ is equal to $CDMABAND_s$ and $PUF_CDMA_FREQ_r$ is equal to $CDMACH_s$).

If the mobile station is processing a PUF probe, the mobile station shall wait for the PUF probe to complete. It shall then terminate the current PUF attempt. The mobile station shall store the following parameters:

- Maximum number of PUF probes transmitted at full power level ($\text{MAX_PWR_PUF}_S = \text{MAX_PWR_PUF}_T + 1$)
- Total number of PUF probes ($\text{TOTAL_PUF_PROBES}_S = \text{TOTAL_PUF_PROBES}_T + 1$)
- PUF interval ($\text{PUF_INTERVAL}_S = \text{PUF_INTERVAL}_T$)
- Number of PUF setup power control groups ($\text{PUF_SETUP_SIZE}_S = \text{PUF_SETUP_SIZE}_T + 1$)
- Number of PUF pulse power control groups ($\text{PUF_PULSE_SIZE}_S = \text{PUF_PULSE_SIZE}_T + 1$)
- Power increase of initial PUF pulse ($\text{PUF_INIT_PWR}_S = \text{PUF_INIT_PWR}_T$)
- Power increase for each successive PUF pulse ($\text{PUF_PWR_STEP}_S = \text{PUF_PWR_STEP}_T$)?
- Frequency included indicator ($\text{PUF_FREQ_INCL}_S = \text{PUF_FREQ_INCL}_T$)

If PUF_FREQ_INCL_S equals '1', the mobile station shall store the following:

- PUF probe Target Frequency CDMA Channel number ($\text{PUF_TF_CDMACH}_S = \text{PUF_CDMA_FREQ}_T$)
- PUF probe Target Frequency CDMA band class ($\text{PUF_TF_CDMABAND}_S = \text{PUF_BAND_CLASS}_T$)

The mobile station shall set $\text{CURRENT_PUF_PROBE}_S$ equal to 0.

The mobile station shall then begin the PUF attempt at the time specified in 2.6.4.1.7.2.

2.6.4.1.7.2 Power Up Function Procedures

The mobile station shall process the initial PUF probe beginning at the start of the frame which starts $\text{ACTION_TIME_FRAME}_T \times 20 \text{ ms} + \text{FRAME_OFFSET}_S \times 1.25 \text{ ms}$ after the System Time specified by ACTION_TIME_T . The mobile station shall process additional PUF probes beginning at intervals of PUF_INTERVAL_S frames from the beginning of the initial PUF probe.

The mobile station shall transmit the PUF probes as described in 2.6.4.1.7.2.1 and 2.6.4.1.7.2.2.

2.6.4.1.7.2.1 PUF Probe On Serving Frequency

The mobile station shall process each PUF probe as follows:

- 1 • The mobile station shall use closed loop power control procedures as specified in
2 2.1.2.3.2 of [2].
- 3 • The mobile station shall use the gated output procedures specified in 2.1.2.2.4
4 and 2.1.3.1.10.3 of [2].
- 5 • The mobile station shall control its mean output power as specified in 2.1.2.3.1 of
6 [2].
- 7 • The mobile station shall monitor its output power during the PUF pulse, and should
8 monitor its output power at least once during each power control group of the PUF
9 pulse. If the mobile station detects that the transmit power level specified in of [2]
10 is equal to or greater than the maximum power output of the mobile station at any
11 time during a PUF pulse, the mobile station shall decrement MAX_PWR_PUF_S by
12 one for that PUF pulse.
- 13 • The mobile station shall transmit the traffic channel preamble for the duration of
14 the PUF probe on the Reverse Fundamental Code Channel.

15 After the processing of each PUF probe, the mobile station shall increment
16 CURRENT_PUF_PROBE_S by 1. If MAX_PWR_PUF_S is equal to 0, the mobile station shall
17 terminate the PUF attempt. If CURRENT_PUF_PROBE_S equal to TOTAL_PUF_PROBE_S, the
18 mobile station shall terminate the PUF attempt.

19 2.6.4.1.7.2.2 PUF Probe On PUF Target Frequency

20 The mobile station shall process each PUF probe as follows:

- 21 • The mobile station shall use closed loop power control procedures as specified in
22 2.1.2.3.2 of [2].
- 23 • The mobile station shall use the gated output procedures specified in 2.1.3.1.10.3 of
24 [2].
- 25 • The mobile station shall control its mean output power as specified in 2.1.2.3.1 of
26 [2].
- 27 • The mobile station shall store the following Serving Frequency parameters from its
28 current configuration:
 - 29 – CDMA Band Class (PUF_SF_CDMABAND_S = CDMABAND_S)
 - 30 – Frequency assignment (PUF_SF_CDMACH_S = CDMACH_S)
- 31 • The mobile station shall monitor its output power during the PUF pulse, and should
32 monitor its output power at least once during each power control group of PUF pulse.
33 If the mobile station detects that the transmit power level specified in 2.1.2.3.1 of
34 [2] is equal to or greater than the maximum power output of the mobile station at
35 any time during a PUF pulse, the mobile station shall decrement the
36 MAX_PWR_PUF_S by one for that PUF pulse.

- 1 • At the beginning of the PUF probe, the mobile station shall disable its transmitter,
2 stop processing the Forward Supplemental Code Channel (if any), or the Forward
3 Supplemental Channel (if any), disable all corrections to the mobile station time
4 reference (see 2.1.5 of [2]), tune to the CDMA channel specified by
5 PUF_TF_CDMACH_S, and PUF_TF_CDMABAND_S and re-enable its transmitter.
- 6 • The mobile station shall transmit the traffic channel preamble on the Reverse
7 Fundamental Code Channel during the PUF pulse at PUF_TX_PWR_S.
- 8 • The mobile station should disable its transmitter immediately after the end of the
9 PUF pulse, and shall disable its transmitter before the end of the first power control
10 group after the PUF pulse. It shall then tune to its assigned CDMA channel as
11 given by CDMACH_S and CDMABAND_S.
- 12 • If the interval between the time that the mobile station tunes to the PUF Target
13 Frequency and the time that it re-tunes to the Serving Frequency is equal to or
14 greater than $(N_{2m} \times 0.02)$ seconds, the mobile station shall wait to receive a period
15 of $(N_{3m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical
16 channel corresponding to FPC_PRI_CHAN_S.
- 17 • The mobile station shall then re-enable its transmitter and re-enable any
18 adjustments to the mobile station time reference.
- 19 • If the Forward Supplemental Code Channel assignment has not expired while the
20 mobile station has tuned to the PUF Target Frequency, then the mobile station
21 shall resume processing the Forward Supplemental Code Channels after re-tuning
22 to the Serving Frequency.
- 23 • If the Forward Supplemental Channel assignment has not expired while the mobile
24 station has tuned to the PUF Target Frequency, then the mobile station shall
25 resume processing the Forward Supplemental Channels after re-tuning to the
26 Serving Frequency.
- 27 • If the Reverse Supplemental Code Channel assignment has not expired while the
28 mobile station has tuned to the PUF Target Frequency, then the mobile station may
29 resume transmitting the Reverse Supplemental Code Channels after re-tuning to
30 the Serving Frequency.
- 31 • If the Reverse Supplemental Channel assignment has not expired while the mobile
32 station has tuned to the PUF Target Frequency, then the mobile station may
33 resume transmitting the Reverse Supplemental Code Channels after re-tuning to
34 the Serving Frequency.

35 After the processing of each PUF probe, the mobile station shall increment
36 CURRENT_PUF_PROBE_S by one. If MAX_PWR_PUF_S is equal to 0, the mobile station shall
37 terminate the PUF attempt. If CURRENT_PUF_PROBE_S is equal to TOTAL_PUF_PROBE_S,
38 the mobile station shall terminate the PUF attempt.

2.6.4.1.7.3 Processing the Power Up Function Completion Message

The mobile station shall terminate any PUF attempt no later than the completion of the current probe in progress and shall discard any pending *Power Up Function Message*. If LOC_IND_r is equal to '1', the mobile station may store the following parameters:

- Mobile Station Latitude ($MS_LAT_s = MS_LAT_r$)
- Mobile Station Longitude ($MS_LONG_s = MS_LONG_r$)
- Time stamp ($MS_LOC_TSTAMP_s = MS_LOC_TSTAMP_r$)

2.6.4.1.8 Forward Traffic Channel Supervision

When in the *Mobile Station Control on the Traffic Channel State*, the mobile station shall continuously monitor the Forward Channel, except:

- During a PUF probe in which it transmits on a PUF target frequency (see 2.6.4.1.7),
- During a search of pilots on a CDMA Candidate Frequency (see 2.6.6.2.8.3),
- During a search of analog frequencies (see 2.6.6.2.10).

The mobile station shall monitor the physical channel corresponding to $FPC_PRI_CHAN_s$.

If the mobile station receives a period of $(N_{2m} \times 20)$ ms with insufficient signal quality (e.g. bad frames) on the physical channel corresponding to $FPC_PRI_CHAN_s$, it shall disable its transmitter. Thereafter, if the mobile station receives a period of $(N_{3m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_s$, then the mobile station should re-enable its transmitter.

The mobile station shall establish a Forward Traffic Channel fade timer. The timer shall be enabled when the mobile station first enables its transmitter when in the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*. The fade timer shall be reset for T_{5m} seconds whenever the mobile station receives a period of $(N_{3m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_s$. The mobile station shall disable the fade timer when it tunes to a PUF target frequency, and shall re-enable the fade timer at the end of the PUF probe. If the timer expires, the mobile station shall disable its transmitter and declare a loss of the Forward Traffic Channel.

The mobile station also enables, disables, and resets the fade timer when it performs a hard handoff or a periodic search, as described in 2.6.6.2.8 and 2.6.6.2.10.

2.6.4.1.9 Processing the Extended Release Message and the Extended Release Mini Message

- Upon receiving the the *Extended Release Message* or the *Extended Release Mini Message*, the mobile station shall process the message as follows:

- If the physical channels indicated in CH_IND_r includes all the physical channels

currently being processed by the mobile station, the layer 3 shall send a “release indication” to all Call Control instances and shall perform the following:

- + Enter the *Release Substate* with a base station extended release indication if the message is the *Extended Release Message*.
 - + Enter the *Release Substate* with a base station extended release mini message indication if the message is the *Extended Release Mini Message*.
- Otherwise (if the physical channels indicated in CH_IND_r is a subset of the physical channels currently being processed by the mobile station), the mobile station shall perform the following:
 - + If the received message is the *Extended Release Message*, the mobile station shall send an *Extended Release Response Message* to the base station. If the received message is the *Extended Release Mini Message*, the mobile station shall send an *Extended Release Response Mini Message* to the base station.
 - The mobile station update CH_IND_s as follows: If the least significant bit of CH_IND_r equals ‘1’, the mobile station shall set CH_IND_s = ‘10’; otherwise (if the least significant bit of CH_IND_r equals ‘0’), the mobile station shall set CH_IND_s = ‘01’.
 - + If CH_IND_r is equal to ‘001’ or ‘101’, the mobile station shall set FPC_PRI_CHAN_s to ‘1’ at the action time of the message.
 - + If CH_IND_r is equal to ‘010’, the mobile station shall set FPC_PRI_CHAN_s to ‘0’ at the action time of the message.
 - + If the least significant bit of CH_IND_r equals ‘1’, then the mobile station shall stop transmitting on R-FCH and stop processing F-FCH at the action time specified by the message.
 - + If the second significant bit of CH_IND_r equals ‘1’, then the mobile station shall stop transmitting on R-DCCH and stop processing F-DCCH at the action time specified by the message.
 - + If GATING_RATE_INCL_r equals ‘1’, the mobile station shall set PILOT_GATING_RATE_s = PILOT_GATING_RATE_r at the action time of the message.
 - + If the most significant bit of CH_IND_r equals ‘1’, the mobile station shall set PILOT_GATING_USE_RATE to ‘1’. The mobile station shall start the reverse pilot gating at PILOT_GATING_RATE_s at the action time of the message.

2.6.4.1.10 Processing the Resource Allocation Message and Resource Allocation Mini Message

The mobile station shall process the *Resource Allocation Message* and the *Resource Allocation Mini Message* as follows:

- The mobile station shall set $FPC_PRI_CHAN_S = FPC_PRI_CHAN_R$ at the action time of the message.
- If the least significant bit of CH_IND_R equals '1', the mobile station shall start processing F-FCH and start transmitting on R-FCH at the action time of the message.
- If the most significant bit of CH_IND_R equals '1', the mobile station shall set $PILOT_GATING_USE_RATE$ to '0' at the action time of the message. The mobile station shall start the continuous reverse pilot at the action time of the message.

2.6.4.1.11 Reserved

2.6.4.1.12 Processing the Service Configuration Record

The mobile station shall update the Service Configuration information record currently in use as follows:

- The mobile station shall store the forward Fundamental Channel and Dedicated Control Channel multiplex option [$FOR_MUX_OPTION_S = FOR_MUX_OPTION_R$].
- The mobile station shall store the reverse Fundamental Channel and Dedicated Control Channel multiplex option [$REV_MUX_OPTION_S = REV_MUX_OPTION_R$].
- The mobile station shall store the set of number of bits per frame of the forward Fundamental traffic channel [$FOR_NUM_BITS_S = FOR_NUM_BITS_R$].
- The mobile station shall store the set of number of bits per frame of the reverse Fundamental traffic channel [$REV_NUM_BITS_S = REV_NUM_BITS_R$].
- If a service option connection has been omitted from the service option connection records, the layer 3 shall terminate the call control instance identified by the connection reference corresponding to the omitted service option connection.
- If this is the first Service Configuration Record received from the base station since entering the *Traffic Channel substate*, the mobile station shall also identify the Call Control instance currently identified by NULL by the connection reference assigned to the first service option connection, CON_REF_R .
- The mobile station shall delete all instances of current service option connection records. For each of the $NUM_CON_REC_R$ occurrences of the service option connection record ($SO_CON_REC[i]$), the mobile station shall perform the following:

- 1 – The mobile station shall store the service option connection reference
2 (SO_CON_REC_S[i].CON_REF = CON_REF_P).
- 3 – The mobile station shall store the service option
4 (SO_CON_REC_S[i].SERVICE_OPTION = SERVICE_OPTION_P).
- 5 – The mobile station shall store the forward traffic channel traffic type
6 (SO_CON_REC_S[i].FOR_TRAFFIC = FOR_TRAFFIC_P).
- 7 – The mobile station shall store the reverse traffic channel traffic type
8 (SO_CON_REC_S[i].REV_TRAFFIC = REV_TRAFFIC_P).
- 9 – The mobile station shall store the encryption mode indicator for user
10 information privacy (SO_CON_REC_S[i].UI_ENCRYPT_MODE =
11 UI_ENCRYPT_MODE_P).
- 12 – The mobile station shall store the service reference identifier
13 (SO_CON_REC_S[i].SR_ID = SR_ID_P).
- 14 – If RLP_INFO_INCL_P equals '1', the mobile station shall store the Radio Link
15 Protocol block of bits (SO_CON_REC_S[i].RLP_BLOB = RLP_BLOB_P).
- 16 – If QOS_PARMS_INCL_P equals '1', the mobile station shall store the QoS
17 parameters block (SO_CON_REC_S[i].QOS_PARMS = QOS_PARMS_P).
- 18 • If FCH_CC_INCL_P equals '1', the mobile station shall do the following:
 - 19 – The mobile station shall store the indicator for 5ms frames on Fundamental
20 Channel as follows: if FCH_FRAME_SIZE_P equals '1', the mobile station shall set
21 FCH_5MS_FRAMES_S = '1'; otherwise, it is set to '0'.
 - 22 – The mobile station shall store the Forward Fundamental Channel Radio
23 Configuration (FOR_FCH_RC_S = FOR_FCH_RC_P).
 - 24 – The mobile station shall store the Reverse Fundamental Channel Radio
25 Configuration (REV_FCH_RC_S = REV_FCH_RC_P).
- 26 • If DCCH_CC_INCL_P equals '1', the mobile station shall do the following:
 - 27 – The mobile station shall store the indicator for 5ms frames on Dedicated
28 Control Channel as follows: If DCCH_FRAME_SIZE_P equals '10' or '11', the mobile
29 station shall set DCCH_5MS_FRAMES_S = '1'; otherwise, it is set to '0'.
 - 30 – The mobile station shall store the Forward Dedicated Control Channel Radio
31 Configuration (FOR_DCCH_RC_S = FOR_DCCH_RC_P).

- 1 - The mobile station shall store the Reverse Dedicated Control Channel Radio
2 Configuration (REV_DCCH_RC_S = REV_DCCH_RC_T).
- 3 • If FOR_SCH_CC_INCL_T equals '1', the mobile station shall store the NUM_FOR_SCH_T
4 occurrences of the Forward Supplemental Channel channel configuration records
5 as follows:
 - 6 - The mobile station shall store the Forward Supplemental Channel Identification
7 (FOR_SCH_ID[FOR_SCH_ID_T]_S = FOR_SCH_ID_T).
 - 8 - The mobile station shall store the Forward Supplemental Channel Multiplex
9 Option (FOR_SCH_MUX[FOR_SCH_ID_T]_S = FOR_SCH_MUX_T).
 - 10 - The mobile station shall store the Forward Supplemental Channel Radio
11 Configuration (FOR_SCH_RC[FOR_SCH_ID_T]_S = SCH_RC_T).
 - 12 - The mobile station shall store the Forward Supplemental Channel Coding Type
13 (FOR_SCH_CODING[FOR_SCH_ID_T]_S = CODING_T).
 - 14 - If FRAME_40_USED_T and FRAME_80_USED_T are both equal to '0', the mobile
15 station shall set FOR_SCH_FRAME_LENGTH_S[FOR_SCH_ID_T] to '00' (i.e., 20 ms
16 frame length).
 - 17 - If FRAME_40_USED_T is equal to '1', the mobile station shall set
18 FOR_SCH_FRAME_LENGTH_S[FOR_SCH_ID_T] to '01' (i.e., 40 ms frame length).
 - 19 - If FRAME_80_USED_T is equal to '1', the mobile station shall set
20 FOR_SCH_FRAME_LENGTH_S[FOR_SCH_ID_T] to '10' (i.e., 80 ms frame length).
 - 21 - F_MAX_RATE_IDX_S[FOR_SCH_ID_T] = MAX_RATE_T.
- 22 • If REV_SCH_CC_INCL_T equals '1', the mobile station shall store the NUM_REV_SCH_T
23 occurrences of the Reverse Supplemental Channel channel configuration records
24 as follows:
 - 25 - The mobile station shall store the Reverse Supplemental Channel
26 Identification (REV_SCH_ID[REV_SCH_ID_T]_S = REV_SCH_ID_T).
 - 27 - The mobile station shall store the Reverse Supplemental Channel Multiplex
28 Option (REV_SCH_MUX[REV_SCH_ID_T]_S = REV_SCH_MUX_T).
 - 29 - The mobile station shall store the Reverse Supplemental Channel Radio
30 Configuration (REV_SCH_RC[REV_SCH_ID_T]_S = SCH_RC_T).
 - 31 - The mobile station shall store the Reverse Supplemental Channel Coding Type
32 (REV_SCH_CODING[REV_SCH_ID_T]_S = CODING_T).
 - 33 - If FRAME_40_USED_T and FRAME_80_USED_T are both equal to '0', the mobile
34 station shall set REV_SCH_FRAME_LENGTH_S[REV_SCH_ID_T] to '00' (i.e., 20 ms
35 frame length).

- 1 - If FRAME_40_USED_r is equal to '1', the mobile station shall set
- 2 REV_SCH_FRAME_LENGTH_s[REV_SCH_ID_r] to '01' (i.e., 40 ms frame length).
- 3 - If FRAME_80_USED_r is equal to '1', the mobile station shall set
- 4 REV_SCH_FRAME_LENGTH_s[REV_SCH_ID_r] to '10' (i.e., 80 ms frame length).
- 5 - R_MAX_RATE_IDX_s[REV_SCH_ID_r] = MAX_RATE_r.

6 2.6.4.1.13 Processing the Non-Negotiable Service Configuration Record

7 The mobile station shall update the Non-Negotiable Service Configuration information
8 record currently in use as follows:

- 9 • If FPC_INCL_r equals '1', the mobile station shall do the following:
 - 10 - The mobile station shall store the Power Control Subchannel indicator
11 (FPC_PRI_CHAN_s = FPC_PRI_CHAN_r).
 - 12 - The mobile station shall store the forward power control operation mode
13 (FPC_MODE_NO_SCH_s = FPC_MODE_r).
 - 14 - The mobile station shall set FPC_MODE_s = FPC_MODE_NO_SCH_s if there is no
15 forward Supplemental Channel assignment in progress (see 2.6.6.2.5.1.1).
 - 16 - If FPC_OLPC_FCH_INCL_r equals '1', the mobile station shall do the following:
 - 17 + The mobile station shall store the Fundamental Channel target Frame Error
18 Rate (FPC_FCH_FER_s = FPC_FCH_FER_r).
 - 19 + The mobile station shall store the minimum Fundamental Channel Outer
20 Loop E_b/N_t setpoint (FPC_FCH_MIN_SETPT_s = FPC_FCH_MIN_SETPT_r).
 - 21 + The mobile station shall store the maximum Fundamental Channel Outer
22 Loop E_b/N_t setpoint (FPC_FCH_MAX_SETPT_s = FPC_FCH_MAX_SETPT_r).
 - 23 - If FPC_OLPC_DCCH_INCL_r equals '1', the mobile station shall do the following:
 - 24 + The mobile station shall store the Dedicated Control Channel target Frame
25 Error Rate (FPC_DCCH_FER_s = FPC_DCCH_FER_r).
 - 26 + The mobile station shall store the minimum Dedicated Control Channel
27 Outer Loop E_b/N_t setpoint (FPC_DCCH_MIN_SETPT_s =
28 FPC_DCCH_MIN_SETPT_r).
 - 29 + The mobile station shall store the maximum Dedicated Control Channel
30 Outer Loop E_b/N_t setpoint (FPC_DCCH_MAX_SETPT_s =
31 FPC_DCCH_MAX_SETPT_r).
- 32 • If GATING_RATE_INCL_r equals '1', the mobile station shall store the Reverse Pilot
33 Channel gating rate (PILOT_GATING_RATE_s = PILOT_GATING_RATE_r).

- 1 • If FOR_SCH_INCL_r equals '1', the mobile station shall store the NUM_FOR_SCH_r
2 occurrences of the Forward Supplemental Channel information as follows:
 - 3 - The mobile station shall store the Forward Supplemental Channel Multiframe
4 Offset (FOR_MULTI_FRAME_OFFSET[FOR_SCH_ID_r]_s =
5 FOR_MULTI_FRAME_OFFSET_r).
- 6 • If REV_SCH_CC_INCL_r equals '1', the mobile station shall store the NUM_REV_SCH_r
7 occurrences of the Reverse Supplemental Channel information as follows:
 - 8 - The mobile station shall store the Reverse Supplemental Channel Multiframe
9 Offset (REV_MULTI_FRAME_OFFSET[REV_SCH_ID_r]_s =
10 REV_MULTI_FRAME_OFFSET_r).
- 11 • The mobile station shall determine the Logical-to-Physical Mapping to be used as
12 follows:
 - 13 - If LPM_IND_r equals '00', the mobile station shall reset the Logical-to-Physical
14 Mapping to their default values as follows:
 - 15 + Default number of Logical-to-Physical Mapping entries
16 (NUM_LPM_ENTRIES_s = '0100').
 - 17 + Default Table(0) Logical-to-Physical Mapping service reference identifier
18 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].SR_ID_s = '000').
 - 19 + Default Table(0) Logical-to-Physical Mapping logical resource identifier
20 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].LOGICAL_RESOURCE_s =
21 '0001').
 - 22 + Default Table(0) Logical-to-Physical Mapping physical resource identifier:
 - 23 o If CH_IND_s is equal to '01' or '11', the mobile station shall set
24 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PHYSICAL_RESOURCE_s to
25 '0000'.
 - 26 o If CH_IND_s is equal to '10', the mobile station shall set
27 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PHYSICAL_RESOURCE_s to
28 '0001'.
 - 29 + Default Table(0) Logical-to-Physical Mapping forward mapping indicator
30 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].FORWARD_FLAG_s = '1').
 - 31 + Default Table(0) Logical-to-Physical Mapping reverse mapping indicator
32 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].REVERSE_FLAG_s = '1').
 - 33 + Default Table(0) Logical-to-Physical Mapping priority
34 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PRIORITY_s = '0000').
 - 35 + Default Table(1) Logical-to-Physical Mapping service reference identifier
36 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].SR_ID_s = '001').

- 1 + Default Table(1) Logical-to-Physical Mapping logical resource identifier
2 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].LOGICAL_RESOURCE_S =
3 '0000').
- 4 + Default Table(1) Logical-to-Physical Mapping physical resource identifier:
 - 5 o If CH_IND_S is equal to '01' or '11', the mobile station shall set
6 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE_S to
7 '0000'.
 - 8 o If CH_IND_S is equal to '10', the mobile station shall set
9 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE_S to
10 '0001'.
- 11 + Default Table(1) Logical-to-Physical Mapping forward mapping indicator
12 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].FORWARD_FLAG_S = '1').
- 13 + Default Table(1) Logical-to-Physical Mapping reverse mapping indicator
14 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].REVERSE_FLAG_S = '1').
- 15 + Default Table(1) Logical-to-Physical Mapping priority
16 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PRIORITY_S = '0000').
- 17 + Default Table(2) Logical-to-Physical Mapping service reference identifier
18 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].SR_ID_S = '001').
- 19 + Default Table(2) Logical-to-Physical Mapping logical resource identifier
20 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].LOGICAL_RESOURCE_S =
21 '0000').
- 22 + Default Table(2) Logical-to-Physical Mapping physical resource identifier
23 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE_S to
24 '0010').
- 25 + Default Table(2) Logical-to-Physical Mapping forward mapping indicator
26 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].FORWARD_FLAG_S = '1').
- 27 + Default Table(2) Logical-to-Physical Mapping reverse mapping indicator
28 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].REVERSE_FLAG_S = '1').
- 29 + Default Table(2) Logical-to-Physical Mapping priority
30 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PRIORITY_S = '0000').
- 31 + Default Table(3) Logical-to-Physical Mapping service reference identifier
32 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].SR_ID_S = '001').
- 33 + Default Table(3) Logical-to-Physical Mapping logical resource identifier
34 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].LOGICAL_RESOURCE_S =
35 '0000').
- 36 + Default Table(3) Logical-to-Physical Mapping physical resource identifier

- 1 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PHYSICAL_RESOURCE_S to
2 '0011').
- 3 + Default Table(3) Logical-to-Physical Mapping forward mapping indicator
4 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].FORWARD_FLAG_S = '1').
- 5 + Default Table(3) Logical-to-Physical Mapping reverse mapping indicator
6 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].REVERSE_FLAG_S = '1').
- 7 + Default Table(3) Logical-to-Physical Mapping priority
8 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PRIORITY_S = '0000').
- 9 - If LPM_IND_r equals '01', the mobile station shall use the Logical-to-Physical
10 Mapping included in this Non-Negotiable Service Configuration Record. The
11 mobile station shall do the following: The mobile station shall delete the Logical-
12 to-Physical Mapping currently in use. The mobile station shall store the
13 number of Logical-to-Physical Mapping entries (NUM_LPM_ENTRIES_S =
14 NUM_LPM_ENTRIES_r). For each ith record of the NUM_LPM_ENTRIES_r Logical-to-
15 Physical Mapping records included in the received Non-Negotiable Service
16 Configuration Record:
- 17 + The mobile station shall store the Logical-to-Physical Mapping service
18 reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].SR_ID_S =
19 SR_ID_r).
- 20 + The mobile station shall store the Logical-to-Physical Mapping logical
21 resource identifier
22 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].LOGICAL_RESOURCE_S =
23 LOGICAL_RESOURCE_r).
- 24 + The mobile station shall store the Logical-to-Physical Mapping Physical
25 Channel
26 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].PHYSICAL_RESOURCE_S =
27 PHYSICAL_RESOURCE_r).
- 28 + The mobile station shall store the Logical-to-Physical Mapping forward
29 mapping indicator
30 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].FORWARD_FLAG_S =
31 FORWARD_FLAG_r).
- 32 + The mobile station shall store the Logical-to-Physical Mapping reverse
33 mapping indicator
34 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].REVERSE_FLAG_S =
35 REVERSE_FLAG_r).
- 36 + The mobile station shall store the Logical-to-Physical Mapping priority
37 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].PRIORITY_S = PRIORITY_r).

- 1 - If LPM_IND_r equals '10', the mobile station shall use the Logical-to-Physical
- 2 Mapping currently in use.
- 3 • For each of the NUM_REC_r occurrences of the service-specific records included in the
- 4 Non-negotiable Service Configuration Record, the mobile station shall perform the
- 5 following:
- 6 - The mobile station shall store the Short Data Burst service option number
- 7 omitted indicator ($SDB_SO_OMIT_s [SR_ID_r] = SDB_SO_OMIT_r$).
- 8 • The mobile station shall store the following:
- 9 - $USE_FLEX_NUM_BITS_s = USE_FLEX_NUM_BITS_r$
- 10 - $USE_VAR_RATE_s = USE_VAR_RATE_r$
- 11 - If $USE_VAR_RATE_r$ is equal to '1', then the mobile station shall store the
- 12 following:
- 13 + $R_INC_RATE_ALLOWED_s = R_INC_RATE_ALLOWED_r$
- 14 + $F_INC_RATE_ALLOWED_s = F_INC_RATE_ALLOWED_r$
- 15 • If $USE_OLD_FLEX_TABLE_r$ is included and equal to '0', the mobile station shall store
- 16 $NUM_BITS_TABLES_COUNT+1$ instances of the Flexible Rate Table (NUM_RECS
- 17 triplets of (NUM_BITS_IDX , NUM_BITS , CRC_LEN_IDX) corresponding to each
- 18 $NUM_BITS_TABLE_ID$) as follows:
- 19 - For each of the NUM_RECS occurrences of the three field record consisting of
- 20 NUM_BITS_IDX , NUM_BITS , and CRC_LEN_IDX the mobile station shall store
- 21 the following
- 22 + $NUM_BITS_s[NUM_BITS_TABLE_ID_r][NUM_BITS_IDX_r] = NUM_BITS_r$;
- 23 + $CRC_LEN_IDX_s[NUM_BITS_TABLE_ID_r][NUM_BITS_IDX_r] = CRC_LEN_IDX_r$;
- 24 • Otherwise, the mobile station shall use the previously stored values for the
- 25 NUM_BITS_s and $CRC_LEN_IDX_s$.
- 26 • If $USE_OLD_FLEX_MAPPING_r$ is included and equal to '0', the mobile station shall
- 27 store the following:
- 28 - $FFCH_NBIT_TABLE_ID_s = FFCH_NBIT_TABLE_ID_r$.
- 29 - $RFCH_NBIT_TABLE_ID_s = RFCH_NBIT_TABLE_ID_r$.
- 30 - $FSCH_NBIT_TABLE_ID_s[1] = FSCH0_NBIT_TABLE_ID_r$.
- 31 - $FSCH_NBIT_TABLE_ID_s[2] = FSCH1_NBIT_TABLE_ID_r$.
- 32 - $RSCH_NBIT_TABLE_ID_s[1] = RSCH0_NBIT_TABLE_ID_r$.
- 33 - $RSCH_NBIT_TABLE_ID_s[2] = RSCH1_NBIT_TABLE_ID_r$.

- 1 - FDCCH_NBIT_TABLE_ID_S = FDCCH_NBIT_TABLE_ID_R.
- 2 - If FDCCH_NBIT_TABLE_ID_S is not equal to '0000', then the mobile station shall
- 3 store FDCCH_NBITS_IDX_S = FDCCH_NBITS_IDX_R.
- 4 - RDCCH_NBIT_TABLE_ID_S = RDCCH_NBIT_TABLE_ID_R.
- 5 - If RDCCH_NBIT_TABLE_ID_S is not equal to '0000', then the mobile station shall
- 6 store RDCCH_NBITS_IDX_S = RDCCH_NBITS_IDX_R.
- 7 • Otherwise, the mobile station shall use the previously stored values for the above
- 8 six variables.
- 9 • If USE_FLEX_NUM_BITS_R is equal to '0', the mobile station shall store the following:
- 10 - FFCH_NBIT_TABLE_ID_S = '0000'.
- 11 - RFCH_NBIT_TABLE_ID_S = '0000'.
- 12 - FSCH_NBIT_TABLE_ID_S[1] = '0000'.
- 13 - FSCH_NBIT_TABLE_ID_S[2] = '0000'.
- 14 - RSCH_NBIT_TABLE_ID_S[1] = '0000'.
- 15 - RSCH_NBIT_TABLE_ID_S[2] = '0000'.
- 16 - FDCCH_NBIT_TABLE_ID_S = '0000'.
- 17 - FDCCH_NBITS_IDX_S = '0000'.
- 18 - RDCCH_NBIT_TABLE_ID_S = '0000'.
- 19 - FDCCH_NBITS_IDX_S = '0000'.
- 20 • If USE_OLD_VAR_TABLE_R is included and equal to '0', the mobile station shall store
- 21 VAR_RATE_TABLES_COUNT+1 instances of the Variable Rate Mask Table
- 22 (NUM_RECS pairs of (NUM_BITS_IDX, MASK) corresponding to each
- 23 VAR_RATE_TABLE_ID) as follows:
- 24 - For each of the NUM_RECS + 1 occurrences of the two-field record consisting of
- 25 NUM_BITS_IDX and MASK the mobile station shall store the following:
- 26 + MASK_S[VAR_RATE_TABLE_ID_R][NUM_BITS_IDX_R] = MASK_R;
- 27 - If FSCH_VAR_TABLE_ID_S[1] is not equal to '000', then the mobile station shall
- 28 store the following:
- 29 + For row=1, ..., 15
- 30 o For i=1, ..., row,

- 1 If the i^{th} bit position in $\text{MASK}_S[\text{FSCH_VAR_TABLE_ID}_S[1]][\text{row}]$ is equal to
2 '1', then the mobile station shall set
3 $\text{VAR_FSCH_RATE_OFFSET}_S[1][\text{row}][i]$ to i ,
4 otherwise, the mobile shall set $\text{VAR_FSCH_RATE_OFFSET}_S[1][\text{row}][i]$ to
5 '0'.
- 6 - If $\text{FSCH_VAR_TABLE_ID}_S[2]$ is not equal to '000', then the mobile station shall
7 store the following:
8 + For row=1, ..., 15
9 o For i=1, ..., row,
10 If the i^{th} bit position in $\text{MASK}_S[\text{FSCH_VAR_TABLE_ID}_S[2]][\text{row}]$ is equal to
11 '1', then the mobile station shall set
12 $\text{VAR_FSCH_RATE_OFFSET}_S[2][\text{row}][i]$ to i ,
13 otherwise, the mobile shall set $\text{VAR_FSCH_RATE_OFFSET}_S[2][\text{row}][i]$ to
14 '0'.
- 15 - If $\text{RSCH_VAR_TABLE_ID}_S[1]$ is not equal to '000', then the mobile station shall
16 store the following:
17 + For row=1, ..., 15
18 o For i=1, ..., row,
19 If the i^{th} bit position in $\text{MASK}_S[\text{RSCH_VAR_TABLE_ID}_S[1]][\text{row}]$ is equal to
20 '1', then the mobile station shall set
21 $\text{VAR_RSCH_RATE_OFFSET}_S[1][\text{row}][i]$ to i ,
22 otherwise, the mobile shall set $\text{VAR_RSCH_RATE_OFFSET}_S[1][\text{row}][i]$ to
23 '0'.
- 24 - If $\text{RSCH_VAR_TABLE_ID}_S[2]$ is not equal to '000', then the mobile station shall
25 store the following:
26 + For row=1, ..., 15
27 o For i=1, ..., row,
28 If the i^{th} bit position in $\text{MASK}_S[\text{RSCH_VAR_TABLE_ID}_S[2]][\text{row}]$ is equal to
29 '1', then the mobile station shall set
30 $\text{VAR_RSCH_RATE_OFFSET}_S[2][\text{row}][i]$ to i ,
31 otherwise, the mobile shall set $\text{VAR_RSCH_RATE_OFFSET}_S[2][\text{row}][i]$ to
32 '0'.
- 33 • Else (if $\text{USE_OLD_VAR_TABLE}_T$ is included and equal to '1'), use the previously
34 stored values for $\text{VAR_RSCH_RATE_OFFSET}_S$ and $\text{VAR_FSCH_RATE_OFFSET}_S$.

- 1 • If $USE_OLD_VAR_MAPPING_r$ is included and equal to '0', the mobile station shall
- 2 store the following:
- 3 - $FSCH_VAR_TABLE_ID_S[1] = FSCH0_VAR_TABLE_ID_r$.
- 4 - $FSCH_VAR_TABLE_ID_S[2] = FSCH1_VAR_TABLE_ID_r$.
- 5 - $RSCH_VAR_TABLE_ID_S[1] = RSCH0_VAR_TABLE_ID_r$.
- 6 - $RSCH_VAR_TABLE_ID_S[2] = RSCH1_VAR_TABLE_ID_r$.
- 7 • Otherwise, use the previously stored values for the above four variables.
- 8 • If $USE_VAR_RATE_r$ is equal to '0', the mobile station shall store the following:
- 9 - $FSCH_VAR_TABLE_ID_S[1] = '000'$.
- 10 - $FSCH_VAR_TABLE_ID_S[2] = '000'$.
- 11 - $RSCH_VAR_TABLE_ID_S[1] = '000'$.
- 12 - $RSCH_VAR_TABLE_ID_S[2] = '000'$.
- 13 • If $USE_OLD_LTU_TABLE$ is included and equal to '0', then the mobile station shall
- 14 store $NUM_LTU_TABLES + 1$ instances of the LTU Table which determines the size
- 15 of the LTU for convolutionally encoded supplemental channels for each number of
- 16 bits per frame. Each LTU Size Table is identified by its LTU_TABLE_ID .
- 17 - For each of the $NUM_ROWS + 1$ rows of the LTU Size Table, the mobile station
- 18 shall store the following:
- 19 + $LTU_TAB_S[LTU_TABLE_ID_r][NBITS_IDX_r] = LTU_LEN_r$
- 20 • Else (if $USE_OLD_LTU_TABLE$ is included and equal to '1'), the mobile station shall
- 21 use the previously stored values for the LTU_TAB_S .
- 22 • If $USE_OLD_LTU_MAPPING_r$ is included and equal to '0', then the mobile station
- 23 shall store the following:
- 24 - $FSCH_LTU_TAB_ID_S[1] = FSCH0_LTU_TAB_ID_r$
- 25 - $FSCH_LTU_TAB_ID_S[2] = FSCH1_LTU_TAB_ID_r$
- 26 - $RSCH_LTU_TAB_ID_S[1] = RSCH0_LTU_TAB_ID_r$
- 27 - $RSCH_LTU_TAB_ID_S[2] = RSCH1_LTU_TAB_ID_r$
- 28 • Else (if $USE_OLD_LTU_MAPPING_r$ is included and equal to '1'), the mobile station
- 29 shall use the previously stored values for the above four variables.
- 30 • If $LTU_INFO_INC_r$ is equal to '0', then the mobile station shall store the following:
- 31 - $FSCH_LTU_TAB_ID_S[1] = '000'$
- 32 - $FSCH_LTU_TAB_ID_S[2] = '000'$

- 1 - RSCH_LTU_TAB_IDS[1] = '000'
- 2 - RSCH_LTU_TAB_IDS[2] = '000'
- 3 • If USE_OLD_PARTITION_TABLE_r is included and is equal to '0', then the mobile
- 4 station shall store NUM_PARTITION_TABLES + 1 instances of the Partition Table
- 5 which determines the number of bits allocated to each service per FCH or DCCH
- 6 frame as follows. Each Partition Table is identified by its PARTITION_TABLE_ID.
- 7 - For each of the NUM_ROWS+1 rows of the Partition Table, the mobile station
- 8 shall store the following:
- 9 + PART_TAB_s[PARTITION_TABLE_ID_r][CATEGORY_r].MUX_HEADER_LEN =
- 10 MUX_HEADER_LEN_r
- 11 + PART_TAB_s[PARTITION_TABLE_ID_r][CATEGORY_r].MUX_HEADER =
- 12 MUX_HEADER_r
- 13 + PART_TAB_s[PARTITION_TABLE_ID_r][CATEGORY_r]. NUM_PARTITIONS =
- 14 NUM_PARTITIONS_r
- 15 + For i=1, ..., NUM_PARTITIONS+1; the mobile station shall store the
- 16 following:
- 17 o PART_TAB_s[PARTITION_TABLE_ID_r][CATEGORY_r]. PARTITION_SR_ID[i] =
- 18 SR_ID_r
- 19 o PART_TAB_s[PARTITION_TABLE_ID_r][CATEGORY_r]. PARTITION_NBITS[i] =
- 20 SRV_NUM_BITS_r
- 21 • Else (if USE_OLD_PARTITION_TABLE_r is included and is equal to '1'), the mobile
- 22 station shall use the previously stored values for the PART_TAB_s.
- 23 • If USE_OLD_PART_MAPPING_r is included and is equal to '0', then the mobile station
- 24 shall store the following:
- 25 - FFCH_PART_TAB_IDS = FFCH_PART_TAB_ID_r
- 26 - RFCH_PART_TAB_IDS = RFCH_PART_TAB_ID_r
- 27 - FDCCH_PART_TAB_IDS = FDCCH_PART_TAB_ID_r
- 28 - RDCCH_PART_TAB_IDS = RDCCH_PART_TAB_ID_r
- 29 • Else (if USE_OLD_PART_MAPPING_r is included and equal to '1'), the mobile station
- 30 shall use the previously stored values for the above four variables.
- 31 • If USE_FLEX_NUM_BITS_s is equal to '0', then the mobile station shall store the
- 32 following:
- 33 - FFCH_PART_TAB_IDS = '000'

- 1 - RFCH_PART_TAB_ID_S = '000'
- 2 - FDCCH_PART_TAB_ID_S = '000'
- 3 - RDCCH_PART_TAB_ID_S = '000'

4 2.6.4.1.14 Processing the Security Mode Command Message

5 The mobile station shall process the received *Security Mode Command Message* as follows:

- 6 • The mobile station shall set SIG_ENCRYPT_MODE_S to SIG_ENCRYPT_MODE_T.
- 7 • For each of the NUM_RECS_T instances of the two-field record consisting of CON_REF
8 and UI_ENCRYPT_MODE, the mobile station shall set
9 UI_ENCRYPT_MODE_S[CON_REF_T] to UI_ENCRYPT_MODE_T.
- 10 • For each of the service option connections specified by the CON_REF field included
11 in this message, at the action time of the message the mobile station shall start
12 encrypting user information (e.g., voice and data) using the encryption algorithm
13 specified by UI_ENCRYPT_MODE_S[CON_REF_T] (see Table 3.7.4.5-1) with the key-size
14 specified by KEY_SIZE_T (see Table 3.7.4.5-2).
- 15 • If USE_NEW_KEY is set to '1' the mobile station shall use the session key generated
16 at the most recent registration for encryption of signaling and user information.
17 The mobile station shall store the session key in KEY_S[KEY_SEQ_NEW_{S-p}]. The
18 mobile station shall then increment the variable KEY_SEQ_NEW_{S-p} by one (modulo
19 16).
- 20 • If USE_NEW_KEY is set to '0' then the mobile station shall use KEY[KEY_SEQ_T] as the
21 session key.

22 2.6.4.2 Traffic Channel Initialization Substate

23 In this substate, the mobile station verifies that it can receive the Forward Traffic
24 Channel and begins transmitting on the Reverse Traffic Channel.

25 Upon entering the *Traffic Channel Initialization Substate*, the mobile station shall perform
26 the following:

- 27 • The mobile station shall perform registration initialization as specified in
28 2.6.5.5.4.1.
- 29 • Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to reset the
30 acknowledgment procedures as specified in 2.2.1.1 and 2.2.2.1 of [4].
- 31 • The mobile station shall initialize Forward Traffic Channel power control as
32 specified in 2.6.4.1.1.1.
- 33 • The mobile station shall initialize the list TAG_OUTSTANDING_LIST to be empty.
- 34 • The mobile station shall set the following variables to their initial default values
35 given below:

- 1 – Default power control step size
2 (PWR_CNTL_STEP_S = '000')
- 3 – Default channel on which the mobile station is to perform the primary inner
4 loop estimation and the base station is to multiplex the Power Control
5 Subchannel:
6 If CH_IND_S is equal to '01', the mobile station shall set FPC_PRI_CHAN_S to '0'.
7 If CH_IND_S is equal to '10', the mobile station shall set FPC_PRI_CHAN_S to '1'.
- 8 – Default forward power control operation mode used except during the forward
9 Supplemental Channel interval
10 (FPC_MODE_NO_SCH_S = '000')
- 11 – Default forward power control operation mode used during the forward
12 Supplemental Channel interval
13 (FPC_MODE_SCH_S = '000')
- 14 – Default forward power control operation mode
15 (FPC_MODE_S = '000')
- 16 – Slotted timer (T_SLOTTED_S = T_{74m})
- 17 – Default Reverse Pilot Channel gating (PILOT_GATING_USE_RATE = '0')
- 18 – Default begin preamble for Reverse Supplemental Code Channels
19 (BEGIN_PREAMBLE_S = '000')
- 20 – Default resume preamble for Reverse Supplemental Code Channels
21 (RESUME_PREAMBLE_S = '000')
- 22 – Default start time for Reverse Supplemental Code Channel assignment
23 (REV_START_TIME_S = NULL)
- 24 – Default retry delays:
25 RETRY_DELAY_S[010] = 0
26 RETRY_DELAY_S[001] = 0
- 27 – Default pilot strength reporting offset
28 (T_MULCHAN_S = '000')
- 29 – Default start time for forward Supplemental Code Channel Assignment
30 (FOR_START_TIME_S = NULL)
- 31 – Default number of Reverse Supplemental Code Channels
32 (NUM_REV_CODES_S = '000')
- 33 – Default reverse use T_ADD abort indicator
34 (USE_T_ADD_ABORT_S = '0')

- 1 – Default *Supplemental Channel Request Message* sequence number
2 (SCRM_SEQ_NUM_S = NULL)
- 3 – Default indicator to ignore *Supplemental Channel Assignment Message*
4 (IGNORE_SCAM_S = '0')
- 5 – Default indicator to ignore *Extended Supplemental Channel Assignment Message*
6 (IGNORE_ESCAM_S = '0')
- 7 – Default maximum wait time on the CDMA Candidate Frequency
8 (CF_WAIT_TIME_S = '1111')
- 9 – Default search period for the candidate search
10 (SEARCH_PERIOD_S = '1111')
- 11 – Default search window size for the Candidate Frequency Search Set
12 (CF_SRCH_WIN_N_S = SRCH_WIN_N_S)
- 13 – Default search window size for the Remaining Set on the CDMA Candidate
14 Frequency (CF_SRCH_WIN_R_S = SRCH_WIN_R_S)
- 15 – Default pilot PN sequence offset increment for the CDMA Candidate Frequency
16 (CF_PILOT_INC_S = PILOT_INC_S)
- 17 – Default Candidate Frequency search priorities included indicator
18 (CF_SEARCH_PRIORITY_INCL_S = '0')
- 19 – Default Candidate Frequency search window size included indicator
20 (CF_SRCH_WIN_NGHR_INCL_S = '0')
- 21 – Default Candidate Frequency search window offset included indicator
22 (CF_SRCH_OFFSET_INCL_S = '0')
- 23 – Default periodic search indicator
24 (PERIODIC_SEARCH_S = '0')
- 25 – Default return-if-handoff-fail indicator
26 (RETURN_IF_HANDOFF_FAIL_S = '0')
- 27 – Default total pilot E_c/I_o threshold
28 (MIN_TOTAL_PILOT_EC_IO_S = '00000')
- 29 – Default total pilot E_c threshold
30 (SF_TOTAL_EC_THRESH_S = '11111')
- 31 – Default total pilot E_c/I_o threshold
32 (SF_TOTAL_EC_IO_THRESH_S = '11111')
- 33 – Default received power difference threshold
34 (DIFF_RX_PWR_THRESH_S = '00000')
- 35 – Default maximum wait time on the CDMA Target Frequency

- 1 (TF_WAIT_TIME_S = '1111')
- 2 – Default Candidate Frequency Search Set
- 3 (Candidate Frequency Search Set is empty)
- 4 – Default Analog Frequency Search Set
- 5 (Analog Frequency Search Set is empty)
- 6 – Default Candidate Frequency CDMA band
- 7 (CF_CDMABAND_S = NULL)
- 8 – Default Candidate Frequency CDMA channel
- 9 (CF_CDMACH_S = NULL)
- 10 – Default indicator for 5ms frames on Fundamental Channel
- 11 (FCH_5MS_FRAMES_S = '0')
- 12 – Default indicator for 5ms frames on Dedicated Control Channel
- 13 (DCCH_5MS_FRAMES_S = '0')
- 14 – Default start time unit for Supplemental Channel
- 15 (START_TIME_UNIT_S = '000')
- 16 – Default Forward Supplemental Channel FER report indicator
- 17 (FOR_SCH_FER_REP_S = '0')
- 18 – Default Forward Supplemental Channel Configuration parameters:
 - 19 + Set the Forward Supplemental Channel frame length
 - 20 FOR_SCH_FRAME_LENGTH_S[0] to NULL.
 - 21 + Set the Forward Supplemental Channel Multiplex Option FOR_SCH_MUX_S[0]
 - 22 to NULL.
 - 23 + Set the Forward Supplemental Channel Radio Configuration
 - 24 FOR_SCH_RC_S[0] to NULL.
 - 25 + Set the Forward Supplemental Channel Coding Type FOR_SCH_CODING_S[0]
 - 26 to NULL.
 - 27 + Set FOR_SCH_FRAME_LENGTH_S[0] to NULL.
 - 28 + Set the Forward Supplemental Channel frame length
 - 29 FOR_SCH_FRAME_LENGTH_S[1] to NULL.
 - 30 + Set the Forward Supplemental Channel Multiplex Option FOR_SCH_MUX_S[1]
 - 31 to NULL.
 - 32 + Set the Forward Supplemental Channel Radio Configuration
 - 33 FOR_SCH_RC_S[1] to NULL.
 - 34 + Set the Forward Supplemental Channel Coding Type FOR_SCH_CODING_S[1]
 - 35 to NULL.

- 1 + Set FOR_SCH_FRAME_LENGTH_S[1] to NULL.
- 2 – Call Origination Transaction Identifier
- 3 (TAG_S = '0000').
- 4 – Default Reverse Supplemental Channel Configuration parameters:
- 5 + REV_WALSH_ID_S[0][0000] = 1
- 6 + REV_WALSH_ID_S[0][0001] = 1
- 7 + REV_WALSH_ID_S[0][0010] = 1
- 8 + REV_WALSH_ID_S[0][0011] = 1
- 9 + REV_WALSH_ID_S[0][0100] = 0
- 10 + REV_WALSH_ID_S[0][0101] = 0
- 11 + REV_WALSH_ID_S[0][0110] = 0
- 12 + REV_WALSH_ID_S[1][0000] = 1
- 13 + REV_WALSH_ID_S[1][0001] = 1
- 14 + REV_WALSH_ID_S[1][0010] = 1
- 15 + REV_WALSH_ID_S[1][0011] = 0
- 16 + REV_WALSH_ID_S[1][0100] = 0
- 17 + REV_WALSH_ID_S[1][0101] = 0
- 18 + REV_WALSH_ID_S[1][0110] = 0
- 19 + Set the Reverse Supplemental Channel frame length
- 20 REV_SCH_FRAME_LENGTH_S[0] to NULL.
- 21 + Set the Reverse Supplemental Channel Multiplex Option REV_SCH_MUX_S[0]
- 22 to NULL.
- 23 + Set the Reverse Supplemental Channel Radio Configuration
- 24 REV_SCH_RC_S[0] to NULL.
- 25 + Set the Reverse Supplemental Channel Coding Type REV_SCH_CODING_S[0]
- 26 to NULL.
- 27 + Set REV_SCH_FRAME_LENGTH_S[0] to NULL.
- 28 + Set the Reverse Supplemental Channel frame length
- 29 REV_SCH_FRAME_LENGTH_S[1] to NULL.
- 30 + Set the Reverse Supplemental Channel Multiplex Option REV_SCH_MUX_S[1]
- 31 to NULL.

- 1 + Set the Reverse Supplemental Channel Radio Configuration
2 REV_SCH_RC_S[1] to NULL.
- 3 + Set the Reverse Supplemental Channel Coding Type REV_SCH_CODING_S[1]
4 to NULL.
- 5 + Set REV_SCH_FRAME_LENGTH_S[1] to NULL.
- 6 – Default number of Logical-to-Physical Mapping entries
7 (NUM_LPM_ENTRIES_S = '0100')
- 8 – Default Table(0) Logical-to-Physical Mapping service reference identifier
9 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].SR_ID_S = '000')
- 10 – Default Table(0) Logical-to-Physical Mapping logical resource identifier
11 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].LOGICAL_RESOURCE_S = '0001')
- 12 – Default Table(0) Logical-to-Physical Mapping physical resource identifier:
13 + If CH_IND_S is equal to '01' or '11', the mobile station shall set
14 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PHYSICAL_RESOURCE_S to
15 '0000'.
- 16 + If CH_IND_S is equal to '10', the mobile station shall set
17 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PHYSICAL_RESOURCE_S to
18 '0001'.
- 19 – Default Table(0) Logical-to-Physical Mapping forward mapping indicator
20 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].FORWARD_FLAG_S = '1')
- 21 – Default Table(0) Logical-to-Physical Mapping reverse mapping indicator
22 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].REVERSE_FLAG_S = '1')
- 23 – Default Table(0) Logical-to-Physical Mapping priority
24 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[0].PRIORITY_S = '0000')
- 25 – Default Table(1) Logical-to-Physical Mapping service reference identifier
26 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].SR_ID_S = '001')
- 27 – Default Table(1) Logical-to-Physical Mapping logical resource identifier
28 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].LOGICAL_RESOURCE_S = '0000')
- 29 – Default Table(1) Logical-to-Physical Mapping physical resource identifier:
30 + If CH_IND_S is equal to '01' or '11', the mobile station shall set
31 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE_S to
32 '0000'.
- 33 + If CH_IND_S is equal to '10', the mobile station shall set
34 LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE_S to
35 '0001'.

- 1 – Default Table(1) Logical-to-Physical Mapping forward mapping indicator
2 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].FORWARD_FLAG_S = '1')
- 3 – Default Table(1) Logical-to-Physical Mapping reverse mapping indicator
4 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].REVERSE_FLAG_S = '1')
- 5 – Default Table(1) Logical-to-Physical Mapping priority
6 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PRIORITY_S = '0000')
- 7 – Default Table(2) Logical-to-Physical Mapping service reference identifier
8 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].SR_ID_S = '001')
- 9 – Default Table(2) Logical-to-Physical Mapping logical resource identifier
10 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].LOGICAL_RESOURCE_S = '0000')
- 11 – Default Table(2) Logical-to-Physical Mapping physical resource identifier
12 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE_S to '0010').
- 13 – Default Table(2) Logical-to-Physical Mapping forward mapping indicator
14 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].FORWARD_FLAG_S = '1')
- 15 – Default Table(2) Logical-to-Physical Mapping reverse mapping indicator
16 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].REVERSE_FLAG_S = '1')
- 17 – Default Table(2) Logical-to-Physical Mapping priority
18 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PRIORITY_S = '0000')
- 19 – Default Table(3) Logical-to-Physical Mapping service reference identifier
20 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].SR_ID_S = '001')
- 21 – Default Table(3) Logical-to-Physical Mapping logical resource identifier
22 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].LOGICAL_RESOURCE_S = '0000')
- 23 – Default Table(3) Logical-to-Physical Mapping physical resource identifier
24 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE_S to '0011').
- 25 – Default Table(3) Logical-to-Physical Mapping forward mapping indicator
26 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].FORWARD_FLAG_S = '1')
- 27 – Default Table(3) Logical-to-Physical Mapping reverse mapping indicator
28 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].REVERSE_FLAG_S = '1')
- 29 – Default Table(3) Logical-to-Physical Mapping priority
30 (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PRIORITY_S = '0000')
- 31 • The mobile station shall disable the T_{MS_Slotted} timer, and set SLOTTED_S to YES.
- 32 • If the ASSIGN_MODE_r field from the *Channel Assignment Message* equals '000', the
33 mobile station shall set SERV_NEG_S to disabled.

- 1 • If the ASSIGN_MODE_r field from the *Channel Assignment Message* equals '100', the
2 mobile station shall set SERV_NEG_s to enabled. For operation in Band Class 1,
3 SERV_NEG_s is always equal to enabled.
- 4 • The mobile station shall determine the service configuration as follows:
 - 5 – If SERV_NEG_s equals disabled, the initial service configuration shall include
6 Multiplex Option 1 and Radio Configuration 1 for both the Forward and Reverse
7 Traffic Channels, and shall include no service option connections.
 - 8 – If SERV_NEG_s equals enabled, and if GRANTED_MODE_s equals '00', the initial
9 service configuration shall include the multiplex option and radio configuration
10 for the Forward and Reverse Traffic Channels as specified by
11 DEFAULT_CONFIG_s, and shall include no service option connections.
 - 12 – If SERV_NEG_s equals enabled and GRANTED_MODE_s equals '01' or '10', the
13 initial service configuration shall include the default Forward and Reverse
14 Traffic Channel multiplex options and transmission rates corresponding to the
15 service option requested by the mobile station in the *Origination Message*, in the
16 case of a mobile station originated call, or the *Page Response Message*, in the
17 case of a mobile station terminated call, and shall include no service option
18 connections.
 - 19 – If SERV_NEG_s equals disabled, the mobile station shall perform the following:
 - 20 + If the call is mobile station originated and the *Origination Message* requests
21 a special service option, the mobile station shall set SO_REQ_s to the special
22 service option number.
 - 23 + If the call is mobile station originated and the *Origination Message* does not
24 request a special service option, the mobile station shall set SO_REQ_s to 1
25 (the default service option number).
 - 26 + If the call is mobile station terminated, the mobile station shall set
27 SO_REQ_s to the service option number requested in the *Page Response*
28 *Message*.

29 While in the *Traffic Channel Initialization Substate*, the mobile station shall perform the
30 following:

- 31 • The mobile station shall monitor Forward Traffic Channels associated with one or
32 more pilots in the Active Set.
- 33 • The mobile station shall perform pilot strength measurements as specified in
34 2.6.6.2.2, but shall not send *Pilot Strength Measurement Messages* or *Extended Pilot*
35 *Strength Measurement Messages*.
- 36 • The mobile station shall perform registration timer maintenance as specified in
37 2.6.5.5.4.2.

- 1 • If the bits of TMSI_CODE_{S-P} are not all equal to '1' and if System Time (in 80 ms
2 units) exceeds $\text{TMSI_EXP_TIME}_{S-P} \times 2^{12}$, the mobile station shall set all the bits of
3 TMSI_CODE_{S-P} to '1' within T_{66m} seconds.
- 4 • If the full-TMSI timer expires or has expired, the mobile station shall set all the bits
5 of TMSI_CODE_{S-P} to '1'. The mobile station shall update the registration variables
6 as described in 2.6.5.5.2.5.

7 If the mobile station does not support the assigned CDMA Channel (see 2.1.1 and 3.1.1 of
8 [2]) or all of the assigned Forward Traffic code channels (see 2.1.3.1.9 of [2]), the mobile
9 station shall enter the *System Determination Substate* of the *Mobile Station Initialization State*
10 with an error indication (see 2.6.1.1).

11 If the mobile station supports the assigned CDMA Channel and the assigned Forward
12 Traffic code channels, the mobile station shall perform the following:

- 13 • The mobile station shall tune to the assigned CDMA Channel.
- 14 • The mobile station shall set its code channel for the assigned Forward Traffic code
15 channel.
- 16 • The mobile station shall set its Forward and Reverse Traffic Channel frame offsets
17 to the assigned frame offset as determined by FRAME_OFFSET_S .
- 18 • The mobile station shall set its Forward and Reverse Traffic Channel long code
19 masks to the public long code mask (see 2.1.3.1.12 of [2]).

20 If the mobile station does not receive a period of $(N_{5m} \times 20)$ ms with sufficient signal
21 quality (e.g. good frames) on the physical channel corresponding to FPC_PRI_CHAN_S within
22 T_{50m} seconds after entering this substate, the mobile station shall enter the *System*
23 *Determination Substate* of the *Mobile Station Initialization State* with a system lost indication
24 (see 2.6.1.1).

25 If the mobile station receives a period of $(N_{5m} \times 20)$ ms with sufficient signal quality (e.g.
26 good frames) on the physical channel corresponding to FPC_PRI_CHAN_S within T_{50m}
27 seconds after entering this substate, the mobile station shall perform the following
28 additional functions while it remains in the *Traffic Channel Initialization Substate*:

- 29 • The mobile station shall perform Forward Traffic Channel supervision as specified
30 in 2.6.4.1.8. If a loss of the Forward Traffic Channel is declared, the mobile station
31 shall enter the *System Determination Substate* of the *Mobile Station Initialization State*
32 with a system lost indication (see 2.6.1.1).
- 33 • The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- 34 • The mobile station shall transmit the Traffic Channel preamble as specified in
35 2.1.3.6.2.3 and 2.1.3.7.2.3 of [2], and Layer 3 shall send an *acquiring dedicated*
36 *channel* indication to Layer 2 (see 2.2.2.1.2 of [4]).
- 37 • The mobile station shall process Forward Traffic Channel signaling traffic and shall
38 discard other types of Forward Traffic Channel traffic.

- If Layer 3 receives a L2-Condition.Notification primitive from Layer 2 indicating an acknowledgment failure, the mobile station shall disable its transmitter and enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).

The mobile station should provide diversity combining of the Forward Traffic Channels associated with pilots in the Active Set if the mobile station receives multiple pilots in the *Extended Channel Assignment Message*.

If Layer 3 does not receive a *forward dedicated channel acquired* indication from Layer 2 (see 2.2.2.1.2 of [4]) within T_{51m} seconds after the first occurrence of receiving a period of $(N_{5m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$, the mobile station shall disable its transmitter and enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).

If Layer 3 receives a *forward dedicated channel acquired* indication from Layer 2 within T_{51m} seconds after the first occurrence of receiving a period of $(N_{5m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$, the mobile station shall perform the following:

- If CH_IND_S is equal to '01' or '11', the mobile station shall begin transmitting on the Reverse Fundamental Channel.
- If $SERV_NEG_S$ equals disabled, the mobile station shall activate the *SO Negotiation Subfunction*.
- If $SERV_NEG_S$ equals enabled and the $GRANTED_MODE_S$ is '00' or '01', the mobile station shall activate the *Normal Service Subfunction*.
- If $SERV_NEG_S$ equals enabled and the $GRANTED_MODE_S$ is '10', the mobile station shall activate the *Waiting for Service Connect Message Subfunction*.
- The layer 3 shall instantiate a Call Control instance (as specified in 2.6.10). The layer 3 shall assign a default identifier of NULL to this Call Control instance.
- The layer 3 shall enter the *Traffic Channel Substate*.

2.6.4.3 Traffic Channel Substate

In this substate, the mobile station may exchange Traffic Channel frames with the base station in accordance with the current service configuration. The mobile station may perform the gating operation of Reverse Pilot Channel.

The mobile station can be in the *Active Mode* or *Control Hold Mode* while in this substate.

The following are the attributes when the mobile station is in the *Active Mode* of *Traffic Channel Substate*:

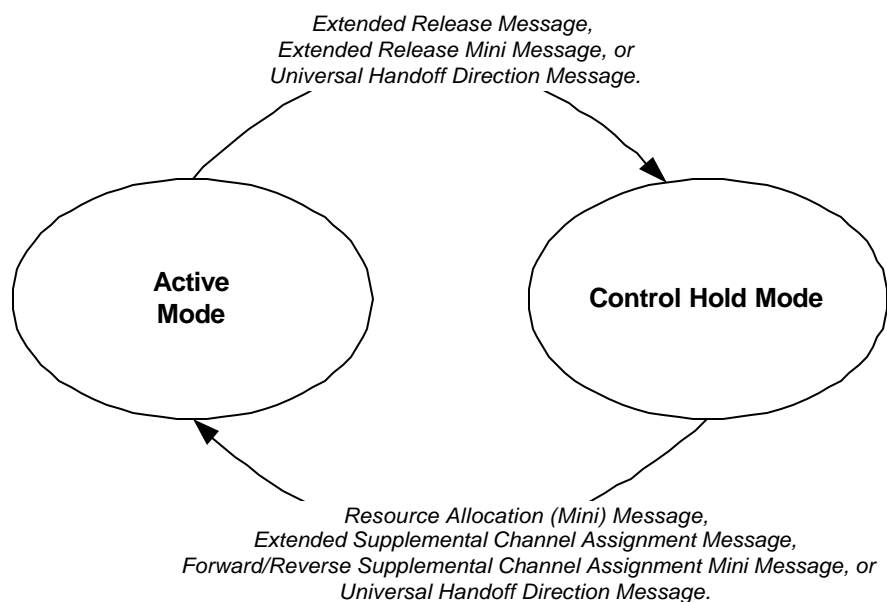
- $PILOT_GATING_USE_RATE$ is set to '0' (i.e., the reverse pilot (r-pich) is not gated).

- Flow of data traffic is permitted by the Multiplex Sublayer.

The following are the attributes when the mobile station is in the *Control Hold Mode of Traffic Channel Substate*:

- PILOT_GATING_USE_RATE is set to '1'.
- The reverse pilot (r-pich) may be gated (if PILOT_GATING_RATE_S is not equal to '00').
- Flow of data traffic is blocked by the Multiplex Sublayer.

Figure 2.6.4.3-1 shows the valid transitions between the modes of a *Traffic Channel Substate* and the over-the-air Upper Layer Signaling Messages that trigger transitions between these modes.



Note: The mode transition occurs when the fields are set appropriately

Figure 2.6.4.3-1. Mobile Station Modes

Upon entering the *Traffic Channel Substate*, the mobile station shall perform the following:

- If SERV_NEG_S equals enabled, the call is mobile station originated, and GRANTED_MODE_S is equal to '00' or '01', the mobile station should initiate service negotiation to request a service configuration in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

While in the *Traffic Channel Substate*, the mobile station shall perform the following:

- 1 • The mobile station shall perform Forward Traffic Channel supervision as specified
2 in 2.6.4.1.8. If a loss of the Forward Fundamental Channel is declared, the layer 3
3 shall terminate all Call Control instances, and shall enter the *System Determination*
4 *Substate* of the *Mobile Station Initialization State* with a system lost indication (see
5 2.6.1.1).
- 6 • The mobile station may send a *Pilot Strength Measurement Mini Message* to report
7 pilot strength order change information, periodic pilot strength information, or
8 threshold based pilot strength information, as specified in the *Mobile Assisted Burst*
9 *Operation Parameters Message*.
- 10 • The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- 11 • The mobile station shall perform Forward Traffic Channel power control as specified
12 in 2.6.4.1.1.
- 13 • The mobile station shall perform handoff processing as specified in 2.6.6.
- 14 • The mobile station shall process Forward and Reverse Traffic Channel frames in
15 accordance with requirements for the active service subfunction (see 2.6.4.1.2.2).
- 16 • The mobile station shall perform registration timer maintenance as specified in
17 2.6.5.5.4.2.
- 18 •
- 19 • If the mobile station has user data to send and if PILOT_GATING_USE_RATE is set
20 to '0', the mobile station shall send a *Data Burst Message*.
- 21 • If the mobile station has user data to send and PILOT_GATING_USE_RATE is equal
22 to '1', then the mobile station may send a *Resource Request Message*, *Resource*
23 *Request Mini Message*, *Supplemental Channel Request Message*, or *Supplemental*
24 *Channel Request Mini Message* to request for continuous reverse pilot transmission
25 and user traffic transmission. The mobile station shall not send a *Resource Request*
26 *Message* or a *Resource Request Mini Message* if RETRY_DELAY_S[010] is not equal to 0;
27 the mobile station shall not send a *Supplemental Channel Request Message* or a
28 *Supplemental Channel Request Mini Message* if RETRY_DELAY_S[011] is not equal to 0.
- 29 • If the mobile station is directed by the user to request a new service configuration,
30 the mobile station shall initiate service negotiation or service option negotiation in
31 accordance with the requirements for the active service subfunction (see
32 2.6.4.1.2.2).
- 33 • The mobile station may send a *Service Option Control Message* or *Service Option*
34 *Control Order* to invoke a service option specific function in accordance with the
35 requirements for the active service subfunction (see 2.6.4.1.2.2).
- 36 • If the mobile station is directed by the user to request a private long code transition
37 and has the long code mask (see 2.3.12.3), the mobile station shall send a *Long*
38 *Code Transition Request Order* (ORDQ = '00000001') in assured mode.

- 1 • If the mobile station is directed by the user to request a public long code transition,
2 the mobile station shall send a *Long Code Transition Request Order* (ORDQ =
3 '00000000') in assured mode.
- 4 • If the mobile station is directed by the user to operate in analog mode, allowing
5 operation in either wide or narrow analog mode, the mobile station shall send the
6 *Request Analog Service Order* in assured mode.
- 7 • If the mobile station is directed by the user to operate in wide analog mode, the
8 mobile station shall send the *Request Wide Analog Service Order* in assured mode.
- 9 • If the mobile station is directed by the user to operate in narrow analog mode, the
10 mobile station shall send the *Request Narrow Analog Service Order* in assured mode.
- 11 • If the mobile station is directed by the user to originate a call, the mobile station
12 shall perform the following:
 - 13 - The mobile station shall first determine the following conditions:
 - 14 + If RETRY_DELAY_S[001] is set to *infinity*, the mobile station shall not send the
15 *Enhanced Origination Message* to the base station.
 - 16 + If RETRY_DELAY_S[001] is not 0 or *infinity*, the mobile station shall not send
17 the *Enhanced Origination Message* until after the system time stored in
18 RETRY_DELAY_S[001].
 - 19 - If the above conditions do not prohibit the mobile station from sending an
20 *Enhanced Origination Message* at this time, the mobile station shall perform the
21 following:
 - 22 + The mobile station shall increment the stored value of TAG_S.
 - 23 + The mobile station shall add TAG_S to the list TAG_OUTSTANDING_LIST.
 - 24 + The mobile station shall send an *Enhanced Origination Message* to the base
25 station, with the TAG field of the message set to TAG_S.
 - 26 - Upon sending the *Enhanced Origination Message*, if the mobile station is directed
27 by the user to cancel this call, the mobile station shall perform the following:
 - 28 + The mobile station shall send a *Call Cancel Message* to the base station, with
29 the TAG field of the message set to the TAG value in the *Enhanced*
30 *Origination Message* sent to originate this call.
 - 31 + The mobile station shall remove the TAG field corresponding to this call
32 from the list TAG_OUTSTANDING_LIST.
- 33 • If the layer 3 receives a "call release request" from a Call Control instance, layer 3
34 shall perform the following:

- 1 - If the service option connection corresponding to this call is the only one
2 connected, the layer 3 shall enter the *Release Substate* with a mobile station
3 release indication (see 2.6.4.4).
- 4 - If the service option connection corresponding to this call is not the only one
5 connected, the mobile station shall send a *Service Request Message*, *Resource*
6 *Release Request Message*, or a *Resource Release Request Mini Message* to the base
7 station requesting to release this service option connection. If the mobile
8 station sends a *Resource Release Request Message* or a *Resource Release Request*
9 *Mini Message*, it shall set the PURGE_SERVICE field to '0'.
- 10 • If the layer 3 receives a "call inactive indication" from a Call Control instance,
11 layer 3 shall perform the following:
 - 12 - If the service option connection corresponding to this call is the only one
13 connected, the layer 3 shall enter the *Release Substate* with a service inactive
14 indication (see 2.6.4.4).
 - 15 - If the service option connection corresponding to this call is not the only one
16 connected, the mobile station shall send a *Service Request Message*, *Resource*
17 *Release Request Message*, or a *Resource Release Request Mini Message*. If the
18 mobile station sends a *Resource Release Request Message* or a *Resource Release*
19 *Request Mini Message*, it shall set the PURGE_SERVICE field to '1'.
- 20 • If the mobile station is directed by the user to power down, the layer 3 shall send a
21 "release indication" to all Call Control instances, and shall enter the *Release*
22 *Substate* with a power-down indication (see 2.6.4.4).
- 23 • If Layer 3 receives a L2-Condition.Notification primitive from Layer 2 indicating an
24 acknowledgment failure, the layer 3 shall terminate all Call Control instances, and
25 the mobile station shall disable its transmitter and shall enter the *System*
26 *Determination Substate* of the *Mobile Station Initialization State* with a system lost
27 indication (see 2.6.1.1).
- 28 • The mobile station shall perform the following:
 - 29 - The mobile station may send the *Resource Request Message* or *Resource Request*
30 *Mini Message* in accordance with requirements for the currently connected
31 service option whenever $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is equal to 0, where,
32 RETRY_TYPE is equal to '010'.
 - 33 - The mobile station shall not send the *Resource Request Message* or *Resource*
34 *Request Mini Message* whenever $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is set to *infinity*,
35 where, RETRY_TYPE is equal to '010'.

- 1 – If $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is not 0 or *infinity*, the mobile station shall not
2 send the *Resource Request Message* or *Resource Request Mini Message* until after
3 the system time stored in $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$, where, RETRY_TYPE is
4 equal to '010'.
- 5 – The mobile station may send the *Supplemental Channel Request Message* or
6 *Supplemental Channel Request Mini Message* whenever
7 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is set to '0', where, RETRY_TYPE is equal to '011'.
- 8 – The mobile station shall not send the *Supplemental Channel Request Message* or
9 *Supplemental Channel Request Mini Message* whenever
10 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is set to *infinity*, where, RETRY_TYPE is equal to
11 '011'.
- 12 – If $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ is not 0 or *infinity*, the mobile station shall not
13 send the *Supplemental Channel Request Message* or *Supplemental Channel Request*
14 *Mini Message* until after the system time stored in
15 $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$, where, RETRY_TYPE is equal to '011'.
- 16 – At the system time stored in $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$, the mobile station
17 shall reset $\text{RETRY_DELAY}_S[\text{RETRY_TYPE}]$ to '0', where RETRY_TYPE is equal to
18 '001', '010' or '011'.
- 19 • The mobile station may send a *Mobile Station Resource Release Request Message* or a
20 *Mobile Station Resource Release Request Mini Message* to request for reverse pilot
21 gating operation to be performed or to request the a service option connection to be
22 disconnected.
- 23 • The mobile station may enter the *Release Substate* with a service inactive
24 indication (see 2.6.4.4) if the service corresponding to the packet data service
25 option instance is inactive at the mobile station.
- 26 • If layer 3 receives a “substate timer expired indication” from a Call Control
27 instance, the layer 3 shall perform the following:
 - 28 – If the service option connection corresponding to this call is not the only one
29 connected, the layer 3 shall terminate this Call Control instance.
 - 30 – If the service option connection corresponding to this call is the only one
31 connected, the layer 3 shall terminate this Call Control instance. The mobile
32 station shall disable its transmitter and enter the *System Determination Substate*
33 of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).
- 34 • If the layer 3 determines that the user directs it to originate an emergency call,
35 the mobile station shall perform the following:
 - 36 – The mobile station shall increment the stored value of TAG_S .

- 1 – The mobile station shall add TAG_S to the list TAG_OUTSTANDING_LIST.
- 2 – The mobile station shall send an *Enhanced Origination Message* to the base
3 station, with the TAG field of the message set to TAG_S. Upon sending the
4 *Enhanced Origination Message*, if the mobile station is directed by the user to
5 cancel this call, the mobile station shall perform the following:
 - 6 + The mobile station shall send a *Call Cancel Message* to the base station, with
7 the TAG field of the message set to the TAG value in the *Enhanced*
8 *Origination Message* sent to originate this call.
 - 9 + The mobile station shall remove the TAG field corresponding to this call
10 from the list TAG_OUTSTANDING_LIST.
- 11 • If the mobile station receives a message which is included in the following list and
12 every message field value is within its permissible range, the mobile station shall
13 process the message as described below and in accordance with the message's
14 action time (see 2.6.4.1.5).
 - 15 1. *Alert With Information Message*: The layer 3 shall deliver this message to the Call
16 Control instance identified by NULL.
 - 17 2. *Analog Handoff Direction Message*: If the analog mode directed by the base
18 station is supported by the mobile station, the mobile station shall process the
19 message as specified in 2.6.6.2.9, and shall perform the following at the action
20 time of the message:
 - 21 – If CON_REF_INCL_r equals '0', the lower layer shall terminate all Call Control
22 instances (if there are any) except the one identified by NULL; otherwise,
23 the layer 3 shall terminate all Call Control instances (if there are any)
24 except the one identified by CON_REF_r. The mobile station shall perform
25 the following (see [6] for handoff to a wide analog channel and [22] for handoff
26 to an 800 MHz narrow analog channel):
 - 27 + If this Call Control instance is in the *Waiting for Order Substate*, the
28 mobile station shall enter the Waiting for Order Task.
 - 29 + If this Call Control instance is in the *Waiting for Mobile Station Answer*
30 *Substate*, the mobile station shall enter the Waiting for Answer Task.
 - 31 + If this Call Control instance is in the *Conversation Substate*, the mobile
32 station shall enter the Conversation Task.
 - 33 – If the mobile station is directed to an unsupported operation mode or band
34 class, the mobile station shall respond with a *Mobile Station Reject Order* with
35 ORDQ equal to '00000110' (message requires a capability that is not
36 supported by the mobile station).

- 1 3. *Audit Order*
- 2 4. *Authentication Challenge Message*: The layer 3 shall send a “reset waiting for
- 3 order substate timer indication” to all Call Control instances. The mobile
- 4 station shall process the message and shall respond as specified in 2.3.12.1.4
- 5 within T_{32m} seconds, regardless of the value of $AUTH_S$.
- 6 5. *Base Station Challenge Confirmation Order*: The layer 3 shall send a “reset
- 7 waiting for order substate timer indication” to all Call Control instances. The
- 8 mobile station shall process the message and shall respond with an *SSD Update*
- 9 *Confirmation Order* or *SSD Update Rejection Order* as specified in 2.3.12.1.5
- 10 within T_{32m} seconds.
- 11 6. *Call Assignment Message*: The mobile station shall process this message as
- 12 follows:
- 13 – If $RESPONSE_IND_r$ equals ‘1’ and TAG_r matches any of the TAG values
- 14 contained in the list $TAG_OUTSTANDING_LIST$, the mobile station shall
- 15 perform the following:
- 16 + If $ACCEPT_IND_r$ equals ‘0’, the mobile station shall remove the TAG
- 17 value specified by TAG_r from the list $TAG_OUTSTANDING_LIST$.
- 18 + If $ACCEPT_IND_r$ equals ‘1’, the mobile station shall perform the
- 19 following:
- 20 o If there already exists a Call Control instance identified by
- 21 CON_REF_r , the mobile station shall send a *Mobile Station Reject Order*
- 22 with $ORDQ$ field set to ‘00010011’ (a call control instance is already
- 23 present with the specified identifier), with the CON_REF field of the
- 24 order set to CON_REF_r .
- 25 o Otherwise, layer 3 shall instantiate a Call Control instance (as
- 26 specified in 2.6.10) at the action time of the message. The mobile
- 27 station shall identify this Call Control instance by CON_REF_r .
- 28 o The mobile station shall remove the TAG value specified by TAG_r
- 29 from the list $TAG_OUTSTANDING_LIST$.
- 30 – If $RESPONSE_IND_r$ equals ‘1’ and TAG_r does not match any of the TAG values
- 31 contained in the list $TAG_OUTSTANDING_LIST$, the mobile station shall
- 32 send a *Mobile Station Reject Order* with $ORDQ$ field set to ‘00010100’ (TAG
- 33 received does not match TAG stored), with the TAG field of the order set to
- 34 TAG_r , and the CON_REF field of the order set to CON_REF_r .
- 35 – If $RESPONSE_IND_r$ equals ‘0’, the mobile station shall perform the following:

+ If there already exists a Call Control instance identified by CON_REF_r , the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00010011' (a call control instance is already present with the specified identifier), with the CON_REF field of the order set to CON_REF_r .

+ Otherwise, if the mobile station does not accept this call assignment, the mobile station shall send a *Mobile Station Reject Order* with $ORDQ$ field set to '00010001' (call assignment not accepted), with the CON_REF field of the order set to CON_REF_r .

+ Otherwise, at the action time of the message, the mobile station shall store the bypass indicator ($BYPASS_ALERT_ANSWER_s = BYPASS_ALERT_ANSWER_r$) and the layer 3 shall instantiate a Call Control instance (as specified in 2.6.10). The mobile station shall identify this Call Control instance by CON_REF_r .

7. *Candidate Frequency Search Control Message*: The mobile station shall process the message as specified in 2.6.6.2.5.1.

8. *Candidate Frequency Search Request Message*: The mobile station shall process the message as specified in 2.6.6.2.5.1.

9. *Continuous DTMF Tone Order*: Support of this order by the mobile station is optional. If $P_REV_IN_USE_s$ is less than seven or if $CON_REF_INCL_r$ equals '0', the layer 3 shall deliver this message to the Call Control instance identified by NULL; otherwise, the layer 3 shall deliver this message to the Call Control instance identified by CON_REF_r .

10. *Data Burst Message*

11. *Extended Alert With Information Message*: The mobile station shall perform the following: If $CON_REF_INCL_r$ equals '0', the layer 3 shall deliver this message to the Call Control instance identified by NULL; otherwise, the layer 3 shall deliver this message to the Call Control instance identified by CON_REF_r .

12. *Extended Flash With Information Message*: The mobile station shall perform the following: If $CON_REF_INCL_r$ equals '0', the layer 3 shall deliver this message to the Call Control instance identified by NULL; otherwise, the layer 3 shall deliver this message to the Call Control instance identified by CON_REF_r .

13. *Extended Handoff Direction Message*: The layer 3 shall send a "reset waiting for order substate timer indication" to all Call Control instances. The mobile station shall process the message as specified in 2.6.6.2.5.1.

14. *Extended Neighbor List Update Message*: The mobile station shall process the message as specified in 2.6.6.2.5.1.

- 1 15. *Extended Release Message*: The mobile station shall process the message as
2 specified in 2.6.4.1.9.
- 3 16. *Extended Release Mini Message*: The mobile station shall process the message as
4 specified in 2.6.4.1.9.
- 5 17. *Forward Supplemental Channel Assignment Mini Message*: The mobile station
6 shall process the message as specified in 2.6.6.2.5.1.
- 7 18. *Flash With Information Message*: The layer 3 shall deliver this message to the
8 Call Control instance identified by NULL.
- 9 19. *Extended Supplemental Channel Assignment Message*: The mobile station shall
10 process the message as specified in 2.6.6.2.5.1.
- 11 20. *General Handoff Direction Message*: The layer 3 shall send a “reset waiting for
12 order substate timer indication” to all Call Control instances. The mobile
13 station shall process the message as specified in 2.6.6.2.5.1.
- 14 21. *In-Traffic System Parameters Message*: The mobile station shall process the
15 message as specified in 2.6.4.1.4.
- 16 22. *Local Control Order*
- 17 23. *Lock Until Power-Cycled Order*: The mobile station shall disable its transmitter
18 and record the reason for the *Lock Until Power-Cycled Order* in the mobile
19 station’s semi-permanent memory (LCKRSN_{P_{s-p}} equals the least-significant
20 four bits of ORDQ_r). The mobile station should notify the user of the locked
21 condition. The layer 3 shall terminate all Call Control instances, and shall
22 enter the *System Determination Substate* of the *Mobile Station Initialization State*
23 with a lock indication (see 2.6.1.1), and shall not enter the *System Access State*
24 again until after the next mobile station power-up or until it has received an
25 *Unlock Order*. This requirement shall take precedence over any other mobile
26 station requirement specifying entry to the *System Access State*.
- 27 24. *Long Code Transition Request Order*: The mobile station shall process the
28 message as specified in 2.6.4.1.6.
- 29 25. *Maintenance Order*: If P_REV_IN_USE_s is less than seven or if CON_REF_INCL_r
30 equals ‘0’, the layer 3 shall deliver this message to the Call Control instance
31 identified by NULL; otherwise, the layer 3 shall deliver this message to the Call
32 Control instance identified by CON_REF_r.
- 33 26. *Maintenance Required Order*: The mobile station shall record the reason for the
34 *Maintenance Required Order* in the mobile station’s semi-permanent memory
35 (MAINTRSN_{S-p} equals the least-significant four bits of ORDQ_r). The mobile
36 station shall remain in the unlocked condition. The mobile station should
37 notify the user of the maintenance required condition.
- 38 27. *Message Encryption Mode Order*: The mobile station shall process the message
39 as specified in 2.3.12.2.

- 1 28. *Mobile Station Registered Message*: The mobile station shall process the message
2 as specified in 2.6.5.5.4.3.
- 3 29. *Mobile Assisted Burst Operation Parameters Message*: The mobile station shall
4 process the message as specified in 2.6.6.2.5.1.
- 5 30. *Neighbor List Update Message*: The mobile station shall process the message as
6 specified in 2.6.6.2.5.1.
- 7 31. *Outer Loop Report Request Order*: The mobile station shall send the *Outer Loop*
8 *Report Message* in assured mode to the base station.
- 9 32. *Parameter Update Order*: The layer 3 shall send a “reset waiting for order
10 substate timer indication” to all Call Control instances. The mobile station
11 shall increment COUNT_{s-p} (see 2.3.12.1.3). The mobile station shall send a
12 *Parameter Update Confirmation Order* within T_{56m} seconds. The mobile station
13 shall set the ORDQ field of the *Parameter Update Confirmation Order* to the same
14 value as the ORDQ field of the *Parameter Update Order*.
- 15 33. *Periodic Pilot Measurement Request Order*: The mobile station shall process the
16 order as specified in 2.6.6.2.5.1.
- 17 34. *Pilot Measurement Request Order*: The mobile station shall process the order as
18 specified in 2.6.6.2.5.1.
- 19 35. *Power Control Message*: The mobile station shall process the message as
20 specified in 2.6.4.1.1.3.
- 21 36. *Power Control Parameters Message*: The mobile station shall process the
22 message as specified in 2.6.4.1.1.2.
- 23 37. *Power Up Function Message*: The mobile station shall process the message as
24 specified in 2.6.4.1.7.1.
- 25 38. *Power Up Function Completion Message*: The mobile station shall process the
26 message as specified in 2.6.4.1.7.3.
- 27 39. *Release Order*: The layer 3 shall send a “release indication” to all Call Control
28 instances, and shall enter the *Release Substate* with a base station release
29 indication (see 2.6.4.4).
- 30 40. *Resource Allocation Message*: The mobile station shall process the message as
31 specified in 2.6.4.1.10.
- 32 41. *Resource Allocation Mini Message*: The mobile station shall process the message
33 as specified in 2.6.4.1.10.
- 34 42. *Retrieve Parameters Message*: The mobile station shall send, within T_{56m}
35 seconds, a *Parameters Response Message*.
- 36 43. *Retry Order*: The mobile station shall process the order as follows:

- 1 • If RETRY_TYPE_r is equal to '000', the mobile station shall set
2 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}]$ to '0', where RETRY_TYPE is equal to '001',
3 '010', or '011'.
 - 4 • If RETRY_TYPE_r is equal to '001', then the mobile station shall perform the
5 following:
 - 6 – If RETRY_DELAY_r is equal to '00000000', then the mobile station shall set
7 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$ to 0.
 - 8 – If RETRY_DELAY_r is not equal to '00000000' the mobile station shall set
9 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$ as follows:
 - 10 + If the most significant bit of the RETRY_DELAY_r is 0, set
11 $\text{RETRY_DELAY_UNIT}_s$ to 1000ms. If the most significant bit of the
12 RETRY_DELAY_r is '1', set $\text{RETRY_DELAY_UNIT}_s$ to 60000ms.
 - 13 + The mobile station shall set $\text{RETRY_DELAY_VALUE}_s$ to the seven
14 least significant bits of RETRY_DELAY_r .
 - 15 + The mobile station shall store the next system time 80 ms boundary
16 + $\text{RETRY_DELAY_VALUE}_s \times \text{RETRY_DELAY_UNIT}_s$ ms as
17 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$.
 - 18 • If RETRY_TYPE_r is equal to '010' or '011', the mobile station shall perform the
19 following:
 - 20 – If $\text{RETRY_DELAY}_r[\text{RETRY_TYPE}_r]$ is '00000000', then the mobile station
21 shall set $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$ to '0'.
 - 22 – If $\text{RETRY_DELAY}_r[\text{RETRY_TYPE}_r]$ is '11111111', then the mobile station
23 shall set $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$ to *infinity*.
 - 24 – If $\text{RETRY_DELAY}_r[\text{RETRY_TYPE}_r]$ is not equal to '00000000' or '11111111',
25 the mobile station shall store the next system time 80 ms boundary +
26 $\text{RETRY_DELAY}_r[\text{RETRY_TYPE}_r] \times 320$ ms as
27 $\text{RETRY_DELAY}_s[\text{RETRY_TYPE}_r]$.
- 28 44. *Reverse Supplemental Channel Assignment Mini Message:* The mobile station
29 shall process the message as specified in 2.6.6.2.5.1.
- 30 45. *Security Mode Command Message:* The mobile station shall process the message
31 as specified in 2.6.4.1.14.
- 32 46. *Send Burst DTMF Message:* Support of this order by the mobile station is
33 optional. If P_REV_IN_USE_s is less than seven or if CON_REF_INCL_r equals '0',
34 the layer 3 shall deliver this message to the Call Control instance identified by
35 NULL; otherwise, the layer 3 shall deliver this message to the Call Control
36 instance identified by CON_REF_r .

- 1 47. *Service Connect Message*: The mobile station shall process the message in
2 accordance with the requirements for the active service subfunction (see
3 2.6.4.1.2.2).
- 4 48. *Service Option Control Message*: The mobile station shall process the message in
5 accordance with the requirements for the active service subfunction (see
6 2.6.4.1.2.2).
- 7 49. *Service Option Control Order*: The mobile station shall process the message in
8 accordance with the requirements for the active service subfunction (see
9 2.6.4.1.2.2).
- 10 50. *Service Option Request Order*: The mobile station shall process the message in
11 accordance with the requirements for the active service subfunction (see
12 2.6.4.1.2.2).
- 13 51. *Service Option Response Order*: The mobile station shall process the message in
14 accordance with the requirements for the active service subfunction (see
15 2.6.4.1.2.2).
- 16 52. *Service Redirection Message*: The mobile station shall process the message as
17 follows:
- 18 If RECORD_TYPE_r is equal to '00000000', the mobile station shall do the
19 following:
- 20 – The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
 - 21 – If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
22 TMSI_CODE_{s-p} to '1'.
 - 23 – The mobile station shall disable the full-TMSI timer.
 - 24 – The layer 3 shall send a "release indication" to all Call Control
25 instances, and shall enter the Release Substate with an NDSS off
26 indication (see 2.6.1.1).
- 27 If RECORD_TYPE_r is not equal to '00000000', REDIRECT_TYPE_r is '1', and the
28 mobile station supports the band class and operating mode specified in the
29 message, the mobile station shall do the following:
- 30 – The mobile station shall store the redirection record received in the
31 message as REDIRECT_REC_s.
 - 32 – The mobile station shall enable NDSS_ORIG_s and shall record the dialed
33 digits.
 - 34 – The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
 - 35 – If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
36 TMSI_CODE_{s-p} to '1'.
 - 37 – The mobile station shall disable the full-TMSI timer.

- The layer 3 shall terminate all Call Control instances, and shall enter the *System Determination Substate of the Mobile Station Initialization State* with a redirection indication (see 2.6.1.1).

Otherwise, the mobile station shall discard the message and send a *Mobile Station Reject Order* (ORDQ set to the applicable reason code as determined from Table 6.7.3-1) within T_{56m} seconds.

53. *Service Request Message*: The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).
54. *Service Response Message*: The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).
55. *Set Parameters Message*: If the mobile station can set all of the parameters specified by the PARAMETER_ID fields in the message, the mobile station shall set them; otherwise, the mobile station shall send, within T_{56m} seconds, a *Mobile Station Reject Order*.
56. *SSD Update Message*: The layer 3 shall send a “reset waiting for order substate timer indication” to all Call Control instances. The mobile station shall process the message and respond with a *Base Station Challenge Order* as specified in 2.3.12.1.5 within T_{32m} seconds.
57. *Status Request Message*: The mobile station shall send, within T_{56m} seconds, a *Status Response Message*. If the message does not specify any qualification information (QUAL_INFO_TYPE_r is equal to ‘00000000’), the mobile station shall include the requested information records in the *Status Response Message*. If the message specifies a band class (QUAL_INFO_TYPE_r is equal to ‘00000001’), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) in the *Status Response Message*. If the message specifies a band class and an operating mode (QUAL_INFO_TYPE_r is equal to ‘00000010’), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) and operating mode (OP_MODE_r) in the *Status Response Message*.

If the message specifies a band class or a band class and an operating mode which is not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to ‘00000110’ (message requires a capability that is not supported by the mobile station).

If the response to this message exceeds the allowable length, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to ‘00001000’ (response message would exceed the allowable length).

If the message specifies an information record which is not supported by the mobile station for the specified band class and operating mode, the mobile

station shall send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is not supported for the specified band class and operating mode).

58. *Status Request Order*: If CDMABAND_s is equal to '00000', the mobile station shall send a *Status Message* within T_{56m} seconds. The mobile station shall respond with information corresponding to the current band class and operating mode.

59. *Supplemental Channel Assignment Message*: The mobile station shall process the message as specified in 2.6.6.2.5.1.

60. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code as follows:

- The mobile station shall store the length of the TMSI zone field by setting ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r,
- The mobile station shall store the assigning TMSI zone number by setting the ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
- The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.

The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

61. *Universal Handoff Direction Message*: The layer 3 shall send a "reset waiting for order substate timer indication" to all Call Control instances. The mobile station shall process the message as specified in 2.6.6.2.5.1.

62. *User Zone Reject Message*: The mobile station shall process this message as specified in 2.6.9.2.2.

63. *User Zone Update Message*: The mobile station shall process this message as specified in 2.6.9.2.2.

- 1 • If the mobile station receives a message that is not included in the above list,
2 cannot be processed, or requires a capability which is not supported, the mobile
3 station shall discard the message and send a *Mobile Station Reject Order* (ORDQ set
4 to the applicable reason code as determined from Table 2.7.3-1) within T_{56m}
5 seconds. If the mobile station receives a Call Control message (see 2.6.10) which is
6 directed to a Call Control instance that does not exist, the mobile station shall
7 send a *Mobile Station Reject Order* with ORDQ field set to '00010010' (no call control
8 instance present with the specified identifier) to the base station within T_{56m}
9 seconds, as follows: if the received message does not contain a CON_REF_INCL field
10 or if the CON_REF_INCL field is set to '0', the mobile station shall set the
11 CON_REF_INCL field of the order to '0'; otherwise, the mobile station shall set the
12 CON_REF field of the order to the value of the CON_REF field of the received
13 message.
- 14 • If the bits of $TMSI_CODE_{S-p}$ are not all equal to '1', and if System Time (in 80 ms
15 units) exceeds $TMSI_EXP_TIME_{S-p} \times 2^{12}$, the mobile station shall set all the bits of
16 $TMSI_CODE_{S-p}$ to '1' within T_{66m} seconds.
- 17 • If the full-TMSI timer expires or has expired, the mobile station shall set all the bits
18 of $TMSI_CODE_{S-p}$ to '1'. The mobile station shall update the registration variables
19 as described in 2.6.5.5.2.5.

20 2.6.4.4 Release Substate

21 In this substate, the mobile station confirms the disconnect of all calls and physical
22 channels.

23 Upon entering the *Release Substate*, the mobile station shall perform the following:

- 24 • The mobile station shall set the substate timer for T_{55m} seconds.
- 25 • If the mobile station enters the *Release Substate* with a power-down indication, the
26 mobile station shall send a *Release Order* (ORDQ = '00000001'), and shall perform
27 power-down registration procedures (see 2.6.5.5.4.4). The layer 3 shall terminate
28 all Call Control instances.
- 29 • If the mobile station enters the *Release Substate* with a mobile station release
30 indication, the mobile station shall send a *Release Order* (ORDQ = '00000000'), and
31 set RETURN_CAUSE_S to '0000'. The mobile station may store the current service
32 configuration (that is, both the Service Configuration information record and the
33 Non-negotiable Service Configuration information record).
- 34 • If the mobile station enters the *Release Substate* with a service inactive indication,
35 the mobile station shall send a *Release Order* (ORDQ = '00000010'), and set
36 RETURN_CAUSE_S to '0000'.

- 1 • If the mobile station enters the *Release Substate* with a base station release
2 indication, the mobile station shall send a *Release Order* (ORDQ = '00000000'). The
3 layer 3 shall terminate all Call Control instances. The mobile station may store
4 the current service configuration (that is, both the Service Configuration
5 information record and the Non-negotiable Service Configuration information
6 record). The mobile station shall disable its transmitter, set RETURN_CAUSE_s to
7 '0000', and shall enter the *System Determination Substate* of the *Mobile Station*
8 *Initialization State* with a release indication (see 2.6.1.1).
- 9 • If the mobile station entered the *Release Substate* with a base station extended
10 release indication, the mobile station shall perform the following:
 - 11 – The mobile station may store the current service configuration (that is, both
12 the Service Configuration information record and the Non-negotiable Service
13 Configuration information record).
 - 14 – The mobile station shall send an *Extended Release Response Message* to the
15 base station.
 - 16 – The layer 3 shall terminate all Call Control instances.
 - 17 – The mobile station shall disable its transmitter, set RETURN_CAUSE_s to '0000',
18 and shall enter the *System Determination Substate* of the *Mobile Station*
19 *Initialization State* with a release indication (see 2.6.1.1).
- 20 • If the mobile station entered the *Release Substate* with a base station extended
21 release with mini message indication, then the mobile station shall perform the
22 following:
 - 23 – The mobile station shall send an *Extended Release Response Mini Message* to the
24 base station.
 - 25 – The layer 3 shall terminate all Call Control instances.
 - 26 – The mobile station shall disable its transmitter, set RETURN_CAUSE_s to '0000',
27 and shall enter the *System Determination Substate* of the *Mobile Station*
28 *Initialization State* with a release indication (see 2.6.1.1).
- 29 • If the mobile station enters the *Release Substate* with a redirection indication, the
30 mobile station shall send a *Release Order* (ORDQ = '00000000') and shall enter the
31 *System Determination Substate* of the *Mobile Station Initialization State* with a
32 redirection indication (see 2.6.1.1). The layer 3 shall terminate all Call Control
33 instances.
- 34 • If the mobile station enters the *Release Substate* with an NDSS off indication, the
35 mobile station shall send a *Release Order* (ORDQ = '00000000'), and shall enter the
36 *System Determination Substate* of the *Mobile Station Initialization State* with an NDSS
37 off indication (see 2.6.1.1). The layer 3 shall terminate all Call Control instances.

1 While in the *Release Substate*, the mobile station shall perform the following:

- 2 • If the substate timer expires, the layer 3 shall terminate all Call Control instances,
3 and the mobile station shall disable its transmitter and shall enter the *System*
4 *Determination Substate* of the *Mobile Station Initialization State* with a release
5 indication (see 2.6.1.1).
- 6 • The mobile station shall perform Forward Traffic Channel supervision as specified
7 in 2.6.4.1.8. If a loss of the Forward Traffic Channel is declared, the layer 3 shall
8 terminate all Call Control instances, and shall enter the *System Determination*
9 *Substate* of the *Mobile Station Initialization State* with a release indication (see
10 2.6.1.1).
- 11 • The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- 12 • The mobile station shall perform Forward Traffic Channel power control as specified
13 in 2.6.4.1.1.
- 14 • The mobile station shall perform handoff processing as specified in 2.6.6.
- 15 • If the Fundamental Channel is present, the mobile station shall transmit null
16 traffic, except when transmitting signaling traffic, on the Reverse Fundamental
17 Channel.
- 18 • The mobile station shall process Forward Traffic Channel signaling traffic and shall
19 discard other types of Forward Traffic Channel traffic.
- 20 • The mobile station shall perform registration timer maintenance as specified in
21 2.6.5.5.4.2.
- 22 • If Layer 3 receives a L2-Condition.Notification primitive from Layer 2 indicating an
23 acknowledgment failure, the layer 3 shall terminate all Call Control instances, and
24 the mobile station shall disable its transmitter and enter the *System Determination*
25 *Substate* of the *Mobile Station Initialization State* with a release indication (see
26 2.6.1.1).
- 27 • If the layer 3 receives an “enter traffic channel substate indication” from a Call
28 Control instance, the layer 3 shall enter the *Traffic Channel substate*.
- 29 • If the mobile station receives a message which is included in the following list, and
30 if every message field value is within its permissible range, the mobile station
31 shall process the message as described below and in accordance with the
32 message’s action time (see 2.6.4.1.5):
 - 33 1. *Alert With Information Message*: The layer 3 shall deliver this message to the
34 Call Control instance identified by NULL.
 - 35 2. *Candidate Frequency Search Control Message*: The mobile station shall process
36 the message as specified in 2.6.6.2.5.1.
 - 37 3. *Candidate Frequency Search Request Message*: The mobile station shall process
38 the message as specified in 2.6.6.2.5.1.

- 1 4. *Data Burst Message*
- 2 5. *Extended Alert With Information Message:* The mobile station shall perform the
- 3 following: If CON_REF_INCL_r equals '0', the layer 3 shall deliver this message to
- 4 the Call Control instance identified by NULL; otherwise, the layer 3 shall
- 5 deliver this message to the Call Control instance identified by CON_REF_r.
- 6 6. *Extended Handoff Direction Message:* The mobile station shall process the
- 7 message as specified in 2.6.6.2.5.1.
- 8 7. *Extended Neighbor List Update Message:* The mobile station shall process the
- 9 message as specified in 2.6.6.2.6.3.
- 10 8. *Extended Supplemental Channel Assignment Message:* The mobile station shall
- 11 process the message as specified in 2.6.6.2.5.1.
- 12 9. *General Handoff Direction Message:* The mobile station shall process the
- 13 message as specified in 2.6.6.2.5.1.
- 14 10. *In-Traffic System Parameters Message:* The mobile station shall process the
- 15 message as specified in 2.6.4.1.4.
- 16 11. *Local Control Order*
- 17 12. *Mobile Assisted Burst Operation Parameters Message:* The mobile station shall
- 18 process the message as specified in 2.6.6.2.5.1.
- 19 13. *Lock Until Power-Cycled Order:* The mobile station shall disable its transmitter
- 20 and record the reason for the *Lock Until Power-Cycled Order* in the mobile
- 21 station's semi-permanent memory (LCKRSN_{S-p} equals the least-significant
- 22 four bits of ORDQ_r). The mobile station should notify the user of the locked
- 23 condition. The layer 3 shall terminate all Call Control instances. The layer 3
- 24 shall enter the *System Determination Substate* of the *Mobile Station Initialization*
- 25 *State* with a lock indication (see 2.6.1.1), and shall not enter the *System Access*
- 26 *State* again until after the next mobile station power-up or until it has received
- 27 an *Unlock Order*. This requirement shall take precedence over any other
- 28 mobile station requirement specifying entry to the *System Access State*.
- 29 14. *Maintenance Required Order:* The mobile station shall record the reason for the
- 30 *Maintenance Required Order* in the mobile station's semi-permanent memory
- 31 (MAINTRSN_{S-p} equals the least-significant four bits of ORDQ_r). The mobile
- 32 station shall remain in the unlocked condition. The mobile station should
- 33 notify the user of the maintenance required condition.
- 34 15. *Mobile Station Registered Message:* The mobile station shall process the
- 35 message as specified in 2.6.5.5.4.3.
- 36 16. *Mobile Assisted Burst Operation Parameters Message:* The mobile station shall
- 37 process the message as specified in 2.6.6.2.5.1.
- 38 17. *Neighbor List Update Message:* The mobile station shall process the message as
- 39 specified in 2.6.6.2.6.3.

18. *Outer Loop Report Request Order*: The mobile station shall send the *Outer Loop Report Message* in assured mode to the base station.
19. *Power Control Message*: The mobile station shall process the message as specified in 2.6.4.1.1.3.
20. *Power Control Parameters Message*: The mobile station shall process the message as specified in 2.6.4.1.1.2.
21. *Power Up Function Message*: The mobile station shall process the message as specified in 2.6.4.1.7.1.
22. *Power Up Function Completion Message*: The mobile station shall process the message as specified in 2.6.4.1.7.3.
23. *Release Order*: The mobile station shall disable its transmitter. The layer 3 shall terminate all Call Control instances. If the mobile station enters the *Release Substate* with a power-down indication, the mobile station may power down; otherwise, the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
24. *Retrieve Parameters Message*: The mobile station shall send, within T_{56m} seconds, a *Parameters Response Message*.
25. *Retry Order*: The mobile station shall process the order as follows:
 - If $RETRY_TYPE_r$ is equal to '000', the mobile station shall set $RETRY_DELAY_s[RETRY_TYPE]$ to '0', where $RETRY_TYPE$ is equal to '001', '010', or '011'.
 - If $RETRY_TYPE_r$ is equal to '001', then the mobile station shall perform the following:
 - If $RETRY_DELAY_r$ is equal to '00000000', then the mobile station shall set $RETRY_DELAY_s[RETRY_TYPE_r]$ to 0.
 - If $RETRY_DELAY_r$ is not equal to '00000000' the mobile station shall set $RETRY_DELAY_s[RETRY_TYPE_r]$ as follows:
 - + If the most significant bit of the $RETRY_DELAY_r$ is 0, set $RETRY_DELAY_UNIT_s$ to 1000ms. If the most significant bit of the $RETRY_DELAY_r$ is '1', set $RETRY_DELAY_UNIT_s$ to 60000ms.
 - + The mobile station shall set $RETRY_DELAY_VALUE_s$ to the seven least significant bits of $RETRY_DELAY_r$.
 - + The mobile station shall store the next system time 80 ms boundary + $RETRY_DELAY_VALUE_s \times RETRY_DELAY_UNIT_s$ ms as $RETRY_DELAY_s[RETRY_TYPE_r]$.

- 1 26. *Service Option Control Message*: The mobile station shall process the message
2 in accordance with the requirements for the active service subfunction (see
3 2.6.4.1.2.2).
- 4 27. *Service Option Control Order*: The mobile station shall process the message in
5 accordance with the requirements for the active service subfunction (see
6 2.6.4.1.2.2).
- 7 28. *Service Redirection Message*: The mobile station shall disable its transmitter. If
8 the mobile station enters the *Release Substate* with a power-down indication,
9 the mobile station may power down (if powering down, the layer 3 shall
10 terminate all Call Control instances); otherwise, the mobile station shall
11 process the message as follows:
- 12 • If RECORD_TYPE_r is '00000000', the mobile station shall do the following:
 - 13 – The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
 - 14 – If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
15 TMSI_CODE_{s-p} to '1'.
 - 16 – The mobile station shall disable the full-TMSI timer.
 - 17 – The layer 3 shall send a "release indication" to all Call Control
18 instances, and shall enter the *Release Substate* with an NDSS off
19 indication (see 6.6.1.1).
 - 20 • If RECORD_TYPE is not equal to '00000000', REDIRECT_TYPE_r is '1', and the
21 mobile station supports the band class and operating mode specified in the
22 message, the mobile station shall do the following:
 - 23 – The mobile station shall store the redirection record received in the
24 message as REDIRECT_REC_s.
 - 25 – The mobile station shall set RETURN_IF_FAIL_s = RETURN_IF_FAIL_r.
 - 26 – If DELETE_TMSI_r is equal to '1', the mobile station shall set all the bits of
27 TMSI_CODE_{s-p} to '1'.
 - 28 – The mobile station shall disable the full-TMSI timer.
 - 29 – The layer 3 shall terminate all Call Control instances, and shall enter
30 the *System Determination Substate of the Mobile Station Initialization State*
31 with a redirection indication (see 6.6.1.1).
 - 32 • Otherwise, the mobile station shall discard the message and send a *Mobile*
33 *Station Reject Order* (ORDQ set to the applicable reason code as determined
34 from Table 6.7.3-1) within T_{56m} seconds.
- 35 29. *Status Request Message*: The mobile station shall send, within T_{56m} seconds, a
36 Status Response Message. If the message does not specify any qualification
37 information (QUAL_INFO_TYPE_r is equal to '00000000'), the mobile station shall

include the requested information records in the *Status Response Message*. If the message specifies a band class (QUAL_INFO_TYPE_r is equal to '00000001'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) in the *Status Response Message*. If the message specifies a band class and an operating mode (QUAL_INFO_TYPE_r is equal to '00000010'), the mobile station shall only include the requested information records for the specified band class (BAND_CLASS_r) and operating mode (OP_MODE_r) in the *Status Response Message*. If the message specifies a band class or a band class and an operating mode which are not supported by the mobile station, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00000110' (message requires a capability that is not supported by the mobile station). If the response to this message exceeds the allowable length, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001000' (response message would exceed the allowable length). If the message specifies an information record which is not supported by the mobile station for the specified band class and operating mode, the mobile station shall send a *Mobile Station Reject Order* with ORDQ set to '00001001' (information record is not supported for the specified band class and operating mode).

30. *Status Request Order*: If CDMABAND_s is equal to '00000', the mobile station shall send, a *Status Message* within T_{56m} seconds. The mobile station shall respond with information corresponding to the current band class and operating mode.
31. *Supplemental Channel Assignment Message*: The mobile station shall process the message as specified in 2.6.6.2.5.1.
32. *TMSI Assignment Message*: The mobile station shall store the TMSI zone and code as follows:
 - The mobile station shall store the length of the TMSI zone field by setting ASSIGNING_TMSI_ZONE_LEN_{s-p} to TMSI_ZONE_LEN_r;
 - The mobile station shall store the assigning TMSI zone number by setting the ASSIGNING_TMSI_ZONE_LEN_{s-p} least significant octets of ASSIGNING_TMSI_ZONE_{s-p} to TMSI_ZONE_r, and
 - The mobile station shall store the TMSI code by setting TMSI_CODE_{s-p} to TMSI_CODE_r.

The mobile station shall set the TMSI expiration time by setting TMSI_EXP_TIME_{s-p} to TMSI_EXP_TIME_r. The mobile station shall disable the full-TMSI timer. The mobile station shall then respond with a *TMSI Assignment Completion Message* within T_{56m} seconds.

33. *Universal Handoff Direction Message*: The mobile station shall process the

message as specified in 2.6.6.2.5.1.

34. *User Zone Reject Message*: The mobile station shall process this message as specified in 2.6.9.2.2.

35. *User Zone Update Message*: The mobile station shall process this message as specified in 2.6.9.2.2.

- If the mobile station receives a message that is not included in the above list or cannot be processed, the mobile station shall discard the message and send a *Mobile Station Reject Order* (ORDQ set to the applicable reason code as determined from Table 2.7.3-1) within T_{56m} seconds. If the mobile station receives a Call Control message (see 2.6.10) which is directed to a Call Control instance that does not exist, the mobile station shall send a *Mobile Station Reject Order* with ORDQ field set to '00010010' (no call control instance present with the specified identifier) to the base station within T_{56m} seconds as follows: if the received message does not contain a CON_REF_INCL field or if the CON_REF_INCL field is set to '0', the mobile station shall set the CON_REF_INCL field of the order to '0'; otherwise, the mobile station shall set the CON_REF field of the order to the value of the CON_REF field of the received message.
- If the bits of $TMSI_CODE_{S-P}$ are not all equal to '1', and if System Time (in 80 ms units) exceeds $TMSI_EXP_TIME_{S-P} \times 2^{12}$, the mobile station shall set all the bits of $TMSI_CODE_{S-P}$ to '1' within T_{66m} seconds.
- If the full-TMSI timer expires or has expired, the mobile station shall set all the bits of $TMSI_CODE_{S-P}$ to '1'. The mobile station shall update the registration variables as described in 2.6.5.5.2.5.

2.6.5 Registration

2.6.5.1 Forms of Registration

Registration is the process by which the mobile station notifies the base station of its location, status, identification, slot cycle, and other characteristics. The mobile station informs the base station of its location and status so that the base station can efficiently page the mobile station when establishing a mobile station terminated call. For operation in the slotted mode, the mobile station supplies the SLOT_CYCLE_INDEX parameter so that the base station can determine which slots the mobile station is monitoring. The mobile station supplies the station class mark and the protocol revision number so that the base station knows the capabilities of the mobile station.

The CDMA system supports ten different forms of registration:

1. Power-up registration. The mobile station registers when it powers on, switches from using a different PCS frequency block, switches from using a different band class, switches from using an alternative operating mode, or switches from using the analog system.

- 1 2. Power-down registration. The mobile station registers when it powers off if
2 previously registered in the current serving system.
- 3 3. Timer-based registration. The mobile station registers when a timer expires.
- 4 4. Distance-based registration. The mobile station registers when the distance
5 between the current base station and the base station in which it last registered
6 exceeds a threshold.
- 7 5. Zone-based registration. The mobile station registers when it enters a new zone.
- 8 6. Parameter-change registration. The mobile station registers when certain of its
9 stored parameters change or when it enters a new system.
- 10 7. Ordered registration. The mobile station registers when the base station requests
11 it.
- 12 8. Implicit registration. When a mobile station successfully sends an *Origination*
13 *Message* or *Page Response Message*, the base station can infer the mobile station's
14 location. This is considered an implicit registration.
- 15 9. Traffic Channel registration. Whenever the base station has registration
16 information for a mobile station that has been assigned to a Traffic Channel, the
17 base station can notify the mobile station that it is registered.
- 18 10. User Zone Registration. The mobile station registers when it selects an active User
19 Zone (see 2.6.9.1.2).

20 The first five forms of registration, as a group, are called autonomous registration and are
21 enabled by roaming status (see 2.6.5.3). Parameter-change registration is independent of
22 roaming status. Ordered registration is initiated by the base station through an *Order*
23 *Message*. Implicit registration does not involve the exchange of any registration messages
24 between the base station and the mobile station. The base station can obtain registration
25 information by sending the *Status Request Message* to the mobile station on either the f-
26 csch or the f-dsch. The base station can obtain limited registration information by sending
27 the *Status Request Order* to the mobile station on the f-dsch. The mobile station can be
28 notified that it is registered through the *Mobile Station Registered Message*.

29 Any of the various forms of autonomous registration and parameter-change registration
30 can be enabled or disabled. The forms of registration that are enabled and the
31 corresponding registration parameters are communicated in the *System Parameters*
32 *Message* on the Paging Channel, or the *ANSI-41 System Parameters Message* on the
33 Broadcast Control Channel.

34 In addition, the mobile station may enable or disable autonomous registration for each
35 type of roaming described in 2.6.5.3.

36 2.6.5.1.1 Power-Up Registration

37 Power-up registration is performed when the mobile station is turned on. To prevent
38 multiple registrations when power is quickly turned on and off, the mobile station delays
39 T_{57m} seconds before registering, after entering the *Mobile Station Idle State*.

The mobile station shall maintain a power-up/initialization timer. While the power-up/initialization timer is active, the mobile station shall not make registration access attempts.

2.6.5.1.2 Power-Down Registration

Power-down registration is performed when the user directs the mobile station to power off. If power-down registration is performed, the mobile station does not power off until after completing the registration attempt.

The mobile station does not perform power-down registration if it has not previously registered in the system that corresponds to the current SID_S and NID_S (see 2.6.5.5.2.4).

2.6.5.1.3 Timer-Based Registration

Timer-based registration causes the mobile station to register at regular intervals. Its use also allows the system to automatically deregister mobile stations that did not perform a successful power-down registration. Timer-based registration uses a Paging Channel or a Forward Common Control Channel slot counter (equivalent to a timer with time increments of 80 ms). Timer-based registration is performed when the counter reaches a maximum value ($REG_COUNT_MAX_S$) that is controlled by the base station via the REG_PRD field of the *System Parameters Message* or *ANSI-41 System Parameters Message*. The base station disables timer-based registration by setting REG_PRD to zero.

The mobile station shall maintain a timer-based registration counter (REG_COUNT_S). The mobile station shall compute and store the timer expiration count ($REG_COUNT_MAX_S$) as

$$REG_COUNT_MAX_S = \lceil 2^{REG_PRD/4} \rceil.$$

The mobile station shall maintain an indicator of timer-based registration timer enable status ($COUNTER_ENABLED_S$).

The counter is reset when the mobile station powers on and when the mobile station switches from different band classes, different serving systems, different PCS frequency blocks, and alternate operating modes. The counter is also reset after each successful registration.

Whenever the mobile station changes $COUNTER_ENABLED_S$ from NO to YES, it shall set REG_COUNT_S to a pseudorandom value between 0 and $REG_COUNT_MAX_S - 1$, using the pseudorandom number generator specified in 2.6.7.2.

If the mobile station is operating in the non-slotted mode, it shall increment the timer-based registration counter once per 80 ms whenever $COUNTER_ENABLED_S$ equals YES. If the mobile station is operating in slotted mode, it may increment the timer-based registration counter when it begins to monitor the Paging Channel (see 2.6.2.1.1.3) or the Forward Common Control Channel. A mobile station operating in the slotted mode shall

increment the counter by the same amount that the counter would have been incremented if the mobile station had been operating in the non-slotted mode.¹³

2.6.5.1.4 Distance-Based Registration

Distance-based registration causes a mobile station to register when the distance between the current base station and the base station in which it last registered exceeds a threshold. The mobile station determines that it has moved a certain distance by computing a distance measure based on the difference in latitude and longitude between the current base station and the base station where the mobile station last registered. If this distance measure exceeds the threshold value, the mobile station registers.

The mobile station stores the base station latitude (BASE_LAT_REG_{S-p}), the base station longitude (BASE_LONG_REG_{S-p}) and the registration distance (REG_DIST_REG_{S-p}), of the base station to which the first access probe (for a *Registration Message*, *Origination Message*, or *Page Response Message* sent on the r-csch) was transmitted after entering the *System Access State*. The mobile station shall compute the current base station's distance from the last registration point (DISTANCE) as:

$$\text{DISTANCE} = \left\lfloor \frac{\sqrt{(\Delta\text{lat})^2 + (\Delta\text{long})^2}}{16} \right\rfloor$$

where

$$\Delta\text{lat} = \text{BASE_LAT}_S - \text{BASE_LAT_REG}_{S-p}$$

and

$$\Delta\text{long} = (\text{BASE_LONG}_S - \text{BASE_LONG_REG}_{S-p}) \times \cos(\pi/180 \times \text{BASE_LAT_REG}_{S-p}/14400).$$

The mobile station shall compute DISTANCE with an error of no more than $\pm 5\%$ of its true value when $|\text{BASE_LAT_REG}_{S-p}/14400|$ is less than 60 and with an error of no more than $\pm 7\%$ of its true value when $|\text{BASE_LAT_REG}_{S-p}/14400|$ is between 60 and 70.¹⁴

2.6.5.1.5 Zone-Based Registration

Registration zones are groups of base stations within a given system and network. A base station's zone assignment is identified by the REG_ZONE field of the *System Parameters Message* or *ANSI-41 System Parameters Message*.

Zone-based registration causes a mobile station to register whenever it moves into a new zone, not on its internally stored list of visited registration zones. A zone is added to the

¹³ For example, if the mobile station uses a 2.56 second slot cycle, then it may increment the counter by 32 every time it becomes active.

¹⁴ BASE_LAT and BASE_LONG are given in units of 1/4 seconds. BASE_LAT/14400 and BASE_LONG/14400 are in units of degrees.

list whenever a registration (including implicit registration) occurs, and is deleted upon expiration of a timer. After a system access, timers are enabled for every zone except one that was successfully registered by the access.

A mobile station can be registered in more than one zone. Zones are uniquely identified by a zone number (REG_ZONE) plus the SID and NID of the zone.

The mobile station shall store a list of the zones in which the mobile station has registered (ZONE_LIST_S). Each entry in ZONE_LIST_S shall include the zone number (REG_ZONE) and the (SID, NID) pair for the zone. The mobile station shall be capable of storing at least N_{9m} entries in ZONE_LIST_S. A base station shall be considered to be in ZONE_LIST_S only if the base station's REG_ZONE, SID and NID are found in an entry in ZONE_LIST_S. The mobile station provides storage for one entry of ZONE_LIST_S in semi-permanent memory, ZONE_LIST_{S-p} (see 2.3.4).

The mobile station shall maintain a zone list entry timer for each entry in ZONE_LIST_S. When an entry in ZONE_LIST_S is removed from the list, the corresponding zone list entry timer shall be disabled. The timer duration shall be as determined from the stored value of ZONE_TIMER_S using Table 3.7.2.3.2.1-1. The mobile station shall provide a means to examine each timer's value while the timer is active, so that the age of list entries can be compared.

If the mobile station supports Band Class 1, the mobile station shall maintain an identifier of the PCS frequency block for each entry in ZONE_LIST_S (see 2.1.1.1 of [2]). When the mobile station adds a zone to ZONE_LIST_S, the mobile station shall include the identifier for the PCS frequency block.¹⁵

If the mobile station supports multiple band classes, the mobile station shall maintain an identifier of the band class for each entry in ZONE_LIST_S (see 2.1.1.1 of [2]). When the mobile station adds a zone to ZONE_LIST_S, the mobile station shall include the identifier for the band class.

The base station controls the maximum number of zones in which a mobile station may be considered registered, by means of the TOTAL_ZONES field of the *System Parameters Message* or *ANSI-41 System Parameters Message*. When an entry is added to the zone list, or if TOTAL_ZONES is decreased, the mobile station removes entries from the zone list if there are more entries than allowed by the setting of TOTAL_ZONES.

Whenever ZONE_LIST_S contains more than TOTAL_ZONES_S entries, the mobile station shall delete the excess entries according to the following rules:

- If TOTAL_ZONES_S is equal to zero, the mobile station shall delete all entries.

¹⁵ The mobile station need not maintain a separate identifier for Band Class Q as the least significant bit of the SID identifies the serving system.

- If $TOTAL_ZONES_S$ is not equal to zero, the mobile station shall delete those entries having active zone list entry timers, starting with the oldest entry, as determined by the timer values, and continuing in order of decreasing age until no more than $TOTAL_ZONES_S$ entries remain.

The mobile station shall store a list of the systems/networks in which the mobile station has registered ($SID_NID_LIST_S$). Each entry in $SID_NID_LIST_S$ shall include the (SID, NID) pair for the system/network. The mobile station shall be capable of storing N_{10m} entries in $SID_NID_LIST_S$. A base station shall be considered to be in the $SID_NID_LIST_S$ only if the base station's SID and NID are found in an entry in $SID_NID_LIST_S$. The mobile station shall provide storage for one entry of $SID_NID_LIST_S$ in semi-permanent memory ($SID_NID_LIST_{S-p}$).

If the mobile station supports Band Class 1, the mobile station shall maintain an identifier of the PCS frequency block for each entry in $SID_NID_LIST_S$ (see 2.1.1.1 of [2]). When the mobile station adds an entry to $SID_NID_LIST_S$, the mobile station shall include the identifier for the PCS frequency block.

If the mobile station supports multiple band classes, the mobile station shall maintain an identifier of the band class for each entry in $SID_NID_LIST_S$ (see 2.1.1.1 of [2]). When the mobile station adds an entry to $SID_NID_LIST_S$, the mobile station shall include the identifier for the band class.

The mobile station shall maintain a SID/NID list entry timer for each entry in $SID_NID_LIST_S$. When an entry in $SID_NID_LIST_S$ is removed from the list, the corresponding SID/NID list entry timer shall be disabled. The timer duration shall be as determined from the stored value of $ZONE_TIMER_S$ using Table 3.7.2.3.2.1-1. The mobile station shall provide a means to examine each timer's value while the timer is active, so that the age of list entries can be compared.

Whenever $SID_NID_LIST_S$ contains more than N_{10m} entries, the mobile station shall delete the excess entries according to the following rule:

- The mobile station shall delete those entries having active SID/NID list entry timers, starting with the oldest entry, as determined by the timer values, and continuing in order of decreasing age.

Whenever $MULT_SIDS_S$ is equal to '0' and SID_NID_LIST contains entries with different SIDs, the mobile station shall delete the excess entries according to the following rules:

- If the SID/NID entry timer for any entry is disabled, the mobile station shall delete all entries not having the same SID as the entry whose timer is disabled;
- Otherwise, the mobile station shall delete all entries not having the same SID as the newest entry in SID_NID_LIST , as determined by the timer values.

Whenever $MULT_NIDS_S$ is equal to '0', and SID_NID_LIST contains more than one entry for any SID, the mobile station shall delete the excess entries for each SID according to the following rules:

- If the SID/NID entry timer for any entry is disabled, the mobile station shall delete all entries for that SID except the entry whose timer is disabled;
- For all other SIDs, the mobile station shall delete all entries for each SID except the newest entry, as determined by the timer values.

2.6.5.1.6 Parameter-Change Registration

Parameter-change registration is performed when a mobile station modifies any of the following stored parameters:

- The preferred slot cycle index ($SLOT_CYCLE_INDEX_p$)
- The station class mark (SCM_p)
- The call termination enabled indicators ($MOB_TERM_HOME_p$, $MOB_TERM_FOR_SID_p$, and $MOB_TERM_FOR_NID_p$)

Parameter-change registration is also performed when any of the following capabilities supported by the mobile station changes:

- The band classes
- The power classes
- The radio configurations
- The operating modes

Parameter-change registration is performed whenever there is no entry in the mobile station's $SID_NID_LIST_S$ that matches the base station's SID and NID.

Parameter-change registration is independent of the roaming status of the mobile station.¹⁶

Whenever a parameter changes, the mobile station shall delete all entries from $SID_NID_LIST_S$.

2.6.5.1.7 Ordered Registration

The base station can command the mobile station to register by sending a *Registration Request Order*. Ordered registration is performed in the *Mobile Station Order and Message Processing Operation* (2.6.2.4). Requirements are specified in 2.6.5.5.2.3.

¹⁶ The indicator $REG_ENABLED$ does not govern parameter-change registration.

2.6.5.1.8 Implicit Registration

Whenever an *Origination Message* or *Page Response Message* is sent, the base station can infer the location of the mobile station. This is considered an implicit registration. Requirements are specified in 2.6.5.5.3.

2.6.5.1.9 Traffic Channel Registration

While a mobile station is assigned a Traffic Channel, the mobile station is notified that it is registered through the *Mobile Station Registered Message*. Requirements are specified in 2.6.5.5.4.3.

2.6.5.1.10 User Zone Registration

User Zone registration is performed when the mobile station selects an active User Zone (see 2.6.9.2.1).

2.6.5.2 Systems and Networks

A base station is a member of a cellular or PCS system and a network. A network is a subset of a system.

Systems are labeled with an identification called the system identification or SID; networks within a system are given a network identification or NID. A network is uniquely identified by the pair (SID, NID). The SID number 0 is a reserved value. The NID number 0 is a reserved value indicating all base stations that are not included in a specific network. The NID number 65535 ($2^{16}-1$) is a reserved value the mobile station may use for roaming status determination (see 2.6.5.3) to indicate that the mobile station considers the entire SID (regardless of NID) as home (non-roaming).

Figure 2.6.5.2-1 shows an example of systems and networks. SID *i* contains three networks labeled *t*, *u*, and *v*. A base station in system *i* that is not in one of these three networks is in NID 0.

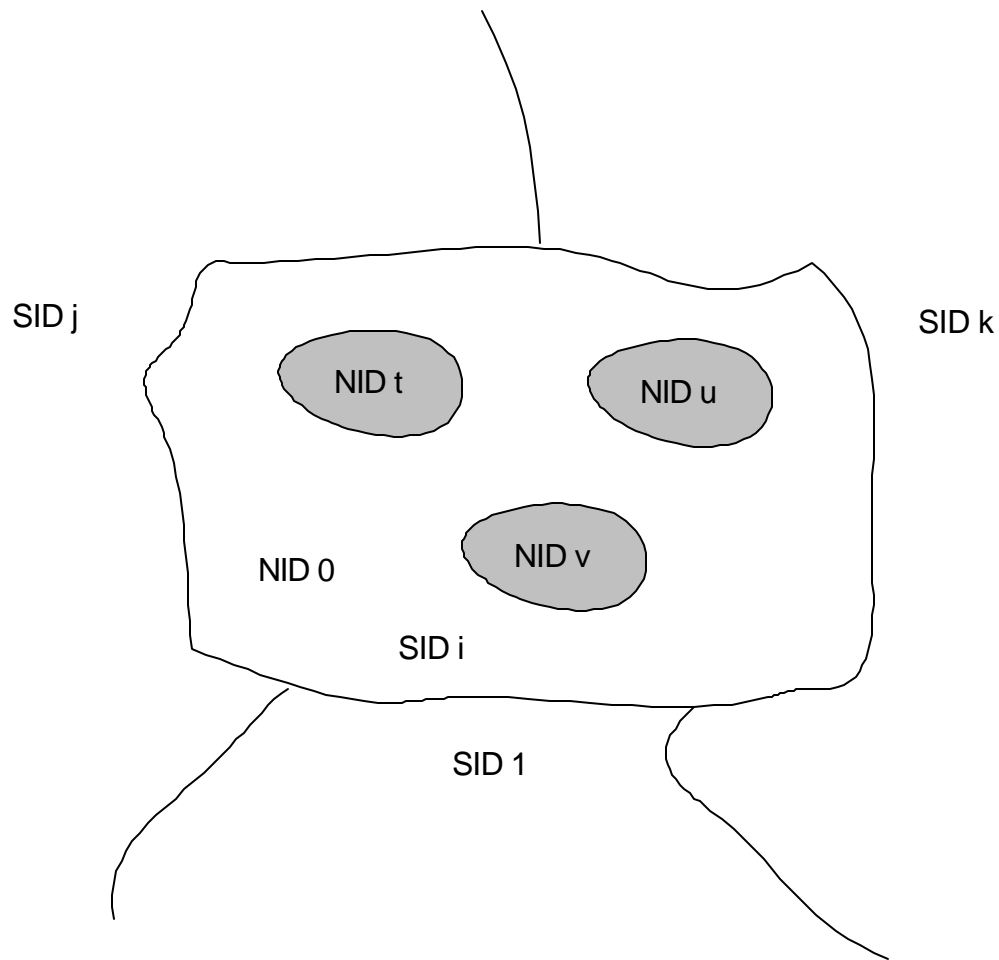


Figure 2.6.5.2-1. Systems and Networks Example

2.6.5.3 Roaming

The mobile station has a list of one or more home (non-roaming) (SID, NID) pairs. A mobile station is roaming if the stored (SID_S, NID_S) pair (received in the *System Parameters Message* on the Paging Channel, or the *ANSI-41 System Parameters Message* on the Broadcast Control Channel) does not match one of the mobile station's non-roaming (SID, NID) pairs. Two types of roaming are defined: A mobile station is a foreign NID roamer if the mobile station is roaming and there is some (SID, NID) pair in the mobile station's (SID, NID) list for which SID is equal to SID_S. A mobile station is a foreign SID roamer if there is no (SID, NID) pair in the mobile station's (SID, NID) list for which SID is equal to

1 SID_s¹⁷. The mobile station may use the special NID value 65535 to indicate that the
 2 mobile station considers all NIDs within a SID to be non-roaming (i.e., that the mobile
 3 station is not roaming when operating with any base station in that system).

4 The mobile station shall store three 1-bit parameters in its permanent memory (see 2.3.8).
 5 These parameters are MOB_TERM_HOME_p, MOB_TERM_FOR_SID_p, and MOB_TERM-
 6 _FOR_NID_p. The mobile station shall set MOB_TERM_HOME_p to '1' if the mobile station is
 7 configured to receive mobile station terminated calls when using a home (SID, NID) pair;
 8 otherwise, the mobile station shall set MOB_TERM_HOME_p to '0'. The mobile station shall
 9 set MOB_TERM_FOR_SID_p to '1' if the mobile station is configured to receive mobile station
 10 terminated calls when it is a foreign SID roamer; otherwise MOB_TERM_FOR_SID_p shall be
 11 set to '0'. The mobile station shall set MOB_TERM_FOR_NID_p to '1' if the mobile station is
 12 configured to receive mobile station terminated calls when it is a foreign NID roamer;
 13 otherwise the mobile station shall set MOB_TERM_FOR_NID_p to '0'.

14 The mobile station determines the registration status using these parameters and the
 15 HOME_REG, FOR_NID_REG, and FOR_SID_REG fields of the *System Parameters Message* or
 16 *ANSI-41 System Parameters Message*.

17 The mobile station shall store a mobile station call termination enabled indicator,
 18 MOB_TERM_s. The mobile station shall set MOB_TERM_s to YES if any of the following
 19 conditions is met:

- 20 • The mobile station is not roaming, and MOB_TERM_HOME_p is equal to '1'; or
- 21 • The mobile station is a foreign NID roamer and MOB_TERM_FOR_NID_p is equal to
 22 '1'; or
- 23 • The mobile station is a foreign SID roamer and MOB_TERM_FOR_SID_p is equal to
 24 '1'; otherwise the mobile station shall set MOB_TERM_s to NO.

25 The mobile station shall store a registration status indicator, REG_ENABLED_s. The mobile
 26 station shall set the indicator REG_ENABLED_s to YES if any of the following conditions is
 27 met for the mobile station:

- 28 • The mobile station is not roaming, and both HOME_REG_s and MOB_TERM_HOME_p
 29 are equal to '1'; or

¹⁷ For example, suppose a mobile station has the following SID, NID list: (2, 3), (2, 0), (3, 1). If the base station (SID, NID) pair is (2, 3), then the mobile station is not roaming because the (SID, NID) pair is in the list. If the base station (SID, NID) pair is (2, 7), then the mobile station is a foreign NID roamer, because the SID 2 is in the list, but the (SID, NID) pair (2, 7) is not in the list. If the base station (SID, NID) pair is (4, 0), then the mobile station is a foreign SID roamer, because SID 4 is not in the list.

- 1 • The mobile station is a foreign NID roamer and both FOR_NID_REG_S and
2 MOB_TERM_FOR_NID_P are equal to '1'; or
- 3 • The mobile station is a foreign SID roamer and both FOR_SID_REG_S and
4 MOB_TERM_FOR_SID_P are equal to '1'; otherwise the mobile station shall set
5 REG_ENABLED_S to NO.

6 The mobile station performs autonomous registrations if REG_ENABLED_S is YES.

7 2.6.5.4 Registration Timers and Indicators

8 The mobile station shall provide the following registration timers:

- 9 • Power-up/initialization timer (see 2.6.5.1.1).
- 10 • Timer-based registration timer (see 2.6.5.1.3).
- 11 • Zone list entry timers (see 2.6.5.1.5).
- 12 • SID/NID list entry timers (see 2.6.5.1.5).

13 The mobile station shall provide a means of enabling and disabling each timer. When a
14 timer is disabled, it shall not be considered expired. A timer that has been enabled is
15 referred to as active.

16 2.6.5.5 Registration Procedures

17 2.6.5.5.1 Actions in the Mobile Station Initialization State

18 2.6.5.5.1.1 Power-Up or Change to a Different Operating Mode, Band Class, Serving System, 19 or PCS Frequency Block

20 Upon power-up, the mobile station shall perform the following actions:

- 21 • Delete all entries of ZONE_LIST_S.
- 22 • If ZONE_LIST_{S-P} contains an entry, copy the entry to ZONE_LIST_S and disable the
23 corresponding entry timer.
- 24 • Delete all entries of SID_NID_LIST_S.
- 25 • If SID_NID_LIST_{S-P} contains an entry, copy the entry to SID_NID_LIST_S and disable
26 the corresponding entry timer.
- 27 • Set the registered flag (REGISTERED_S) to NO.
- 28 • Set timer-based registration enable status (COUNTER_ENABLED_S) to NO.
- 29 • Set autonomous registration enable status (REG_ENABLED_S) to NO.
- 30 • Set RETURN_CAUSE_S to '0000'.

31 Upon switching from using CDMA in a different band class, from using CDMA in a different
32 Band Class 0 serving system, from using CDMA in a different Band Class 1 frequency

block, or from using the 800 MHz analog system, the mobile station shall perform the following actions:

- Set timer-based registration enable status (COUNTER_ENABLED_S) to NO.
- Set autonomous registration enable status (REG_ENABLED_S) to NO.
- Set RETURN_CAUSE_S to '0000'.

2.6.5.5.1.2 Timer Maintenance

While in the *Mobile Station Initialization State*, the mobile station shall update all active registration timers (see 2.6.5.4). If any timer expires while in this state, the mobile station shall preserve the expiration status so that further action can be taken in the *Mobile Station Idle State*.

2.6.5.5.1.3 Entering the Mobile Station Idle State

Before entering the *Mobile Station Idle State* from the *Mobile Station Initialization State*, the mobile station shall perform the following action:

- If REGISTERED_S is equal to NO, enable the power-up/initialization timer with an expiration time of T_{57m} seconds (see 2.6.5.1.1) only when the mobile station is entering this state with a power-up indication.

2.6.5.5.2 Actions in the Mobile Station Idle State

Requirements in this section and its subsections apply only when the mobile station is in the *Mobile Station Idle State*.

2.6.5.5.2.1 Idle Registration Procedures

These procedures are performed whenever the mobile station is in the *Mobile Station Idle State* (see 2.6.2.1.3).

While in the *Mobile Station Idle State*, the mobile station shall update all active registration timers (see 2.6.5.4).

If the power-up/initialization timer has expired or is disabled, the mobile station shall perform the following actions in the order given. If any action necessitates a registration, the mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* (see 2.6.3) with a registration indication.

1. The timer-based registration timer shall be enabled (COUNTER_ENABLED_S = YES) and the timer count (REG_COUNT_S) shall be set to a pseudorandom number as specified in 2.6.5.1.3, if the following conditions are met:
 - a. COUNTER_ENABLED_S is equal to NO; and
 - b. The stored configuration parameters are current (see 2.6.2.2); and
 - c. REG_ENABLED_S is equal to YES; and

- 1 d. REG_PRD_S is not equal to zero.
- 2 2. If any zone list entry timer (see 2.6.5.1.5) has expired, the mobile station shall
- 3 delete the corresponding entry from ZONE_LIST_S.
- 4 3. If any SID/NID list entry timer (see 2.6.5.1.5) has expired, the mobile station shall
- 5 delete the corresponding entry from SID_NID_LIST_S.
- 6 4. The mobile station shall perform power-up registration, as specified in 2.6.5.1.1, if
- 7 all the following conditions are met:
- 8 a. POWER_UP_REG_S is equal to '1'; and
- 9 b. The stored configuration parameters are current (see 2.6.2.2); and
- 10 c. REGISTERED_S is equal to NO, and
- 11 d. REG_ENABLED_S is equal to YES.
- 12 5. The mobile station shall perform parameter-change registration (see 2.6.5.1.6) if all
- 13 the following conditions are met:
- 14 a. PARAMETER_REG_S is equal to '1'; and
- 15 b. The stored configuration parameters are current (see 2.6.2.2); and
- 16 c. There is no entry of SID_NID_LIST_S whose SID and NID fields match the stored
- 17 SID_S and NID_S.
- 18 6. The mobile station shall perform timer-based registration (see 2.6.5.1.3) if all the
- 19 following conditions are met:
- 20 a. COUNTER_ENABLED_S is equal to YES; and
- 21 b. The stored configuration parameters are current (see 2.6.2.2); and
- 22 c. REG_ENABLED_S is equal to YES; and
- 23 d. REG_COUNT_S is greater than or equal to REG_COUNT_MAX_S.
- 24 7. The mobile station shall perform distance-based registration (see 2.6.5.1.4) if all
- 25 the following conditions are met:
- 26 a. REG_DIST_S is not equal to zero; and
- 27 b. The stored configuration parameters are current (see 2.6.2.2); and
- 28 c. REG_ENABLED_S is equal to YES; and
- 29 d. The current base station's distance from the base station in which the mobile
- 30 station last registered (see 2.6.5.1.4) is greater than or equal to
- 31 REG_DIST_REG_{S-p}.
- 32 8. The mobile station shall perform zone-based registration (see 2.6.5.1.5) if all the
- 33 following conditions are met:

- 1 a. TOTAL_ZONES_S is not equal to zero; and
- 2 b. The stored configuration parameters are current (see 2.6.2.2); and
- 3 c. REG_ENABLED_S is equal to YES; and
- 4 d. There is no entry of ZONE_LIST_S whose SID, NID and REG_ZONE fields match
- 5 the stored SID_S, NID_S and REG_ZONE_S.
- 6 9. The mobile station shall perform User Zone registration (see 2.6.2.5.1.10) if it
- 7 selects an active User Zone (see 2.6.9.1.2).

8 2.6.5.5.2.2 Processing the Registration Fields of the System Parameters Message and

9 ANSI-41 System Parameters Message

10 When the mobile station processes the *System Parameters Message* or *ANSI-41 System*
 11 *Parameters Message*, it shall perform the following actions:

- 12 1. If REG_PRD_S is equal to zero, the mobile station shall set COUNTER_ENABLED_S to
- 13 NO.
- 14 2. If REG_PRD_S is not equal to zero, the mobile station shall set REG_COUNT_MAX_S as
- 15 specified in 2.6.5.1.3.
- 16 3. The mobile station shall update its roaming status and set REG_ENABLED_S as
- 17 specified in 2.6.5.3.
- 18 4. If ZONE_LIST_S contains more than TOTAL_ZONES_S entries, the mobile station shall
- 19 delete the excess entries according to the rules specified in 2.6.5.1.5.
- 20 5. If MULT_SIDS_S is equal to '0' and SID_NID_LIST contains entries with different
- 21 SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
- 22 6. If MULT_NIDS_S is equal to '0' and SID_NID_LIST contains more than one entry for
- 23 any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.

24 2.6.5.5.2.3 Ordered Registration

25 Ordered registration is performed after receiving a *Registration Request Order* while in the

26 *Mobile Station Order and Message Processing Operation* (see 2.6.2.4).

27 The mobile station shall enter the *Update Overhead Information Substate* of the *System*

28 *Access State* with a registration indication within T_{33m} seconds after the *Registration*

29 *Request Order* is received.

30 2.6.5.5.2.4 Power Off

31 These procedures are performed when the mobile station is directed by the user to power

32 off.

33 The mobile station shall perform the following actions:

- 1 • If an entry of ZONE_LIST_S does not have an active timer, copy that entry to
- 2 ZONE_LIST_{S-p} ; otherwise, delete any entry in ZONE_LIST_{S-p} .
- 3 • If an entry of SID_NID_LIST_S does not have an active timer, copy that entry to
- 4 $\text{SID_NID_LIST}_{S-p}$; otherwise, delete any entry in $\text{SID_NID_LIST}_{S-p}$.

5 The mobile station shall perform power-down registration (see 2.6.5.1.2) by entering the
6 *System Access State* with a registration indication within T_{33m} seconds after the user
7 directs the mobile station to power off, if all the following conditions are true:

- 8 • REG_ENABLED_S equals YES; and
- 9 • POWER_DOWN_REG_S equals '1'; and
- 10 • There is an entry of SID_NID_LIST_S for which the SID and NID fields are equal to
- 11 SID_S and NID_S ; and
- 12 • The power-up/initialization timer (see 2.6.5.1.1) is disabled or has expired.

13 2.6.5.5.2.5 Full-TMSI Timer Expiration

14 When the mobile station sets all the bits of TMSI_CODE_{S-p} to '1' upon expiration of the full-
15 TMSI timer (see 2.6.2), the mobile station shall delete all entries from SID_NID_LIST_S and
16 ZONE_LIST_S .

17 2.6.5.5.3 Actions in the System Access State

18 Requirements in this section and its subsections apply only when the mobile station is in
19 the *System Access State*.

20 2.6.5.5.3.1 Successful Access, Registration, or Implicit Registration

21 These procedures shall be performed after the mobile station receives confirmation of
22 delivery of a *Registration Message*, *Origination Message*, or *Page Response Message* sent on
23 the r-csch (see 2.6.3.1.2).

- 24 • Disable the power-up/initialization timer (see 2.6.5.1.1).
- 25 • If the mobile station supports the 800 MHz analog mode, set the First-Idle ID status
- 26 to enabled (see 2.6.3.11).
- 27 • Set DIGITAL_REG_{S-p} to '00000001'.
- 28 • Set REG_COUNT_S to zero.
- 29 • Set REGISTERED_S to YES.
- 30 • Delete all entries from ZONE_LIST_S belonging to a different band class (see 2.1.1.1
- 31 of [2]) than CDMABAND_S .
- 32 • If $\text{CDMABAND}_S = '00000'$, delete all entries from ZONE_LIST_S that have a SID from
- 33 a different serving system than SERVSYS_S .

- 1 • If CDMABAND_S = '00001', delete all entries from ZONE_LIST_S belonging to a
2 different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block
3 associated with SID_S.
- 4 • Add REG_ZONE_S, SID_S, and NID_S to ZONE_LIST_S if not already in the list. If
5 required, include the band class identifier and block identifier for the current band
6 and PCS frequency block as specified in 2.6.5.1.5.
- 7 • Disable the zone list entry timer for the entry of ZONE_LIST_S containing
8 REG_ZONE_S, SID_S, and NID_S. For any other entry of ZONE_LIST_S whose entry timer
9 is not active, enable the entry timer with the duration specified by ZONE_TIMER_S
10 (see 2.6.5.1.5).
- 11 • If ZONE_LIST_S contains more than TOTAL_ZONES_S entries, delete the excess
12 entries according to the rules specified in 2.6.5.1.5.
- 13 • Delete all entries from SID_NID_LIST_S belonging to a different band class (see
14 2.1.1.1 of [2]) than CDMABAND_S.
- 15 • If CDMABAND_S = '00000', delete all entries from SID_NID_LIST_S that have a SID
16 from a different serving system than SERVSYS_S.
- 17 • If CDMABAND_S = '00001', delete all entries from SID_NID_LIST_S belonging to a
18 different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block
19 associated with SID_S.
- 20 • Add SID_S and NID_S to SID_NID_LIST_S if not already in the list. If required, include
21 the band class identifier and block identifier for the current band and PCS
22 frequency block as specified in 2.6.5.1.5.
- 23 • Disable the SID/NID list entry timer for the entry of SID_NID_LIST_S containing
24 SID_S, and NID_S. For any other entry of SID_NID_LIST_S whose entry timer is not
25 active, enable the entry timer with the duration specified in 2.6.5.1.5.
- 26 • If SID_NID_LIST_S contains more than N_{10m} entries, delete the excess entries
27 according to the rules specified in 2.6.5.1.5.
- 28 • If MULT_SIDS_S is equal to '0' and SID_NID_LIST contains entries with different
29 SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
- 30 • If MULT_NIDS_S is equal to '0' and SID_NID_LIST contains more than one entry for
31 any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.
- 32 • Set the stored location of last registration (BASE_LAT_REG_{S-p} and BASE_LONG-
33 _REG_{S-p}) to the current base station's location (BASE_LAT_S and BASE_LONG_S). Set
34 the stored registration distance (REG_DIST_REG_{S-p}) to the current base station's
35 registration distance (REG_DIST_S).

These procedures shall be performed after the mobile station receives confirmation of delivery of any other message:

- If the mobile station supports the 800 MHz analog mode, set the First-Idle ID status to enabled (see 2.6.3.11).
- Set DIGITAL_REG_{S-p} to '00000001'.
- Delete all entries from ZONE_LIST_S belonging to a different band class (see 2.1.1.1 of [2]) than CDMABAND_S.
- If CDMABAND_S = '00000', delete from ZONE_LIST_S all entries from ZONE_LIST_S that have a SID from a different serving system than SERVSYS_S.
- If CDMABAND_S = '00001', delete all entries from ZONE_LIST_S belonging to a different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block associated with SID_S.
- For any entry of ZONE_LIST_S not matching REG_ZONE_S, SID_S, and NID_S and not having an active entry timer, enable the entry timer with the duration specified by ZONE_TIMER_S (see 2.6.5.1.5).
- Delete all entries from SID_NID_LIST_S belonging to a different band class (see 2.1.1.1 of [2]) than CDMABAND_S.
- If CDMABAND_S = '00000', delete from SID_NID_LIST_S all entries from SID_NID_LIST_S that have a SID from a different serving system than SERVSYS_S.
- If CDMABAND_S = '00001', delete all entries from SID_NID_LIST_S belonging to a different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block associated with SID_S.
- For any entry of SID_NID_LIST_S not matching SID_S and NID_S and not having an active entry timer, enable the entry timer with the duration specified by ZONE_TIMER_S (see 2.6.5.1.5).

2.6.5.5.3.2 Unsuccessful Access

These procedures are performed when the mobile station declares an access attempt failure when in the *System Access State* (see 2.6.3).

The mobile station shall perform the following actions:

- If the mobile station supports the 800 MHz analog mode, set the First-Idle ID status to enabled (see 2.6.3.11).
- Set DIGITAL_REG_{S-p} to '00000001'.
- Delete all entries from ZONE_LIST_S belonging to a different band class (see 2.1.1.1 of [2]) than CDMABAND_S.

- 1 • If CDMABAND_S = '00000', delete from ZONE_LIST_S all entries from ZONE_LIST_S that
2 have a SID from a different serving system than SERVSYS_S.
- 3 • If CDMABAND_S = '00001', delete all entries from ZONE_LIST_S belonging to a
4 different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block
5 associated with SID_S.
- 6 • For any entry of ZONE_LIST_S not matching REG_ZONE_S, SID_S, and NID_S and not
7 having an active entry timer, enable the entry timer with the duration specified by
8 ZONE_TIMER_S (see 2.6.5.1.5).
- 9 • Delete all entries from SID_NID_LIST_S belonging to a different band class (see
10 2.1.1.1 of [2]) than CDMABAND_S.
- 11 • If CDMABAND_S = '00000', delete from SID_NID_LIST_S all entries from
12 SID_NID_LIST_S that have a SID from a different serving system than SERVSYS_S.
- 13 • If CDMABAND_S = '00001', delete all entries from SID_NID_LIST_S belonging to a
14 different PCS frequency block (see 2.1.1.1 of [2]) than the PCS frequency block
15 associated with SID_S.
- 16 • For any entry of SID_NID_LIST_S not matching SID_S and NID_S and not having an
17 active entry timer, enable the entry timer with the duration specified by
18 ZONE_TIMER_S (see 2.6.5.1.5).

19 2.6.5.5.3.3 Power Off

20 These procedures are performed when the mobile station is directed by the user to power
21 off.

22 The mobile station shall perform the following actions:

- 23 • If an entry of ZONE_LIST_S does not have an active timer, copy that entry to
24 ZONE_LIST_{S-p}; otherwise, delete any entry in ZONE_LIST_{S-p}.
- 25 • If an entry of SID_NID_LIST_S does not have an active timer, copy that entry to
26 SID_NID_LIST_{S-p}; otherwise, delete any entry in SID_NID_LIST_{S-p}.

27 2.6.5.5.4 Actions in the Mobile Station Control on the Traffic Channel State

28 Requirements in this section and its subsections apply only when the mobile station is in
29 the *Mobile Station Control on the Traffic Channel State*.

30 2.6.5.5.4.1 Traffic Channel Initialization

31 Upon entering the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the*
32 *Traffic Channel State*, the mobile station shall set COUNTER_ENABLED_S to NO.

2.6.5.5.4.2 Timer Maintenance

While in the *Mobile Station Control on the Traffic Channel State*, the mobile station shall update all active registration timers.

If a zone list entry timer expires, the mobile station shall delete the corresponding entry from ZONE_LIST_S . If a SID/NID list entry timer expires, the mobile station shall delete the corresponding entry from SID_NID_LIST_S .

2.6.5.5.4.3 Processing the Mobile Station Registered Message

The mobile station receives the *Mobile Station Registered Message* on the Forward Traffic Channel when the mobile station is considered registered for the base station whose location and other parameters are included in the message.

The mobile station shall store the following parameters:

- System identification ($\text{SID}_S = \text{SID}_T$)
- Network identification ($\text{NID}_S = \text{NID}_T$)
- Registration zone ($\text{REG_ZONE}_S = \text{REG_ZONE}_T$)
- Number of registration zones to be retained ($\text{TOTAL_ZONES}_S = \text{TOTAL_ZONES}_T$)
- Zone timer length ($\text{ZONE_TIMER}_S = \text{ZONE_TIMER}_T$)
- Multiple SID storage indicator ($\text{MULT_SIDS}_S = \text{MULT_SIDS}_T$)
- Multiple NID storage indicator ($\text{MULT_NIDS}_S = \text{MULT_NIDS}_T$)
- Base station latitude ($\text{BASE_LAT}_S = \text{BASE_LAT}_T$)
- Base station longitude ($\text{BASE_LONG}_S = \text{BASE_LONG}_T$)
- Registration distance ($\text{REG_DIST}_S = \text{REG_DIST}_T$)

The mobile station shall perform the following actions:

- If the mobile station supports the 800 MHz analog mode, set the First-Idle ID status to enabled (see [6]).
- Set DIGITAL_REG_{S-p} to '00000001'.
- Add REG_ZONE_S , SID_S , and NID_S to ZONE_LIST_S if not already in the list. If required, include the band class identifier and block identifier for the current band and PCS frequency block as specified in 2.6.5.1.5.
- Delete all entries from ZONE_LIST_S belonging to a different band class (see 2.1.1.1 of [2]) than CDMABAND_S .

- 1 • Disable the zone list entry timer for the entry of $ZONE_LIST_S$ containing
2 REG_ZONE_S , SID_S , and NID_S . For any other entry of $ZONE_LIST_S$ whose entry timer
3 is not active, enable the entry timer with the duration specified by $ZONE_TIMER_S$
4 (see 2.6.5.1.5).
- 5 • If $ZONE_LIST_S$ contains more than $TOTAL_ZONES_S$ entries, delete the excess
6 entries according to the rules specified in 2.6.5.1.5.
- 7 • Delete all entries from $SID_NID_LIST_S$ belonging to a different band class (see [2])
8 than $CDMABAND_S$.
- 9 • Add SID_S and NID_S to $SID_NID_LIST_S$ if not already in the list. If required, include
10 the band class identifier and block identifier for the current band and PCS
11 frequency block as specified in 2.6.5.1.5.
- 12 • Disable the SID/NID list entry timer for the entry of $SID_NID_LIST_S$ containing
13 SID_S , and NID_S . For any other entry of $SID_NID_LIST_S$ whose entry timer is not
14 active, enable the entry timer with the duration specified in 2.6.5.1.5.
- 15 • If $SID_NID_LIST_S$ contains more than N_{10m} entries, delete the excess entries
16 according to the rules specified in 2.6.5.1.5.
- 17 • If $MULT_SIDS_S$ is equal to '0' and SID_NID_LIST contains entries with different
18 SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
- 19 • If $MULT_NIDS_S$ is equal to '0' and SID_NID_LIST contains more than one entry for
20 any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.
- 21 • Set the stored location of last registration ($BASE_LAT_REG_{S-p}$ and $BASE_LONG_REG_{S-p}$)
22 to the base station's location ($BASE_LAT_S$ and $BASE_LONG_S$). Set the
23 stored registration distance ($REG_DIST_REG_{S-p}$) to the base station's registration
24 distance (REG_DIST_S).
- 25 • Update its roaming status and set MOB_TERM_S as specified in 2.6.5.3. The mobile
26 station should indicate to the user whether the mobile station is roaming.

27 2.6.5.5.4.4 Power Off

28 These procedures are performed when the mobile station is directed by the user to power
29 off.

30 The mobile station shall perform the following actions:

- 31 • If an entry of $ZONE_LIST_S$ does not have an active timer, copy that entry to
32 $ZONE_LIST_{S-p}$; otherwise, delete the entry in $ZONE_LIST_{S-p}$ if $ZONE_LIST_{S-p}$
33 contains an entry.

- If an entry of $SID_NID_LIST_S$ does not have an active timer, copy that entry to $SID_NID_LIST_{S-p}$; otherwise, delete the entry in $SID_NID_LIST_{S-p}$ if $SID_NID_LIST_{S-p}$ contains an entry.

2.6.6 Handoff Procedures

This section presents an overview and mobile station requirements for handoffs occurring while the mobile station is in the *Mobile Station Control on the Traffic Channel State* (see 2.6.4). Mobile station requirements for handoffs occurring while the mobile station is in the *Mobile Station Idle State* are specified in 2.6.2.1.4.

2.6.6.1 Overview

2.6.6.1.1 Types of Handoff

The mobile station supports the following three handoff procedures while in the *Mobile Station Control on the Traffic Channel State*:

- *Soft Handoff*: A handoff in which the mobile station commences communications with a new base station without interrupting communications with the old base station. Soft handoff can only be used between CDMA Channels having identical Frequency Assignments. Soft handoff provides diversity of Forward Traffic Channels and Reverse Traffic Channel paths on the boundaries between base stations.
- *CDMA-to-CDMA Hard Handoff*: A handoff in which the mobile station is transitioned between disjoint sets of base stations, different band classes, different Frequency Assignments, or different frame offsets.
- *CDMA-to-Analog Handoff*: A handoff in which the mobile station is directed from a CDMA traffic channel to an analog voice channel.

The mobile station shall support soft handoffs on the same Frequency Assignment (see 2.6.6.2.7). The mobile station shall support CDMA-to-CDMA hard handoffs between band classes on which it supports CDMA operation (see 2.6.6.2.8). The mobile station shall support CDMA-to-Analog handoffs from band classes on which it supports CDMA operation to band classes on which it supports analog operation (see 2.6.6.2.9).

2.6.6.1.2 Pilot Sets

Within section 2.6.6 the term pilot refers to a Pilot Channel identified by a pilot sequence offset (see 3.1.3.2.1 of [2]), a Walsh function or a quasi-orthogonal function (see 3.1.3.2.2 of [2]), and a Frequency Assignment (see 2.1.1.1 of [2]). A pilot is associated with the Forward Traffic Channels in the same Forward CDMA Channel. All pilots in a pilot set have the same CDMA Frequency Assignment.

The mobile station searches for pilots on the current CDMA Frequency Assignment to detect the presence of CDMA Channels and to measure their strengths. When the mobile station detects a pilot of sufficient strength that is not associated with any of the Forward Traffic Channels assigned to it, it sends a *Pilot Strength Measurement Message* or an

1 *Extended Pilot Strength Measurement Message* to the base station. The base station can then
 2 assign a Forward Traffic Channel associated with that pilot to the mobile station and direct
 3 the mobile station to perform a handoff.

4 The pilot search parameters and the rules for *Pilot Strength Measurement Message* or
 5 *Extended Pilot Strength Measurement Message* transmission are expressed in terms of the
 6 following sets of pilots:

- 7 • *Active Set*: The pilots associated with the Forward Traffic Channels assigned to the
 8 mobile station.
- 9 • *Candidate Set*: The pilots that are not currently in the Active Set but have been
 10 received by the mobile station with sufficient strength to indicate that the
 11 associated Forward Traffic Channels could be successfully demodulated.
- 12 • *Neighbor Set*: The pilots that are not currently in the Active Set or the Candidate
 13 Set and are likely candidates for handoff.
- 14 • *Remaining Set*: The set of all possible pilots in the current system on the current
 15 CDMA Frequency Assignment, excluding the pilots in the Neighbor Set, the
 16 Candidate Set, and the Active Set. This set of possible pilots consists of pilots
 17 whose pilot PN sequence offset indices are integer multiples of PILOT_INC_S .

18 The base station may direct the mobile station to search for pilots on a different CDMA
 19 frequency to detect the presence of CDMA Channels and to measure their strengths. The
 20 mobile station reports the results of the search to the base station using the *Candidate*
 21 *Frequency Search Report Message*. Depending upon the pilot strength measurements
 22 reported in the *Candidate Frequency Search Report Message*, the base station can direct the
 23 mobile station to perform an inter-frequency hard handoff.

24 The pilot search parameters are expressed in terms of the following sets of pilots on the
 25 CDMA Candidate Frequency:

- 26 • *Candidate Frequency Neighbor Set*: A list of pilots on the CDMA Candidate Frequency.
- 27 • *Candidate Frequency Search Set*: A subset of the Candidate Frequency Neighbor Set
 28 that the base station may direct the mobile station to search.

29 2.6.6.2 Requirements

30 2.6.6.2.1 Pilot Search

31 For the pilot sets defined in 2.6.6.1.2, the base station sets the search window (range of PN
 32 offsets) in which the mobile station is to search for usable multipath components (i.e.,
 33 multipath components that the mobile station can use for demodulation of the associated
 34 Forward Traffic Channel) of the pilots in the set.

35 Search performance criteria are defined in [11].

This search shall be governed by the following:

- *Active Set and Candidate Set:* The search procedures for pilots in the Active Set and Candidate Set shall be identical. The search window size¹⁸ for each pilot in the Active Set and Candidate Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to SRCH_WIN_A_S. The mobile station should center the search window for each pilot of the Active Set and Candidate Set around the earliest arriving usable multipath component of the pilot. If the mobile station receives a value greater than or equal to 13 for SRCH_WIN_A_R, it may store and use the value 13 in SRCH_WIN_A_S.

Table 2.6.6.2.1-1. Searcher Window Sizes

SRCH_WIN_A SRCH_WIN_N SRCH_WIN_NGHR SRCH_WIN_R CF_SRCH_WIN_N	window_size (PN chips)	SRCH_WIN_A SRCH_WIN_N SRCH_WIN_NGHR SRCH_WIN_R CF_SRCH_WIN_N	window_size (PN chips)
0	4	8	60
1	6	9	80
2	8	10	100
3	10	11	130
4	14	12	160
5	20	13	226
6	28	14	320
7	40	15	452

Table 2.6.6.2.1-2. Search Window Offset

SRCH_OFFSET_NGHR CF_SRCH_OFFSET_NGHR	Offset (PN chips)
0	0
1	window_size/2
2	window_size
3	3 × window_size /2
4	- window_size /2
5	- window_size

¹⁸ The table defines the entire search range. For example, SRCH_WIN_A_S = 6 corresponds to a 28 PN chip search window or ±14 PN chips around the search window center.

6	$-3 \times \text{window_size} / 2$
7	Reserved

1

- 2 • *Neighbor Set:* If SRCH_WIN_NGHBR_INCL_S is equal to '1', the search window size for
3 each pilot in the Neighbor Set shall be the number of PN chips specified in Table
4 2.6.6.2.1-1, corresponding to SRCH_WIN_NGHBR_S associated with the pilot being
5 searched. If SRCH_WIN_NGHBR_INCL_S is equal to '0', the search window size for
6 each pilot in the Neighbor Set shall be the number of PN chips specified in Table
7 2.6.6.2.1-1 corresponding to SRCH_WIN_N_S. If SRCH_OFFSET_INCL_S is equal to '1',
8 the search window offset for each pilot in the Neighbor Set shall be the number of
9 PN chips specified in Table 2.6.6.2.1-2, corresponding to SRCH_OFFSET_NGHBR_S
10 associated with the pilot being searched. If SRCH_OFFSET_INCL_S is equal to '0',
11 the search window offset for each pilot in the Neighbor Set shall be zero PN chip.
12 The mobile station should center the search window for each pilot in the Neighbor
13 Set around the pilot's PN sequence offset plus the corresponding search window
14 offset, using timing defined by the mobile station's time reference (see [2]). If
15 SEARCH_PRIORITY_INCL_S is equal to '1', the mobile station should use
16 SEARCH_PRIORITY_S for the corresponding pilot to schedule its neighbor search. If
17 the mobile station supports hopping pilot beacons and the TIMING_INCL field of the
18 NGHBR_REC for the corresponding pilot is equal to '1', then the mobile station shall
19 use the information included in the NGHBR_TX_OFFSET, NGHBR_TX_DURATION,
20 and NGHBR_TX_PERIOD fields of the NGHBR_REC for the corresponding pilot to
21 schedule the time for searching the neighbor. If ADD_PILOT_REC_INCL field of the
22 NGHBR_REC for the corresponding pilot is equal to '1', the mobile station shall use
23 the information included in the NGHBR_PILOT_REC field for searching the
24 neighbor.
- 25 • *Remaining Set:* The search window size for each pilot in the Remaining Set shall be
26 the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to
27 SRCH_WIN_R_S. The mobile station should center the search window for each pilot
28 in the Remaining Set around the pilot's PN sequence offset, using timing defined by
29 the mobile station's time reference (see [2]). The mobile station should only search
30 for Remaining Set pilots whose pilot PN sequence offset indices are equal to integer
31 multiples of PILOT_INC_S.

- Candidate Frequency Search Set:* If CF_SRCH_WIN_NGHBRN_INCL_S is equal to '1', the search window size for each pilot in the Candidate Frequency Search set shall be the number of PN chips specified in Table 2.6.6.2.1-1, corresponding to SRCH_WIN_NGHBR_S associated with the pilot being searched. If CF_SRCH_WIN_NGHBR_INCL_S is equal to '0', the search window size for each pilot in the Candidate Frequency Search Set shall be the number of PN chips specified in Table 2.6.6.2.1-1 corresponding to CF_SRCH_WIN_N_S. If CF_SRCH_OFFSET_INCL_S is equal to '1', the search window offset for each pilot in the Candidate Frequency Search Set shall be the number of PN chips specified in Table 2.6.6.2.1-2, corresponding to SRCH_OFFSET_NGHBR_S associated with the pilot being searched. If CF_SRCH_OFFSET_INCL_S is equal to '0', the search window offset for each pilot in the Candidate Frequency Search Set shall be zero PN chip. The mobile station should center the search window for each pilot in the Candidate Frequency Search Set around the pilot's PN sequence offset plus the corresponding search window offset using timing defined by the mobile station's time reference (see [2]). If CF_SEARCH_PRIORITY_INCL_S is equal to '1', the mobile station should use SEARCH_PRIORITY_S associated with each pilot to schedule a search of its Candidate Frequency Search Set.

2.6.6.2.2 Pilot Strength Measurements

The mobile station assists the base station in the handoff process and in the Reverse Supplemental Code Channel operation and in the Reverse Supplemental Channel operation by measuring and reporting the strengths of received pilots.

For an SR1 pilot, the mobile station should use the searcher element (see [2]) to compute the strength of a pilot (PS) by adding the ratios of received pilot energy per chip, E_c , to total received spectral density (noise and signals), I_o , of at most k usable multipath components, where k is the number of demodulating elements (see [2]) supported by the mobile station.

For an SR3 pilot, the pilot strength is given by

$$\frac{1}{3} \times \left(\left(\frac{E_c}{I_o} \right)_{\text{Primary}} + \frac{\left(\frac{E_c}{I_o} \right)_1}{\Delta_1} + \frac{\left(\frac{E_c}{I_o} \right)_2}{\Delta_2} \right) \text{ where:}$$

- $\left(\frac{E_c}{I_o} \right)_{\text{Primary}}$ is the pilot E_c/I_o measured on the Primary carrier (computed as specified above for SR1 pilots),

- $\left(\frac{E_c}{I_o} \right)_1$ is the pilot E_c/I_o measured on the pilot on the lower frequency of the two

remaining SR3 frequencies (computed as specified above for SR1 pilots), and Δ_1 is the relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies (SR3_PILOT_POWER1 converted to linear units).

- $\left(\frac{E_c}{I_o}\right)_2$ is the pilot E_c/I_o measured on the pilot on the higher frequency of the two remaining SR3 frequencies (computed as specified above for SR1 pilots), and Δ_2 is the relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies (SR3_PILOT_POWER2 converted to linear units).

2.6.6.2.3 Handoff Drop Timer

The mobile station shall maintain a handoff drop timer for each pilot in the Active Set and Candidate Set.

If $P_REV_IN_USE_s$ is less than or equal to three or $SOFT_SLOPE_s$ is equal to '000000', the mobile station shall perform the following:

- For the Candidate Set, the mobile station shall start the timer whenever the strength of the corresponding pilot becomes less than T_DROP_s . The mobile station shall reset and disable the timer if the strength of the corresponding pilot exceeds T_DROP_s .
- For the Active Set, the mobile station shall start the timer whenever the strength of the corresponding pilot becomes less than T_DROP_s . The mobile station shall start the timer even if the timer has previously expired. The mobile station shall reset and disable the timer if the strength of the corresponding pilot exceeds T_DROP_s .

If $P_REV_IN_USE_s$ is greater than three and $SOFT_SLOPE_s$ is not equal to '000000', the mobile station shall perform the following:

- For the Candidate Set, the mobile station shall start the timer whenever the strength of the corresponding pilot becomes less than T_DROP_s . The mobile station shall reset and disable the timer if the strength of the corresponding pilot exceeds T_DROP_s .
- For the Active Set, the mobile station shall sort the N_A pilots in the Active Set in order of increasing strengths, i.e., $PS_1 < PS_2 < PS_3 < \dots < PS_{N_A}$ where the strength PS is as defined in 2.6.6.2.2. The mobile station shall start the timer whenever the strength PS_i satisfies the following inequality:

$$10 \times \log_{10} PS_i < \max\left(\frac{SOFT_SLOPE_s}{8} \times 10 \times \log_{10} \sum_{j>i} PS_j + \frac{DROP_INTERCEPT_s}{2}, -\frac{T_DROP_s}{2}\right)$$

$i = 1, 2, \dots, PS_{N_A-1}$

For the Active Set, the mobile station shall start the timer even if the timer has previously expired. The mobile station shall reset and disable the timer whenever the above inequality is not satisfied for the corresponding pilot.

If T_{TDROP_S} equals zero, the mobile station shall consider the timer expired within 100 ms of enabling it. Otherwise, the mobile station shall consider the timer expired within 10% of the timer expiration value shown in Table 2.6.6.2.3-1 corresponding to T_{TDROP_S} .

If T_{TDROP_S} changes, the mobile station shall begin using the new value for all handoff drop timers within 100 ms.

Table 2.6.6.2.3-1. Handoff Drop Timer Expiration Values

T_TDROP	Timer Expiration (seconds)	T_TDROP	Timer Expiration (seconds)
0	0.1	8	27
1	1	9	39
2	2	10	55
3	4	11	79
4	6	12	112
5	9	13	159
6	13	14	225
7	19	15	319

The mobile station shall indicate the status of the handoff drop timer for all pilots in the Active Set and Candidate Set when transmitting a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message*.

2.6.6.2.4 Pilot PN Phase

The mobile station shall measure the arrival time, $PILOT_ARRIVAL$, for each pilot reported to the base station. The pilot arrival time shall be the time of occurrence, as measured at the mobile station antenna connector, of the earliest arriving usable multipath component of the pilot (for SR3 pilots, it is based on the earliest arriving usable multipath component from all three carriers). The arrival time shall be measured relative to the mobile station's time reference (see [2]) in units of PN chips. The mobile station shall compute the reported pilot PN phase, $PILOT_PN_PHASE$, as

$$PILOT_PN_PHASE = (PILOT_ARRIVAL + (64 \times PILOT_PN)) \bmod 2^{15},$$

where $PILOT_PN$ is the PN sequence offset index of the pilot (see [2]).

2.6.6.2.5 Handoff Messages

2.6.6.2.5.1 Processing of Forward Traffic Channel Handoff Messages

If the mobile station receives any of the following messages, then the mobile station shall process the message as described.

1. *Pilot Measurement Request Order*: The mobile station shall send, within T_{56m} seconds, a *Pilot Strength Measurement Message* if $P_REV_IN_USE$ is less than seven or a *Extended Pilot Strength Measurement Message* if $P_REV_IN_USE$ is equal to or greater than seven.
2. *Analog Handoff Direction Message*: The mobile station shall process the message as specified in 2.6.6.2.9.
3. *Neighbor List Update Message*: The mobile station shall process the message as specified in 2.6.6.2.6.3 and set $SEARCH_PRIORITY_INCL_S$, $SRCH_WIN_NGHBR_INCL_S$, and $SRCH_OFFSET_INCL_S$ to '0', and set $TIMING_INCL$ for each of the neighboring base stations in the *Neighbor List Update Message* to '0'.
4. *Extended Handoff Direction Message*: The mobile station shall process the message as follows:

The mobile station shall send a *Mobile Station Reject Order* with the $ORDQ$ field set to '00000110' (capability not supported), if the mobile station does not support the band class specified in the *Extended Handoff Direction Message*.

If the mobile station does not send a *Mobile Station Reject Order* in response to the *Extended Handoff Direction Message*, the mobile station shall perform the following at the action time of the message:

- The mobile station shall send a *Handoff Completion Message* or an *Extended Handoff Completion Message* as specified in 2.6.6.2.5.2.
- Update the Active Set, Candidate Set, and Neighbor Set in accordance with the *Extended Handoff Direction Message* processing (see 2.6.6.2.6.1, 2.6.6.2.6.2, and 2.6.6.2.6.3).
- Discontinue use of all Forward Traffic Channels associated with pilots not listed in the *Extended Handoff Direction Message*.
- The mobile station shall update the Code Channel List, $CODE_CHAN_LIST_S$, as specified in 2.6.8.
- If the mobile station is currently processing Forward Supplemental Code Channels, then it shall continue processing the Forward Supplemental Code Channels using the updated Code Channel List, $CODE_CHAN_LIST_S$.
- The mobile station shall set $IGNORE_SCAM_S$ and $IGNORE_ESCAM_S$ to '0'.
- If $HARD_INCLUDED$ is equal to '1', perform the following actions:

- 1 – If FRAME_OFFSET_T is not equal to FRAME_OFFSET_S , change the frame offset
- 2 on all of the code channels of the Forward Traffic Channel and of the
- 3 Reverse Traffic Channel.
- 4 – If RESET_L2_T is equal to '1', Layer 3 shall send a L2-Supervision.Request
- 5 primitive to Layer 2 to reset the acknowledgment procedures as specified in
- 6 2.2.1.1 and 2.2.2.1 of [4]. The acknowledgment procedures shall be reset
- 7 immediately after the action time of the *Extended Handoff Direction Message*.
- 8 – If RESET_FPC_T is equal to '1', initialize the Forward Traffic Channel power
- 9 control counters as specified in 2.6.4.1.1.1.
- 10 – If SERV_NEG_TYPE_T is equal to '1', set SERV_NEG_S to enabled; otherwise set
- 11 SERV_NEG_S to disabled. For operation in Band Class 1, SERV_NEG_S is
- 12 always equal to enabled.
- 13 – Use the long code mask specified by the PRIVATE_LCM_T (see 2.3.12.3) and
- 14 indicate to the user the voice privacy mode status.
- 15 – Process the ENCRYPT_MODE field as specified in 2.3.12.2.
- 16 • Store the following parameters from the current configuration:
 - 17 – Serving Frequency Assignment ($\text{SF_CDMACH}_S = \text{CDMACH}_S$)
 - 18 – Serving Frequency band class ($\text{SF_BAND_CLASS}_S = \text{BAND_CLASS}_S$)
 - 19 – Serving Frequency frame offset ($\text{SF_FRAME_OFFSET}_S = \text{FRAME_OFFSET}_S$)
- 20 • If HARD_INCLUDED is not equal to '1', set $\text{NUM_PREAMBLE}_S = '000'$.
- 21 • Store the following parameters from the *Extended Handoff Direction Message*:
 - 22 – *Extended Handoff Direction Message* sequence number ($\text{HDM_SEQ}_S = \text{HDM_SEQ}_T$)
 - 23 – If SEARCH_INCLUDED is equal to '1', then store the following:
 - 24 + Search window size for the Active Set and Candidate Set
 - 25 ($\text{SRCH_WIN}_A_S = \text{SRCH_WIN}_A_T$)
 - 26 + Pilot detection threshold ($\text{T_ADD}_S = \text{T_ADD}_T$)
 - 27 + Pilot drop threshold ($\text{T_DROP}_S = \text{T_DROP}_T$)
 - 28 + Active Set versus Candidate Set comparison threshold
 - 29 ($\text{T_COMP}_S = \text{T_COMP}_T$)
 - 30 + Drop timer value ($\text{T_TDROP}_S = \text{T_TDROP}_T$)
 - 31 – If HARD_INCLUDED is equal to '1', then store the following:
 - 32 + Frame offset ($\text{FRAME_OFFSET}_S = \text{FRAME_OFFSET}_T$)
 - 33 + Nominal power setting of the target cell ($\text{NOM_PWR}_S = \text{NOM_PWR}_T$)

- 1 + Hard handoff traffic channel preamble count required before transmitting
- 2 *Handoff Completion Message* or *Extended Handoff Completion Message*
- 3 (NUM_PREAMBLE_S = NUM_PREAMBLE_T)
- 4 + CDMA band class (CDMABAND_S = BAND_CLASS_T)
- 5 + Frequency assignment (CDMACH_S = CDMA_FREQ_T)
- 6 + Nominal power setting of the target cell (If CDMABAND_S = '00001', then
- 7 NOM_PWR_EXT_S = NOM_PWR_EXT_T; otherwise, NOM_PWR_EXT_S = '0')
- 8 – One occurrence of PILOT_PN and PWR_COMB_IND for each included
- 9 member of the Active Set.
- 10 – If ADD_LENGTH is not equal to '000', then store the following:
- 11 + Protocol revision level (P_REV_S = P_REV_T)
- 12 + Protocol revision level currently in use (P_REV_IN_USE_S = the minimum
- 13 value of P_REV_S and MOB_P_REV_P of the current band class)
- 14 – Disable return on failure (RETURN_IF_HANDOFF_FAIL_S = '0')
- 15 • Perform a soft or hard handoff depending on the following conditions:
- 16 – If any of the following conditions is true, the mobile station shall perform a
- 17 hard handoff:
- 18 + HARD_INCLUDED is set to '1' and either BAND_CLASS_T is not equal to
- 19 SF_CDMABAND_S, CDMA_FREQ_T is not equal to SF_CDMACH_S, or
- 20 FRAME_OFFSET_T is not equal to SF_FRAME_OFFSET_S, or
- 21 + The set of pilots specified by the message is disjoint from the Active Set
- 22 prior to the action time of the message.
- 23 – If the mobile station performs a hard handoff, it shall do the following:
- 24 + If a Periodic Serving Frequency Pilot Report Procedure is in progress, abort
- 25 the procedure (see 2.6.6.2.12).
- 26 + If a Candidate Frequency periodic search is in progress, abort the periodic
- 27 search (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4) and set PERIODIC_SEARCH_S to '0'.
- 28 + Perform the actions specified in 2.6.6.2.8.1. If the message specifies more
- 29 than one pilot, the mobile station shall also perform the actions specified in
- 30 2.6.6.2.7.1 and 2.6.6.2.7.2.
- 31 – Otherwise, the mobile station shall perform a soft handoff as specified in
- 32 2.6.6.2.7.
- 33 5. *Candidate Frequency Search Request Message*: The mobile station shall process the
- 34 message as follows:

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported), if the following condition is true:

- SEARCH_MODE_r is not equal to '0000', and the mobile station does not support the capability specified by SEARCH_MODE_r.

If none of the above conditions is true, the mobile station shall perform the actions described in the remainder of this section to process the *Candidate Frequency Search Request Message*.

If SEARCH_MODE_r is equal to '0000', the mobile station shall process the *Candidate Frequency Search Request Message* as follows:

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001100' (invalid Frequency Assignment), if the Frequency Assignment specified in the message is the same as the Serving Frequency (BAND_CLASS_r is equal to CDMABAND_s and CDMA_FREQ_r is equal to CDMACH_s).
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001010' (search set not specified), if SEARCH_TYPE_r is equal to '01' or '11', and one of the following conditions is true:
 - PILOT_UPDATE_r is equal to '0' and the Candidate Frequency Search Set before the action time of the *Candidate Frequency Search Request Message* is empty, or
 - PILOT_UPDATE_r is equal to '1' and the message specifies an empty search set.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '0001101' (search period too short), if SEARCH_TYPE_r is equal to '11' and *search_period* is less than $(\max(\text{fwd_time}, \text{rev_time}) + T_{71m})$ seconds, where *search_period*, *fwd_time* and *rev_time* are defined below.

(In the following, if PILOT_UPDATE_r is equal to '1', *rec_search_set* is the set of pilots specified in the *Candidate Frequency Search Request Message* with the corresponding SEARCH_SET field set to '1'; otherwise, *rec_search_set* is the Candidate Frequency Search Set before the action time of the *Candidate Frequency Search Request Message*.)

search_period = time period corresponding to SEARCH_PERIOD_r shown in Table 2.6.6.2.8.3.2-1

1 *fwd_time* = the mobile station's estimate of the total length of time, in
 2 seconds, for which the mobile station will need to suspend its
 3 current Forward Traffic Channel processing in order to tune
 4 to the Candidate Frequency, to search *rec_search_set*, and to
 5 re-tune to the Serving Frequency; if the mobile station
 6 searches *rec_search_set* in multiple visits, *fwd_time* is the
 7 total time for all visits to the Candidate Frequency in a
 8 search period (see 2.6.6.2.8.3.2)

9 *rev_time* = the mobile station's estimate of the total length of time, in
 10 seconds, for which the mobile station will need to suspend its
 11 current Reverse Traffic Channel processing in order to tune
 12 to the Candidate Frequency, to search *rec_search_set*, and to
 13 re-tune to the Serving Frequency; if the mobile station
 14 searches *rec_search_set* in multiple visits, *rev_time* is the total
 15 time for all visits to the Candidate Frequency in a search
 16 period

- 17 • If the mobile station does not send a *Mobile Station Reject Order* in response to
 18 the *Candidate Frequency Search Request Message*, it shall perform the following:
 - 19 – The mobile station shall send a *Candidate Frequency Search Response*
 20 *Message* in assured mode, within T_{56m} seconds of receiving the *Candidate*
 21 *Frequency Search Request Message*. The mobile station shall set the fields of
 22 the *Candidate Frequency Search Response Message* as follows:
 - 23 + The mobile station shall set TOTAL_OFF_TIME_FWD and
 24 TOTAL_OFF_TIME_REV to its estimate of the total number of frames or
 25 power control groups for which it will need to suspend its current
 26 Forward Traffic Channel processing and Reverse Traffic Channel
 27 processing, respectively, in order to tune to the Candidate Frequency, to
 28 search *rec_search_set*, and to re-tune to the Serving Frequency (see
 29 2.6.6.2.8.3.2). If the mobile station searches *rec_search_set* in multiple
 30 visits to the Candidate Frequency, the mobile station shall report the
 31 total number of frames or power control groups in all visits in a search
 32 period for which it will need to suspend its current Forward Traffic
 33 Channel and the Reverse Traffic Channel processing.

- 1 + The mobile station shall set MAX_OFF_TIME_FWD and
2 MAX_OFF_TIME_REV to its estimate of the maximum number of frames
3 or power control groups for which it will need to suspend its current
4 Forward Traffic Channel processing and Reverse Traffic Channel
5 processing, respectively, during any single visit to tune to the Candidate
6 Frequency, to search a subset of *rec_search_set*, and to re-tune to the
7 Serving Frequency.¹⁹
- 8 + The mobile station shall set PCG_OFF_TIMES to '1' if
9 TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_-FWD
10 and MAX_OFF_TIME_FWD are expressed in units of power control
11 groups. If these time estimates are expressed in units of frames, the
12 mobile station shall set PCG_OFF_TIMES to '0'. The mobile station shall
13 not use power control groups as the unit of delay if P_REV_IN_USE_s is
14 less than six.
- 15 + If ALIGN_TIMING_r is equal to '1', the mobile station shall set
16 ALIGN_TIMING_USED to '1' to indicate if it will align its search as
17 requested by the base station; otherwise, the mobile station shall set
18 ALIGN_TIMING_USED to '0'. If ALIGN_TIMING_USED is set to '1', the
19 mobile station shall set NUM_VISITS to the number of visits per search
20 period minus one and, if NUM_VISITS is not equal to 0, the mobile
21 station shall set INTER_VISIT_TIME, in units of frames or power control
22 groups, to its estimate of the time between subsequent visits within the
23 same search period.
- 24 – When the message takes effect, the mobile station shall perform the
25 following actions:
 - 26 + If any periodic search is in progress, the mobile station shall abort it
27 (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4).
 - 28 + If SEARCH_TYPE_r is equal to '00', the mobile station may stop
29 maintaining the average of the Serving Frequency received power that
30 is used in the handoff and search procedures.

¹⁹ If the mobile station searches the entire Candidate Frequency Search Set in a single visit to the Candidate Frequency, TOTAL_OFF_TIME_FWD will be equal to MAX_OFF_TIME_FWD, and TOTAL_OFF_TIME_REV will be equal to MAX_OFF_TIME_REV.

- 1 + If SEARCH_TYPE_T is equal to '01' or '11', and the mobile station uses
2 received power measurements in the search procedure, it should start
3 monitoring the received power on the Serving Frequency, if it is not
4 already doing so. While it is tuned to the Serving Frequency, the mobile
5 station should measure the received power once every frame (0.02
6 seconds), and should maintain an average of the received power over the
7 last N_{12m} frames.
- 8 + Store the following parameters from the *Candidate Frequency Search*
9 *Request Message*:
 - 10 o *Candidate Frequency Search Request Message* sequence number
11 (CFSRM_SEQ_S = CFSRM_SEQ_T)
 - 12 o Periodic search flag: If SEARCH_TYPE_T is equal to '11', the mobile
13 station shall set PERIODIC_SEARCH_S to '1'; otherwise, the mobile
14 station shall set PERIODIC_SEARCH_S to '0'.
 - 15 o Search period on the Candidate Frequency
16 (SEARCH_PERIOD_S = SEARCH_PERIOD_T)
 - 17 o Candidate Frequency search mode
18 (SEARCH_MODE_S = SEARCH_MODE_T)
 - 19 o Band class for the Candidate Frequency
20 (CF_CDMABAND_S = BAND_CLASS_T)
 - 21 o CDMA Channel number for the CDMA Candidate Frequency
22 (CF_CDMACH_S = CDMA_FREQ_T)
 - 23 o Serving Frequency total pilot E_c threshold
24 (SF_TOTAL_EC_THRESH_S = SF_TOTAL_EC_THRESH_T)
 - 25 o Serving Frequency total pilot E_c/I_o threshold
26 (SF_TOTAL_EC_IO_THRESH_S = SF_TOTAL_EC_IO_THRESH_T)
 - 27 o Received power difference threshold
28 (DIFF_RX_PWR_THRESH_S = DIFF_RX_PWR_THRESH_T)
 - 29 o Candidate Frequency Total pilot E_c/I_o threshold
30 (MIN_TOTAL_PILOT_EC_IO_S = MIN_TOTAL_PILOT_EC_IO_T)
 - 31 o Pilot detection threshold on the CDMA Candidate Frequency
32 (CF_T_ADD_S = CF_T_ADD_T)

- o Maximum time on the CDMA Candidate Target Frequency that the mobile station may wait to receive a period of $(N_{11m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$
($TF_WAIT_TIME_S = TF_WAIT_TIME_R$)
- o Pilot PN sequence offset increment on the CDMA Candidate Frequency ($CF_PILOT_INC_S = CF_PILOT_INC_R$)
- o Search window for pilots in the Neighbor Set on the CDMA Candidate Frequency ($CF_SRCH_WIN_N_S = CF_SRCH_WIN_N_R$)
- o Search window for pilots in the Remaining Set on the CDMA Candidate Frequency ($CF_SRCH_WIN_R_S = CF_SRCH_WIN_R_R$)
- o If $PILOT_UPDATE$ is equal to '1', the mobile station shall perform the following:
 - ◇ Set $CF_SEARCH_PRIORITY_INCL_S$ and $CF_SRCH_WIN_NGHBR_INCL_S$ to the values corresponding to $CF_NGHBR_SRCH_MODE$ shown in Table 2.6.6.2.5.1-1,
 - ◇ Set $CF_SRCH_OFFSET_INCL_S$ to $CF_SRCH_OFFSET_INCL_R$.
- o If $PILOT_UPDATE$ is equal to '1', the mobile station shall replace the Candidate Frequency Neighbor Set with all neighbor pilots specified in the *Candidate Frequency Search Request Message*. Specifically, the mobile station shall store the following:
 - ◇ Set the $NGHBR_PN$ to $NGHBR_PN_R$.
 - ◇ Set the $ADD_PILOT_REC_INCL$ field to $ADD_PILOT_INCL_R$. If $ADD_PILOT_REC_INCL_R$ is equal to '1', the mobile station shall store the following:
 - Set the $NGHBR_PILOT_REC_TYPE$ field of the Candidate Frequency Neighbor Set Pilot Record to $NGHBR_PILOT_REC_TYPE_R$.
 - If $NGHBR_PILOT_REC_TYPE_R$ equals '000', the mobile station shall set the TD_POWER_LEVEL field of the Candidate Frequency Neighbor Set Pilot Record to $TD_POWER_LEVEL_R$ and set the TD_MODE field of $NGHBR_PILOT_REC$ to TD_MODE_R .
 - If $NGHBR_PILOT_REC_TYPE_R$ is equal to '001', the mobile station shall
 - + Set the AUX_PILOT_QOF field of the Candidate Frequency Neighbor Set Pilot Record to QOF_R .

- 1 + Set the AUX_PILOT_WALSH_CODE field of the Candidate
- 2 Frequency Neighbor Set Pilot Record to
- 3 AUX_PILOT_WALSH_r with the Walsh Code length specified
- 4 by WALSH_LENGTH_r.
- 5 - If NGHBR_PILOT_REC_TYPE_r is equal to '010', the mobile
- 6 station shall:
- 7 + Set the AUX_PILOT_TD_QOF field of the Candidate
- 8 Frequency Neighbor Set Pilot Record to QOF_r.
- 9 + Set the AUX_PILOT_TD_WALSH_CODE field of the
- 10 Candidate Frequency Neighbor Set Pilot Record to
- 11 AUX_TD_WALSH_r with the Walsh Code length specified by
- 12 WALSH_LENGTH_r.
- 13 + Set the AUX_TD_POWER_LEVEL field of the Candidate
- 14 Frequency Neighbor Set Pilot Record to
- 15 AUX_TD_POWER_LEVEL_r.
- 16 + Set the TD_MODE field of the Candidate Frequency
- 17 Neighbor Set Pilot Record to TD_MODE_r.
- 18 - If NGHBR_PILOT_REC_TYPE_r is equal to '011', the mobile
- 19 station shall:
- 20 + Set the SR3_PRIMARY_PILOT field of Candidate Frequency
- 21 Neighbor Set Pilot Record to SR3_PRIMARY_PILOT_r.
- 22 + Set the SR3_PILOT_POWER1 field of Candidate Frequency
- 23 Neighbor Set Pilot Record to SR3_PILOT_POWER1_r.
- 24 + Set the SR3_PILOT_POWER2 field of Candidate Frequency
- 25 Neighbor Set Pilot Record to SR3_PILOT_POWER2_r.
- 26 - If NGHBR_PILOT_REC_TYPE_r is equal to '100', the mobile
- 27 station shall:
- 28 + Set the SR3_PRIMARY_PILOT field of Candidate Frequency
- 29 Neighbor Set Pilot Record to SR3_PRIMARY_PILOT_r.
- 30 + Set the SR3_PILOT_POWER1 field of Candidate Frequency
- 31 Neighbor Set Pilot Record to SR3_PILOT_POWER1_r.
- 32 + Set the SR3_PILOT_POWER2 field of Candidate Frequency
- 33 Neighbor Set Pilot Record to SR3_PILOT_POWER2_r.
- 34 + Set the AUX_PILOT_QOF field of Candidate Frequency
- 35 Neighbor Set Pilot Record to QOF_r.

- 1 + Set the AUX_PILOT_WALSH_CODE field of Candidate

2 Frequency Neighbor Set Pilot Record to

3 AUX_PILOT_WALSH_r with the Walsh Code length specified

4 by WALSH_LENGTH_r.
- 5 + If ADD_INFO_INCL1_r is equal to '1', set the

6 AUX_PILOT_QOF1 field of Candidate Frequency Neighbor

7 Set Pilot Record to QOF1_r and set the

8 AUX_PILOT_WALSH_CODE1 field of Candidate Frequency

9 Neighbor Set Pilot Record to AUX_PILOT_WALSH1_r with

10 the Walsh Code length specified by WALSH_LENGTH1_r;

11 otherwise, set the AUX_PILOT_QOF1 field of Candidate

12 Frequency Neighbor Set Pilot Record to QOF_r and set the

13 AUX_PILOT_WALSH_CODE1 field of Candidate Frequency

14 Neighbor Set Pilot Record to AUX_PILOT_WALSH_r with the

15 Walsh Code length specified by WALSH_LENGTH_r.
- 16 + If ADD_INFO_INCL2_r is equal to '1', set the

17 AUX_PILOT_QOF2 field of Candidate Frequency Neighbor

18 Set Pilot Record to QOF2_r and set the

19 AUX_PILOT_WALSH_CODE2 field of Candidate Frequency

20 Neighbor Set Pilot Record to AUX_PILOT_WALSH2_r with

21 the Walsh Code length specified by WALSH_LENGTH2_r;

22 otherwise, set the AUX_PILOT_QOF2 field of Candidate

23 Frequency Neighbor Set Pilot Record to QOF_r and set the

24 AUX_PILOT_WALSH_CODE2 field of Candidate Frequency

25 Neighbor Set Pilot Record to AUX_PILOT_WALSH_r with the

26 Walsh Code length specified by WALSH_LENGTH_r.
- 27 o If PILOT_UPDATE is equal to '1' and CF_SEARCH_PRIORITY_INCL_s is

28 equal to '1', the mobile station shall store the search priority

29 (SEARCH_PRIORITY_s = SEARCH_PRIORITY_r) associated with each of

30 the neighboring base stations contained in the Candidate Frequency

31 Neighbor Set.
- 32 o If PILOT_UPDATE is equal to '1' and CF_SRCH_WIN_NGHBR_INCL_s is

33 equal to '1', the mobile station shall perform the following:

 - 34 ◇ Store the neighbor pilot channel search window size

35 (SRCH_WIN_NGHBR_s = SRCH_WIN_NGHBR_r) associated with each

36 of the neighboring base stations contained in the Candidate

37 Frequency Neighbor Set,

- 1 ◇ If CF_SRCH_OFFSET_INCL_r equals to '1', store the neighbor pilot
- 2 channel search window offset (SRCH_OFFSET_NGHR_s =
- 3 SRCH_OFFSET_NGHR_r) associated with each of the neighboring
- 4 base stations contained in the Candidate Frequency Neighbor
- 5 Set.
- 6 o If PILOT_UPDATE is equal to '1', the mobile station shall replace the
- 7 Candidate Frequency Search Set with all flagged pilots (those with
- 8 the corresponding SEARCH_SET field set to '1') specified in the
- 9 *Candidate Frequency Search Request Message*.
- 10 o Search offset time (SEARCH_OFFSET_s = SEARCH_OFFSET_r)
- 11 + If ALIGN_TIMING_r is equal to '1' and the mobile station will align its
- 12 search as requested by the base station, the mobile station shall set
- 13 ALIGN_TIMING_USED_s to '1'; otherwise, the mobile station shall set
- 14 ALIGN_TIMING_USED_s to '0'.
- 15 + If the mobile station sets the PCG_OFF_TIMES field of the *Candidate*
- 16 *Frequency Search Response Message* to '1', it shall set
- 17 SEARCH_TIME_RESOLUTION_s to 0.00125; otherwise, it shall set
- 18 SEARCH_TIME_RESOLUTION_s to 0.02.
- 19 + The mobile station shall store the following parameters from its current
- 20 configuration:
- 21 o CDMA band class (SF_CDMABAND_s = CDMABAND_s)
- 22 o Frequency Assignment (SF_CDMACH_s = CDMACH_s)
- 23 o Pilot detection threshold (SF_T_ADD_s = T_ADD_s)
- 24 + If SEARCH_TYPE_r is equal to '01', the mobile station shall perform a
- 25 single search of the Candidate Frequency Search Set, as described in
- 26 2.6.6.2.8.3.1. If SEARCH_TYPE_r is equal to '11', the mobile station shall
- 27 perform the periodic search procedures, as described in 2.6.6.2.8.3.2.
- 28

Table 2.6.6.2.5.1-1. Search Parameter Settings

NGHBR_SRCH_- MODE CF_NGHBR_- SRCH_MODE	SEARCH_- PRIORITY_INCL CF_SEARCH_- PRIORITY_INCL	SRCH_WIN_- NGHBR_INCL CF_SRCH_- WIN_NGHBR_INCL
00	0	0
01	1	0
10	0	1
11	1	1

If SEARCH_MODE_r is equal to '0001', and if the mobile station supports analog searching, the mobile station shall process the *Candidate Frequency Search Request Message* as follows:

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '0001101' (search period too short), if SEARCH_TYPE_r is equal to '11' and search_period is less than $(\max(\text{fwd_time}, \text{rev_time}) + T_{71m})$ seconds where search_period , fwd_time and rev_time are defined below.

(In the following, rec_search_set is the set of analog frequencies specified in the *Candidate Frequency Search Request Message*.)

search_period = time period corresponding to SEARCH_PERIOD_r shown in Table 2.6.6.2.8.3.2-1

fwd_time = the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Forward Traffic Channel processing in order to tune to each analog frequency in rec_search_set and measure its strength, and to re-tune to the Serving Frequency; if the mobile station searches rec_search_set in multiple visits, fwd_time is the total time for all visits away from the Serving Frequency in a search period (see 2.6.6.2.10.2)

rev_time = the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Reverse Traffic Channel processing in order to tune to each analog frequency in rec_search_set and measure its strength, and to re-tune to the Serving Frequency; if the mobile station searches rec_search_set in multiple visits, rev_time is the total time for all visits away from the Serving Frequency in a search period

- If the mobile station does not send a *Mobile Station Reject Order* in response to the *Candidate Frequency Search Request Message*, it shall perform the following:

- 1 – The mobile station shall send a *Candidate Frequency Search Response*
2 *Message* in assured mode, within T_{56m} seconds of receiving the *Candidate*
3 *Frequency Search Request Message*. The mobile station shall set the fields of
4 the *Candidate Frequency Search Response Message* as follows:
 - 5 + The mobile station shall set TOTAL_OFF_TIME_FWD and
6 TOTAL_OFF_TIME_REV to its estimate of the total number of frames or
7 power control groups for which it will need to suspend its current
8 Forward Traffic Channel processing and Reverse Traffic Channel
9 processing, respectively, in order to tune to each analog frequency in
10 *rec_search_set*, and to re-tune to the Serving Frequency (see
11 2.6.6.2.8.3.2). If the mobile station searches *rec_search_set* in multiple
12 visits away from the Serving Frequency, the mobile station shall report
13 the total number of frames or power control groups in all visits in a
14 search period for which it will need to suspend its current Forward
15 Traffic Channel and the Reverse Traffic Channel processing.
 - 16 + The mobile station shall set MAX_OFF_TIME_FWD and
17 MAX_OFF_TIME_REV to its estimate of the maximum number of frames
18 or power control groups for which it will need to suspend its current
19 Forward Traffic Channel processing and Reverse Traffic Channel
20 processing, respectively, during any single visit away from the Serving
21 Frequency, to search a subset of *rec_search_set*, and to re-tune to the
22 Serving Frequency.
 - 23 + The mobile station shall set PCG_OFF_TIMES to '1' if
24 TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_FWD
25 and MAX_OFF_TIME_FWD are expressed in units of power control
26 groups. If these time estimates are expressed in units of frames, the
27 mobile station shall set PCG_OFF_TIMES to '0'. The mobile station shall
28 not use power control groups as the unit of delay if P_REV_IN_USE_s is
29 less than six.
 - 30 + If ALIGN_TIMING_r is equal to '1', the mobile station shall set
31 ALIGN_TIMING_USED to '1' to indicate if it will align its search as
32 requested by the base station; otherwise, the mobile station shall set
33 ALIGN_TIMING_USED to '0'. If ALIGN_TIMING_USED is set to '1', the
34 mobile station shall set NUM_VISITS to the number of visits per search
35 period minus one and, if NUM_VISITS is not equal to 0, the mobile
36 station shall set INTER_VISIT_TIME, in units of frames or power control
37 groups, to its estimate of the time between subsequent visits within the
38 same search period.
- 39 – When the message takes effect, the mobile station shall perform the
40 following actions:
 - 41 + If any periodic search is in progress, the mobile station shall abort it
42 (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4).

- 1 + If SEARCH_TYPE_r is equal to '00', the mobile station may stop
2 maintaining the average of the Serving Frequency received power that
3 is used in the handoff and search procedures.
- 4 + If SEARCH_TYPE_r is equal to '01' or '11', and the mobile station uses
5 received power measurements in the search procedure, it should start
6 monitoring the received power on the Serving Frequency, if it is not
7 already doing so. While it is tuned to the Serving Frequency, the mobile
8 station should measure the received power once every frame (0.02
9 seconds), and should maintain an average of the received power over the
10 last N_{12m} frames.
- 11 + Store the following parameters from the *Candidate Frequency Search*
12 *Request Message*:
 - 13 o *Candidate Frequency Search Request Message* sequence number
14 (CFSRM_SEQ_s = CFSRM_SEQ_r)
 - 15 o Periodic search flag: If SEARCH_TYPE_r is equal to '11', the mobile
16 station shall set PERIODIC_SEARCH_s to '1'; otherwise, the mobile
17 station shall set PERIODIC_SEARCH_s to '0'.
 - 18 o Search period for the analog frequencies search
19 (SEARCH_PERIOD_s = SEARCH_PERIOD_r)
 - 20 o Candidate Frequency search mode
21 (SEARCH_MODE_s = SEARCH_MODE_r)
 - 22 o Band class for the analog frequencies
23 (CF_CDMABAND_s = BAND_CLASS_r)
 - 24 o Serving Frequency total pilot E_c threshold
25 (SF_TOTAL_EC_THRESH_s = SF_TOTAL_EC_THRESH_r)
 - 26 o Serving Frequency total pilot E_c/I₀ threshold
27 (SF_TOTAL_EC_IO_THRESH_s = SF_TOTAL_EC_IO_THRESH_r)
 - 28 o Candidate Frequency Analog Search Set: The mobile station shall
29 replace the Candidate Frequency Analog Search Set with the analog
30 frequencies included in the *Candidate Frequency Search Request*
31 *Message*.
 - 32 o Search offset time (SEARCH_OFFSET_s = SEARCH_OFFSET_r)
- 33 + If ALIGN_TIMING_r is equal to '1' and the mobile station will align its
34 search as requested by the base station, the mobile station shall set
35 ALIGN_TIMING_USED_s to '1'; otherwise, the mobile station shall set
36 ALIGN_TIMING_USED_s to '0'.

- 1 + If the mobile station sets the PCG_OFF_TIMES field of the *Candidate*
2 *Frequency Search Response Message* to '1', it shall set
3 SEARCH_TIME_RESOLUTION_S to 0.00125; otherwise, it shall set
4 SEARCH_TIME_RESOLUTION_S to 0.02.
- 5 + If SEARCH_TYPE_r is equal to '01', the mobile station shall perform a
6 single search of the Candidate Frequency Analog Search Set as
7 described in 2.6.6.2.10.1. If SEARCH_TYPE_r is equal to '11', the mobile
8 station shall perform the periodic search procedures described in
9 2.6.6.2.10.2.
- 10 6. *Candidate Frequency Search Control Message*: The mobile station shall process the
11 message as follows:
- 12 If SEARCH_MODE_S is equal to '0000':
- 13 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
14 set to '00001010' (search set not specified), if SEARCH_TYPE_r is not equal to '00'
15 and the Candidate Frequency Search Set is empty.
 - 16 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
17 set to '00001011' (invalid search request), if SEARCH_TYPE_r is not equal to '00'
18 and the Candidate Frequency is the same as the Serving Frequency
19 (CF_CDMABAND_S is equal to CDMABAND_S and CF_CDMACH_S is equal to
20 CDMACH_S).
 - 21 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
22 set to '0001101' (search period too short), if SEARCH_TYPE_r is equal to '11' and
23 *search_period* is less than (max (*fwd_time*, *rev_time*) + T_{71m}) seconds, where
24 *search_period* = time period corresponding to SEARCH_PERIOD_r shown in
25 Table 2.6.6.2.8.3.2-1,
26 *fwd_time* = the mobile station's estimate of the total length of time, in
27 seconds, for which the mobile station will need to suspend its
28 current Forward Traffic Channel processing in order to tune to
29 the Candidate Frequency, to search the Candidate Frequency
30 Search Set and to re-tune to the Serving Frequency; if the
31 mobile station searches the Candidate Frequency Search Set
32 in multiple visits, *fwd_time* is the total time for all visits to the
33 Candidate Frequency in a search period (see 2.6.6.2.8.3.2),
34 and

rev_time = the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Reverse Traffic Channel processing in order to tune to the Candidate Frequency, to search the Candidate Frequency Search Set and to re-tune to the Serving Frequency; if the mobile station searches the Candidate Frequency Search Set in multiple visits, *rev_time* is the total time for all visits to the Candidate Frequency in a search period.

- If the mobile station does not reject the *Candidate Frequency Search Control Message*, it shall perform the following actions when the message takes effect:
 - If any periodic search is in progress, the mobile station shall abort it (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4).
 - If SEARCH_TYPE_r is equal to '00':
 - + The mobile station shall set PERIODIC_SEARCH_s to '0'.
 - + The mobile station may stop maintaining the average of the Serving Frequency received power that is used in the handoff and search procedures.
 - If SEARCH_TYPE_r is equal to '01' or '11', the mobile station shall store the following parameters from its current configuration:
 - + CDMA band class (SF_CDMABAND_s = CDMABAND_s)
 - + Frequency Assignment (SF_CDMACH_s = CDMACH_s)
 - + Pilot detection threshold (SF_T_ADD_s = T_ADD_s)
 - If SEARCH_TYPE_r is equal to '01':
 - + The mobile station shall set PERIODIC_SEARCH_s to '0'.
 - + If the mobile station uses received power measurements in the search procedure, it should start monitoring the received power on the Serving Frequency, if it is not already doing so. While it is tuned to the Serving Frequency, the mobile station should measure the received power once every frame (0.02 seconds), and should maintain an average of the received power over the last N_{12m} frames.
 - + The mobile station shall perform a single search of the Candidate Frequency Search Set, as described in 2.6.6.2.8.3.1.
 - If SEARCH_TYPE_r is equal to '11':
 - + The mobile station shall set PERIODIC_SEARCH_s to '1'.

- + If the mobile station uses received power measurements in the search procedure, it should start monitoring the received power on the Serving Frequency, if it is not already doing so. While it is tuned to the Serving Frequency, the mobile station should measure the received power once every frame (0.02 seconds), and should maintain an average of the received power over the last N_{12m} frames.
- + The mobile station shall perform the periodic search procedures for the Candidate Frequency Search Set, as described in 2.6.6.2.8.3.2.

If $SEARCH_MODE_S$ is equal to '0001':

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001010' (search set not specified), if $SEARCH_TYPE_r$ is not equal to '00' and the Candidate Frequency Analog Search Set is empty.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '0001101' (search period too short), if $SEARCH_TYPE_r$ is equal to '11' and $search_period$ is less than $(\max(fwd_time, rev_time) + T_{71m})$ seconds, where

$search_period$ = time period corresponding to $SEARCH_PERIOD_r$ shown in Table 2.6.6.2.8.3.2-1,

fwd_time = the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Forward Traffic Channel processing in order to tune to each analog frequency in the Candidate Frequency Analog Search Set and measure its strength, and to re-tune to the Serving Frequency; if the mobile station searches the Candidate Frequency Analog Search Set in multiple visits, fwd_time is the total time for all visits away from the Serving Frequency in a search period (see 2.6.6.2.10.2),

and

rev_time = the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Reverse Traffic Channel processing in order to tune to each analog frequency in the Candidate Frequency Analog Search Set and measure its strength, and to re-tune to the Serving Frequency; if the mobile station searches the Candidate Frequency Analog Search Set in multiple visits, fwd_time is the total time for all visits away from the Serving Frequency in a search period (see 2.6.6.2.10.2).

- If the mobile station does not reject the *Candidate Frequency Search Control Message*, it shall perform the following actions when the message takes effect:
 - If any periodic search is in progress, the mobile station shall abort it (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4).

- 1 – If SEARCH_TYPE_T is equal to '00':
- 2 + The mobile station shall set PERIODIC_SEARCH_S to '0'.
- 3 + The mobile station may stop maintaining the average of the Serving
- 4 Frequency received power that is used in the handoff and search
- 5 procedures.
- 6 – If SEARCH_TYPE_T is equal to '01':
- 7 + The mobile station shall set PERIODIC_SEARCH_S to '0'.
- 8 + If mobile station uses received power measurements in the search
- 9 procedure, it should start monitoring the received power on the Serving
- 10 Frequency, if it is not already doing so. While it is tuned to the Serving
- 11 Frequency, the mobile station should measure the received power once
- 12 every frame (0.02 seconds), and should maintain an average of the
- 13 received power over the last N_{12m} frames.
- 14 + The mobile station shall perform a single search of the Candidate
- 15 Frequency Analog Search Set, as described in 2.6.6.2.10.1.
- 16 – If SEARCH_TYPE_T is equal to '11':
- 17 + The mobile station shall set PERIODIC_SEARCH_S to '1'.
- 18 + If mobile station uses received power measurements in the search
- 19 procedure, it should start monitoring the received power on the Serving
- 20 Frequency, if it is not already doing so. While it is tuned to the Serving
- 21 Frequency, the mobile station should measure the received power once
- 22 every frame (0.02 seconds), and should maintain an average of the
- 23 received power over the last N_{12m} frames.
- 24 + The mobile station shall perform the periodic search procedures for the
- 25 Candidate Frequency Analog Search Set, as described in 2.6.6.2.10.2.
- 26 7. *Extended Neighbor List Update Message*: The mobile station shall update its
- 27 neighbor set as specified in 2.6.6.2.6.3 and perform the following:
- 28 • If NGHBR_SRCH_MODE_T is equal to '01' or '11', the mobile station shall store the
- 29 search priority (SEARCH_PRIORITY_S = SEARCH_PRIORITY_T) associated with
- 30 each of the neighboring base stations contained in the *Extended Neighbor List*
- 31 *Update Message* which are in the mobile's neighbor set.
- 32 • If NGHBR_SRCH_MODE_T is equal to '01' or '00', the mobile station shall set the
- 33 SRCH_OFFSET_INCL_S field '0'.
- 34 • If NGHBR_SRCH_MODE_T is equal to '10' or '11', the mobile station shall perform
- 35 the following:

- Store the neighbor pilot channel search window size ($SRCH_WIN_NGHBR_S = SRCH_WIN_NGHBR_r$) associated with each of the neighboring base stations contained in the *Extended Neighbor List Updated Message* which are in the mobile's neighbor set,
 - If $SRCH_OFFSET_INCL_r$ equals to '1', set the $SRCH_OFFSET_NGHBR$ field of $NGHBR_REC[i]$ to the i^{th} occurrence of $SRCH_OFFSET_NGHBR_r$,
 - Set $SRCH_OFFSET_INCL_S$ to $SRCH_OFFSET_INCL_r$.
- The mobile station shall update the default search window size for its Neighbor Set ($SRCH_WIN_N_S = SRCH_WIN_N_r$).
 - The mobile station shall set $SEARCH_PRIORITY_INCL_S$ and $SRCH_WIN_NGHBR_INCL_S$ to the value specified in Table 2.6.6.2.5.1-1 corresponding to $NGHBR_SRCH_MODE_r$.
 - If USE_TIMING is equal to '1', the mobile station shall store the timing included flag ($TIMING_INCL$) associated with each of the neighboring base stations contained in the *Extended Neighbor List Update Message* which are in the mobile station neighbor set; otherwise the mobile station shall set the timing included flag ($TIMING_INCL$) associated with each of the neighboring base stations to '0'.
 - If USE_TIMING is equal to '1' and $TIMING_INCL_r$ is equal to '1', the mobile station shall store the neighbor transmit time offset ($NGHBR_TX_OFFSET = NGHBR_TX_OFFSET_r$) associated with each of the neighboring base stations contained in the *Extended Neighbor List Update Message* which are in the mobile station neighbor set.
 - If USE_TIMING is equal to '1' and the $TIMING_INCL$ is equal to '1', then the mobile station shall perform the following:
 - If the $GLOBAL_TIMING_INCL$ field is equal to '1', then the mobile station shall store the neighbor transmit time duration ($NGHBR_TX_DURATION = GLOBAL_TX_DURATION_r$) and the neighbor transmit time duration ($NGHBR_TX_PERIOD = GLOBAL_TX_PERIOD_r$) contained in the *Extended Neighbor List Update Message*.
 - If the $GLOBAL_TIMING_INCL$ field is equal to '0', then the mobile station shall store the neighbor transmit time duration ($NGHBR_TX_DURATION = NGHBR_TX_DURATION_r$) and the neighbor transmit time duration ($NGHBR_TX_PERIOD = NGHBR_TX_PERIOD_r$) associated with each of the neighboring base stations contained in the *Extended Neighbor List Update Message* which are in the mobile station neighbor set.

- 1 • For each of the neighboring base stations contained in the *General Neighbor List*
2 *Message*, the mobile station shall set ADD_PILOT_REC_INCL field of
3 NGHBR_REC[i] to the i^{th} occurrence of ADD_PILOT_REC_INCL_r. If
4 ADD_PILOT_REC_INCL_r equals '1', for each pilot, the mobile station shall also
5 perform the following:
 - 6 – Set the NGHBR_PILOT_REC_TYPE field of NGHBR_PILOT_REC to
7 NGHBR_PILOT_REC_TYPE_r.
 - 8 – If NGHBR_PILOT_REC_TYPE_r is equal to '000'. The mobile station shall set
9 the TD_POWER_LEVEL field of NGHBR_PILOT_REC to TD_POWER_LEVEL_r and
10 set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
 - 11 – If NGHBR_PILOT_REC_TYPE_r is equal to '001', the mobile station shall:
 - 12 + Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r
 - 13 + Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
14 AUX_PILOT_WALSH_r with the Walsh Code length specified by
15 WALSH_LENGTH_r
 - 16 – If NGHBR_PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
 - 17 + Set the AUX_PILOT_TD_QOF field of NGHBR_PILOT_REC to QOF_r.
 - 18 + Set the AUX_PILOT_TD_WALSH_CODE field of NGHBR_PILOT_REC to
19 AUX_TD_WALSH_r with the Walsh Code length specified by
20 WALSH_LENGTH_r.
 - 21 + Set the AUX_TD_POWER_LEVEL field of NGHBR_PILOT_REC to
22 AUX_TD_POWER_LEVEL_r.
 - 23 + Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
 - 24 – If NGHBR_PILOT_REC_TYPE_r is equal to '011', the mobile station shall:
 - 25 + Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to
26 SR3_PRIMARY_PILOT_r.
 - 27 + Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to
28 SR3_PILOT_POWER1_r.
 - 29 + Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to
30 SR3_PILOT_POWER2_r.
 - 31 – If NGHBR_PILOT_REC_TYPE_r is equal to '100', the mobile station shall:
 - 32 + Set the SR3_PRIMARY_PILOT field of NGHBR_PILOT_REC to
33 SR3_PRIMARY_PILOT_r.

- 1 + Set the SR3_PILOT_POWER1 field of NGHBR_PILOT_REC to
- 2 SR3_PILOT_POWER1_r.
- 3 + Set the SR3_PILOT_POWER2 field of NGHBR_PILOT_REC to
- 4 SR3_PILOT_POWER2_r.
- 5 + Set the AUX_PILOT_QOF field of NGHBR_PILOT_REC to QOF_r.
- 6 + Set the AUX_PILOT_WALSH_CODE field of NGHBR_PILOT_REC to
- 7 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 8 WALSH_LENGTH_r.
- 9 + If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of
- 10 NGHBR_PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1
- 11 field of NGHBR_PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code
- 12 length specified by WALSH_LENGTH1_r; otherwise, set the
- 13 AUX_PILOT_QOF1 field of NGHBR_PILOT_REC to QOF_r and set the
- 14 AUX_PILOT_WALSH_CODE1 field of NGHBR_PILOT_REC to
- 15 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 16 WALSH_LENGTH_r.
- 17 + If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of
- 18 NGHBR_PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2
- 19 field of NGHBR_PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code
- 20 length specified by WALSH_LENGTH2_r; otherwise, set the
- 21 AUX_PILOT_QOF2 field of NGHBR_PILOT_REC to QOF_r and set the
- 22 AUX_PILOT_WALSH_CODE2 field of NGHBR_PILOT_REC to
- 23 AUX_PILOT_WALSH_r with the Walsh Code length specified by
- 24 WALSH_LENGTH_r.

25 8. *Supplemental Channel Assignment Message*: The mobile station shall process this
 26 message as follows:

27 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to
 28 the specified value if any of the following conditions is true, and shall not perform
 29 any other action described in this section for processing the *Supplemental Channel*
 30 *Assignment Message*:

- 31 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
- 32 set to '00000110' (capability not supported), if the number of forward or reverse
- 33 Supplemental Code Channels specified in the *Supplemental Channel Assignment*
- 34 *Message* is greater than the maximum number of Supplemental Code Channels
- 35 supported by the mobile station.

- 1 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
2 set to '00000011' (message structure not acceptable), if both
3 USE_REV_HDM_SEQ and EXPL_REV_START_TIME or both USE_FOR_HDM_SEQ
4 and EXPL_FOR_START_TIME specified in the *Supplemental Channel Assignment*
5 *Message* are set to '1'.
- 6 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
7 set to '00000100' (message field not in valid range), if PILOT_PN specified in the
8 *Supplemental Channel Assignment Message* is not in the Active Set and this
9 message is not linked with a *General Handoff Direction Message*.

10 If none of the above conditions is true, the mobile station shall perform the
11 following.

- 12 • The mobile station shall store the following parameters from the *Supplemental*
13 *Channel Assignment Message*:
 - 14 – Use *General Handoff Direction Message* forward sequence number indicator
15 (USE_FOR_HDM_SEQ_S = USE_FOR_HDM_SEQ_R)
 - 16 – If USE_FOR_HDM_SEQ_R is equal to '1', then the mobile station shall store the
17 following:
 - 18 + The sequence number of the *General Handoff Direction Message* to which
19 this messaged is linked for the Forward Supplemental Code Channel
20 assignment (FOR_LINKED_HDM_SEQ_S = FOR_LINKED_HDM_SEQ_R)
 - 21 + The forward Supplemental Code Channel assignment order
22 (SCAM_FOR_ORDER_S = least significant bit of FOR_SUP_CONFIG_R)
 - 23 + The forward duration assignment indicator
24 (SCAM_FOR_DURATION_MODE_S = USE_FOR_DURATION_R).
 - 25 – Use *General Handoff Direction Message* reverse sequence number indicator
26 (USE_REV_HDM_SEQ_S = USE_REV_HDM_SEQ_R)
 - 27 – If USE_REV_HDM_SEQ_R is equal to '1', then the mobile station shall store the
28 following:
 - 29 + The sequence number of the *General Handoff Direction Message* to which
30 this messaged is linked for the Reverse Supplemental Code Channel
31 assignment (REV_LINKED_HDM_SEQ_S = REV_LINKED_HDM_SEQ_R)
 - 32 + The reverse duration assignment indicator
33 (SCAM_REV_DURATION_MODE_S = USE_REV_DURATION_R).
- 34 • If USE_RETRY_DELAY_R is '0', then the mobile station shall store 0 as
35 RETRY_DELAY_S. The mobile station may send subsequent *Supplemental Channel*
36 *Request Messages* whenever RETRY_DELAY_S is set to 0.

- 1 • If $USE_RETRY_DELAY_R$ is set to '1', the mobile station shall interpret the
2 *Supplemental Channel Assignment Message* as an indication that the base station
3 has specified a *Supplemental Channel Request Message* retry delay in
4 $RETRY_DELAY_R$ as follows:
 - 5 – The mobile station shall store the next system time 80 ms boundary +
6 $RETRY_DELAY_R \times 320$ ms as $RETRY_DELAY_S$. The mobile station shall not
7 send any subsequent *Supplemental Channel Request Message* until after the
8 system time stored in $RETRY_DELAY_S$. At the system time stored in
9 $RETRY_DELAY_S$, the mobile station shall reset $RETRY_DELAY_S$ to 0.
 - 10 – If $RETRY_DELAY_R$ is '00000000', then the mobile station shall store 0 as
11 $RETRY_DELAY_S$. The mobile station may send subsequent *Supplemental*
12 *Channel Request Messages* whenever $RETRY_DELAY_S$ is set to 0.
 - 13 – If $RETRY_DELAY_R$ is '11111111', then the mobile station shall store *infinity* as
14 $RETRY_DELAY_S$, and the mobile station shall not send any further
15 *Supplemental Channel Request Messages* until the mobile station receives a
16 new *Supplemental Channel Assignment Message* with no retry delay or a non-
17 infinite retry delay specified, or until the mobile station receives a *General*
18 *Handoff Direction Message* with a $CLEAR_RETRY_DELAY$ indication set.
- 19 • If $REV_INCLUDED_R$ is equal to '1', then the mobile station shall process Reverse
20 Supplemental Code Channel assignment information for the *Supplemental*
21 *Channel Assignment Message*. This information shall be processed as follows:
 - 22 – The mobile station shall store $USE_T_ADD_ABORT_R$, the Reverse
23 Supplemental Code Channel assignment T_ADD abort indicator, as
24 $USE_T_ADD_ABORT_S$.
 - 25 – The mobile station shall store $REV_DTX_DURATION_R$, Reverse Supplemental
26 Channel Discontinuous Transmission Duration, as $REV_DTX_DURATION_S$.
 - 27 – If $REV_PARMS_INCLUDED_R$ is equal to '1', the mobile station shall store the
28 following:
 - 29 + $T_MULCHAN_S = T_MULCHAN_R$
 - 30 + $BEGIN_PREAMBLE_S = BEGIN_PREAMBLE_R$
 - 31 + $RESUME_PREAMBLE_S = RESUME_PREAMBLE_R$
 - 32 – If $IGNORE_SCAM_S$ is equal to '1' and $SCRM_SEQ_NUM_R$ is not present or is
33 present and is not equal to $SCRM_SEQ_NUM_S$, then the mobile station shall
34 not process the remaining Reverse Supplemental Code Channel
35 assignment information in this message.

- 1 – If IGNORE_SCAM_S is equal to '1' and SCRM_SEQ_NUM_R is present and is
2 equal to SCRM_SEQ_NUM_S, then the mobile station shall set
3 IGNORE_SCAM_S to '0'.
- 4 – The mobile station shall set REV_START_TIME_S as follows:
 - 5 + If EXPL_REV_START_TIME_R is equal to '1', the mobile station shall set
6 the REV_START_TIME_S to REV_START_TIME_R.
 - 7 + If USE_REV_HDM_SEQ_R is equal to '1' and REV_LINKED_HDM_SEQ_R is not
8 equal to HDM_SEQ_S, the mobile station shall set the REV_START_TIME_S
9 to NULL.
 - 10 + If USE_REV_HDM_SEQ_R is equal to '1' and REV_LINKED_HDM_SEQ_R is
11 equal to HDM_SEQ_S, then the mobile station shall set the
12 REV_START_TIME_S to the action time of the *General Handoff Direction*
13 *Message* that is linked to the *Supplemental Channel Assignment Message*.
 - 14 + If EXPL_REV_START_TIME_R is equal to '0' and USE_REV_HDM_SEQ_R is
15 equal to '0', the mobile station shall set the REV_START_TIME_S to the
16 next 80 ms boundary following the action time of the *Supplemental*
17 *Channel Assignment Message*.
- 18 – The mobile station shall set NUM_REV_CODES_S to NUM_REV_CODES_R. If
19 REV_START_TIME_S is not equal to NULL, the mobile station shall perform the
20 following actions:
 - 21 + If NUM_REV_CODES_R is equal to '000', the mobile station shall stop
22 transmitting the Reverse Supplemental Code Channels at the start time
23 specified by REV_START_TIME_S.
 - 24 + If NUM_REV_CODES_R is not equal to '000', the mobile station shall set
25 PILOT_GATING_USE_RATE to '0' at the action time of the message and
26 the mobile station may start transmitting on NUM_REV_CODES_S
27 Reverse Supplemental Code Channels at the start time specified by
28 REV_START_TIME_S for a duration of time specified by the following rules:
 - 29 o If USE_REV_DURATION_R is equal to '1', the mobile station shall set
30 REV_DURATION_S to REV_DURATION_R. The mobile station may
31 continue transmitting on the Reverse Supplemental Code Channels
32 for a period of (REV_DURATION_S × 80) ms, or until it receives the
33 action time of a subsequent *General Handoff Direction Message* or a
34 *Supplemental Channel Assignment Message* that specifies a different
35 Reverse Supplemental assignment duration or start time.

- 1 o If $USE_REV_DURATION_R$ is equal to '0', the mobile station may

2 continue to transmit indefinitely on the Reverse Supplemental Code

3 Channels, or until it receives the action time of a subsequent

4 *General Handoff Direction Message* or a *Supplemental Channel*

5 *Assignment Message* that specifies a different Reverse Supplemental

6 assignment duration or start time.
- 7 • If $FOR_INCLUDED$ is equal to '1', then the mobile station shall process Forward

8 Supplemental Code Channel assignment information as follows:

 - 9 – The mobile station shall assign a value to $FOR_START_TIME_S$ according to

10 the following rules:

 - 11 + If $EXPL_FOR_START_TIME$ is equal to '1', the mobile station shall set the

12 $FOR_START_TIME_S$ to $FOR_START_TIME_R$.
 - 13 + If $USE_FOR_HDM_SEQ_R$ is equal to '1' and $FOR_LINKED_HDM_SEQ_R$ is not

14 equal to HDM_SEQ_S , the mobile station shall set the $FOR_START_TIME_S$

15 to NULL.
 - 16 + If $USE_FOR_HDM_SEQ_R$ is equal to '1' and $FOR_LINKED_HDM_SEQ_R$ is

17 equal to HDM_SEQ_S , then the mobile station shall set the

18 $FOR_START_TIME_S$ to the action time of the *General Handoff Direction*

19 *Message* that is linked to the *Supplemental Channel Assignment Message*.
 - 20 + If $EXPL_FOR_START_TIME_R$ is equal to '0' and $USE_FOR_HDM_SEQ_R$

21 equals '0', the mobile station shall set the $FOR_START_TIME_S$ to the

22 action time of the *Supplemental Channel Assignment Message*.
 - 23 – If $FOR_SUP_CONFIG_R$ is equal to '00' and $FOR_START_TIME_S$ is not equal to

24 NULL, the mobile station should stop processing the Forward Supplemental

25 Code Channels at the time specified by $FOR_START_TIME_S$.
 - 26 – If $FOR_SUP_CONFIG_R$ is equal to '01' and $FOR_START_TIME_S$ is not equal to

27 NULL, the mobile station shall set $PILOT_GATING_USE_RATE$ to '0' at the

28 action time of the message and start processing the Forward Supplemental

29 Code Channels in the $CODE_CHAN_LIST_S$ at $FOR_START_TIME_S$ for a period

30 of time specified by the following rules:

 - 31 + If $USE_FOR_DURATION$ is equal to '1', the mobile station shall set

32 $FOR_DURATION_S$ to $FOR_DURATION_R$. The mobile station shall continue

33 processing the Forward Supplemental Code Channels for a period of

34 $(FOR_DURATION_S \times 80)$ ms, or until it receives the action time of a

35 subsequent *Supplemental Channel Assignment Message* or a *General*

36 *Handoff Direction Message* that specifies a different Forward

37 Supplemental assignment duration or start time.

- 1 + If $USE_FOR_DURATION_R$ is equal to '0', the mobile station shall continue
- 2 processing the Forward Supplemental Code Channels until it receives
- 3 the action time of a subsequent *Supplemental Channel Assignment*
- 4 *Message* or a *General Handoff Direction Message* that specifies a different
- 5 Forward Supplemental assignment duration or start time.
- 6 – If $FOR_SUP_CONFIG_R$ is equal to '10', the mobile station shall perform the
- 7 following:
- 8 + The mobile station shall update the $CODE_CHAN_LIST_S$ as specified in
- 9 2.6.8.
- 10 + If $FOR_START_TIME_S$ is not equal to NULL the mobile station should stop
- 11 processing Forward Supplemental Code Channels at the time specified
- 12 by $FOR_START_TIME_S$.
- 13 – If $FOR_SUP_CONFIG_R$ is equal to '11', the mobile station shall perform the
- 14 following:
- 15 + The mobile station shall update the $CODE_CHAN_LIST_S$ as specified in
- 16 2.6.8.
- 17 + If $FOR_START_TIME_S$ is not equal to NULL, then the mobile station shall
- 18 set $PILOT_GATING_USE_RATE$ to '0' at the action time of the message
- 19 and start processing the Forward Supplemental Code Channels in the
- 20 $CODE_CHAN_LIST_S$ at the time specified by $FOR_START_TIME_S$ for a
- 21 period of time specified by the following rules:
- 22 o If $USE_FOR_DURATION_R$ is equal to '1', the mobile station shall set
- 23 $FOR_DURATION_S$ to $FOR_DURATION_R$. The mobile station shall
- 24 continue processing the Forward Supplemental Code Channels for
- 25 $(FOR_DURATION_S \times 80)$ ms, until it receives a subsequent
- 26 *Supplemental Channel Assignment Message* or a *General Handoff*
- 27 *Direction Message* that specifies a different Forward Supplemental
- 28 assignment duration or start time.
- 29 o If $USE_FOR_DURATION_R$ is equal to '0', the mobile station shall
- 30 continue processing the Forward Supplemental Code Channels until
- 31 it receives a subsequent *Supplemental Channel Assignment Message*
- 32 or a *General Handoff Direction Message* that specifies a different
- 33 Forward Supplemental assignment duration or start time.
- 34 9. *General Handoff Direction Message*: The mobile station shall process the message
- 35 as follows:
- 36 In addition to the requirements in this section, if the $SCR_INCLUDED$ field is
- 37 included in this message and is set to '1' the mobile station shall also process this
- 38 message in accordance with the requirements for the active service subfunction
- 39 (see 2.6.4.1.2.2).

1 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to
 2 the specified value if any of the following conditions is true, and shall not perform
 3 any other action described in this section for processing the *General Handoff*
 4 *Direction Message*:

- 5 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
 6 set to '00000110' (capability not supported), if the mobile station does not support
 7 the band class specified in the *General Handoff Direction Message*.
- 8 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
 9 set to '00000110' (capability not supported), if the number of forward or reverse
 10 Supplemental Code Channels specified in the *General Handoff Direction Message*
 11 is greater than the maximum number of Supplemental Code Channels
 12 supported by the mobile station.
- 13 • If the SCR_INCLUDED field is included in this message and is set to '1', the
 14 mobile station shall do the following:
 - 15 - The mobile station shall send a *Mobile Station Reject Order* with the ORDQ
 16 field set to '00000111' (message cannot be handled by the current mobile
 17 station configuration), if the mobile station does not support the service
 18 configuration specified in the *General Handoff Direction Message*.
 - 19 - The mobile station shall send a *Mobile Station Reject Order* (ORDQ =
 20 '00000111') within T_{56m} seconds, if the mobile station supports the service
 21 configuration specified but does not accept the service configuration
 22 specified in the *General Handoff Direction Message*.
- 23 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
 24 set to '00000111' (message cannot be handled by the current mobile station
 25 configuration), if the NNSCR_INCLUDED field is included and set to '1' and the
 26 SCR_INCLUDED field is either not included or included but set to '0', and the
 27 mobile station does not support the configuration specified in the non-
 28 negotiable service configuration information record in the *General Handoff*
 29 *Direction Message*.
- 30 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
 31 set to '00001010' (search set not specified), if the PERIODIC_SEARCH field is
 32 included in the *General Handoff Direction Message* and is set to '1', and the
 33 Candidate Frequency Search Set is empty.
- 34 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
 35 set to '00001101' (search period too short), if the PERIODIC_SEARCH field is
 36 included in the *General Handoff Direction Message* and is set to '1', and
 37 *search_period* is less than $(\max(\text{fwd_time}, \text{rev_time}) + T_{71m} \text{ seconds})$, where
 38 *search_period* = time period corresponding to SEARCH_PERIOD_S shown in
 39 Table 2.6.6.2.8.3.2-1,

1 *fwd_time* = the mobile station's estimate of the total length of time, in seconds,
 2 for which the mobile station will need to suspend its current
 3 Forward Traffic Channel processing in order to tune to the CDMA
 4 Candidate Frequency, to search the Candidate Frequency Search
 5 Set, and to re-tune to the Serving Frequency; if the mobile station
 6 searches the Candidate Frequency Search Set in multiple visits,
 7 *fwd_time* is the total time for all visits to the CDMA Candidate
 8 Frequency in a search period (see 2.6.6.2.8.3.2),

9 and

10 *rev_time* = the mobile station's estimate of the total length of time, in seconds,
 11 for which the mobile station will need to suspend its current
 12 Reverse Traffic Channel processing in order to tune to the CDMA
 13 Candidate Frequency, to search the Candidate Frequency Search
 14 Set, and to re-tune to the Serving Frequency; if the mobile station
 15 searches the Candidate Frequency Search Set in multiple visits,
 16 *rev_time* is the total time for all visits to the CDMA Candidate
 17 Frequency in a search period.

18 If none of the above conditions is true, the mobile station shall perform the actions
 19 described in the remainder of this section to process the *General Handoff Direction*
 20 *Message* at the action time of the message.

21 If EXTRA_PARMS is equal to '1', the mobile station shall store the return on failure
 22 indicator from the *General Handoff Direction Message* (RETURN_IF_HANDOFF_FAIL_S
 23 = RETURN_IF_HANDOFF_FAIL_R); otherwise the mobile station shall set
 24 RETURN_IF_HANDOFF_FAIL_S to '0'.

25 The mobile station shall set RETURN_IF_HANDOFF_FAIL_S to '0' (disable return on
 26 failure) if any of the following conditions is true:

- 27 • If P_REV_IN_USE_S is less than or equal to four and the mobile station does not
 28 support hard handoff with return on failure, or
- 29 • At least one of the pilots specified by the message is also included in the Active
 30 Set prior to the action time of the message, and one of the following conditions
 31 is true:
 - 32 – EXTRA_PARMS is equal to '0', or
 - 33 – EXTRA_PARMS is equal to '1', the message specifies the same Frequency
 34 Assignment as the Serving Frequency (BAND_CLASS_R is equal to
 35 CDMABAND_S and CDMA_FREQ_R is equal to CDMACH_S), and FRAME_OFFSET_R
 36 is equal to FRAME_OFFSET_S.

37 The mobile station shall store the following parameters from its current
 38 configuration:

- 39 • CDMA band class (SF_CDMABAND_S = CDMABAND_S)

- 1 • Frequency assignment ($SF_CDMACH_S = CDMACH_S$)
- 2 • Frame Offset ($SF_FRAME_OFFSET_S = FRAME_OFFSET_S$)

3 If $RETURN_IF_HANDOFF_FAIL_S$ is equal to '1', the mobile station shall also store the
 4 following parameters from its current configuration:

- 5 • Protocol revision level
 6 ($SF_P_REV_S = P_REV_S$)
- 7 • Protocol revision level in use on the Serving Frequency
 8 ($SF_P_REV_IN_USE_S = P_REV_IN_USE_S$)
- 9 • Search window size for the Active Set and Candidate Set
 10 ($SF_SRCH_WIN_A_S = SRCH_WIN_A_S$)
- 11 • Search window size for the Neighbor Set
 12 ($SF_SRCH_WIN_N_S = SRCH_WIN_N_S$)
- 13 • Search window size for the Remainder Set
 14 ($SF_SRCH_WIN_R_S = SRCH_WIN_R_S$)
- 15 • Pilot detection threshold
 16 ($SF_T_ADD_S = T_ADD_S$)
- 17 • Pilot drop threshold
 18 ($SF_T_DROP_S = T_DROP_S$)
- 19 • Active Set versus Candidate Set comparison threshold
 20 ($SF_T_COMP_S = T_COMP_S$)
- 21 • Drop timer value
 22 ($SF_T_TDROP_S = T_TDROP_S$)
- 23 • Soft slope for the dynamic add and drop thresholds
 24 ($SF_SOFT_SLOPE_S = SOFT_SLOPE_S$)
- 25 • Intercept for the dynamic add threshold
 26 ($SF_ADD_INTERCEPT_S = ADD_INTERCEPT_S$)
- 27 • Intercept for the dynamic drop threshold
 28 ($SF_DROP_INTERCEPT_S = DROP_INTERCEPT_S$)
- 29 • Private long code mask indicator: If the mobile station is using the private long
 30 code mask on the Serving Frequency, it shall set $SF_PRIVATE_LCM_S$ to '1';
 31 otherwise, it shall set $SF_PRIVATE_LCM_S$ to '0'.
- 32 • Service negotiation type
 33 ($SF_SERV_NEG_S = SERV_NEG_S$)

- 1 • Service configuration:
- 2 Store the current service configuration (service configuration record and non-
- 3 negotiable service configuration record) in SF_SERVICE_CONFIG_S
- 4 • Message encryption mode: If message encryption is on, the mobile station shall
- 5 set SF_ENCRYPT_MODE_S to '1'; otherwise, the mobile station shall set
- 6 SF_ENCRYPT_MODE_S to '0'.
- 7 • Extended nominal power setting of the current cell
- 8 (SF_NOM_PWR_EXT_S = NOM_PWR_EXT_S)
- 9 • Nominal power setting of the current cell
- 10 (SF_NOM_PWR_S = NOM_PWR_S)
- 11 • Power control step
- 12 (SF_PWR_CNTL_STEP_S = PWR_CNTL_STEP_S)
- 13 • Serving Frequency Active Set (SF Active Set = ?For each pilot in the current
- 14 Active Set: (PILOT_PN, PWR_COMB_IND) ?)
- 15 • Serving Frequency Code Channel List
- 16 (SF_CODE_CHAN_LIST_S = CODE_CHAN_LIST_S)

17 When the message takes effect, the mobile station shall perform the following
18 actions:

- 19 • The mobile station shall send a *Handoff Completion Message* or an *Extended Handoff*
20 *Completion Message* as specified in 2.6.6.2.5.2.
- 21 • Update the Active Set, Candidate Set, and Neighbor Set in accordance with the
22 *General Handoff Direction Message* processing (see 2.6.6.2.6.1, 2.6.6.2.6.2, and
23 2.6.6.2.6.3).
- 24 • Discontinue use of all Forward Traffic Channels associated with pilots not listed
25 in the *General Handoff Direction Message*.
- 26 • If EXTRA_PARMS is equal to '1', perform the following actions:
 - 27 – If FRAME_OFFSET_T is not equal to FRAME_OFFSET_S, change the frame offset
 - 28 on all of the code channels of the Forward Traffic Channel and of the
 - 29 Reverse Traffic Channel.
 - 30 – If RESET_L2_T is equal to '1', and RETURN_IF_HANDOFF_FAIL_S is equal to '0',
 - 31 Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to reset
 - 32 the acknowledgment procedures, as specified in 2.2.1.1 and 2.2.2.1 of [4].
 - 33 The mobile station shall reset the acknowledgment procedures immediately
 - 34 after the action time of the *General Handoff Direction Message*.
 - 35 – If RESET_FPC_T is equal to '1' and RETURN_IF_HANDOFF_FAIL_S is equal to '0',
 - 36 initialize the Forward Traffic Channel power control counters, as specified
 - 37 in 2.6.4.1.1.1.

- 1 – If $SERV_NEG_TYPE_T$ is equal to '1', set $SERV_NEG_S$ to enabled; otherwise set
- 2 $SERV_NEG_S$ to disabled. For operation in Band Class 1, $SERV_NEG_S$ is
- 3 always equal to enabled.
- 4 – Use the long code mask specified by the $PRIVATE_LCM_T$ (see 2.3.12.3) and
- 5 indicate to the user the voice privacy mode status.
- 6 – Process the $ENCRYPT_MODE$ field, as specified in 2.3.12.2.
- 7 • If $EXTRA_PARMS$ is equal to '0', set the following variables to the values
- 8 indicated:
 - 9 – Hard handoff traffic channel preamble count required before transmitting a
 - 10 *Handoff Completion Message* or an *Extended Handoff Completion Message*
 - 11 ($NUM_PREAMBLE_S = '000'$)
 - 12 – Complete search flag ($COMPLETE_SEARCH_S = '1'$)
 - 13 – CDMA band class for the Target Frequency
 - 14 ($TF_CDMABAND_S = SF_CDMABAND_S$)
 - 15 – Frequency assignment for the Target Frequency
 - 16 ($TF_CDMACH_S = SF_CDMACH_S$)
 - 17 • Store the following parameters from the *General Handoff Direction Message*:
 - 18 – *General Handoff Direction Message* sequence number
 - 19 ($HDM_SEQ_S = HDM_SEQ_T$)
 - 20 – Forward power control subchannel relative gain ($FPC_SUBCHAN_GAIN_S =$
 - 21 $FPC_SUBCHAN_GAIN_T$).
 - 22 – If the mobile station uses $FPC_SUBCHAN_GAIN_S$, the mobile station shall
 - 23 perform the following:
 - 24 + If $PC_ACTION_TIME_T$ is received, the mobile station shall apply its usage
 - 25 of the $FPC_SUBCHAN_GAIN_S$ at the time specified by $PC_ACTION_TIME_T$.
 - 26 + If PC_ACTION_TIME is not received and the explicit action time is
 - 27 received, the mobile station shall apply its usage of the
 - 28 $FPC_SUBCHAN_GAIN_S$ at the action time.
 - 29 + If neither $PC_ACTION_TIME_T$ nor explicit action time is received, the
 - 30 mobile station shall apply its usage of the $FPC_SUBCHAN_GAIN_S$ at the
 - 31 first 80ms boundary occurring at least 80ms after the end of the frame
 - 32 containing the last bit of the *General Handoff Direction Message* sent to
 - 33 the mobile station.
 - 34 – Reverse Eighth Gating Mode ($REV_FCH_GATING_MODE_S =$
 - 35 $REV_FCH_GATING_MODE_T$).

- 1 – Reverse Power Control Delay if $REV_PWR_CNTL_DELAY_INCL_R$ is equal to '1'
- 2 ($REV_PWR_CNTL_DELAY_S = REV_PWR_CNTL_DELAY_R$).
- 3 – If $SEARCH_INCLUDED$ is equal to '1', store the following:
 - 4 + Search window size for the Active Set and Candidate Set
 - 5 ($SRCH_WIN_A_S = SRCH_WIN_A_R$)
 - 6 + Pilot detection threshold
 - 7 ($T_ADD_S = T_ADD_R$)
 - 8 + Pilot drop threshold
 - 9 ($T_DROP_S = T_DROP_R$)
 - 10 + Active Set versus Candidate Set comparison threshold
 - 11 ($T_COMP_S = T_COMP_R$)
 - 12 + Drop timer value
 - 13 ($T_TDROP_S = T_TDROP_R$)
 - 14 + Soft slope for the dynamic add and drop thresholds
 - 15 ($SOFT_SLOPE_S = SOFT_SLOPE_R$)
 - 16 + Intercept for the dynamic add threshold
 - 17 ($ADD_INTERCEPT_S = ADD_INTERCEPT_R$)
 - 18 + Intercept for the dynamic drop threshold
 - 19 ($DROP_INTERCEPT_S = DROP_INTERCEPT_R$)
- 20 – If $EXTRA_PARMS$ is equal to '1', store the following:
 - 21 + Protocol revision level ($P_REV_S = P_REV_R$), and protocol revision level
 - 22 currently in use ($P_REV_IN_USE_S = \min(P_REV_S, MOB_P_REV_P$ of the
 - 23 current band class))
 - 24 + If the mobile station supports packet data service options, the packet
 - 25 data services zone identifier ($PACKET_ZONE_ID_S = PACKET_ZONE_ID_R$)
 - 26 + Frame offset ($FRAME_OFFSET_S = FRAME_OFFSET_R$)
 - 27 + Acknowledgment procedures reset indicator
 - 28 (If $RETURN_IF_HANDOFF_FAIL_S$ is equal to '1', set $TF_RESET_L2_S$ to
 - 29 $RESET_L2_R$)
 - 30 + Indicator to initialize the Forward Traffic Channel power control
 - 31 counters (If $RETURN_IF_HANDOFF_FAIL_S$ is equal to '1', set
 - 32 $TF_RESET_FPC_S$ to $RESET_FPC_R$)
 - 33 + Nominal power setting of the target cell ($NOM_PWR_S = NOM_PWR_R$)

- 1 + Extended nominal power setting of the target cell (If CDMABAND_S =
- 2 '00001', then NOM_PWR_EXT_S = NOM_PWR_EXT_T; otherwise,
- 3 NOM_PWR_EXT_S = '0')
- 4 + Hard handoff traffic channel preamble count required before
- 5 transmitting a *Handoff Completion Message* or an *Extended Handoff*
- 6 *Completion Message* (NUM_PREAMBLE_S = NUM_PREAMBLE_T)
- 7 + CDMA band class for the Target Frequency
- 8 (TF_CDMABAND_S = BAND_CLASS_T and CDMABAND_S = BAND_CLASS_T)
- 9 + Frequency assignment for the Target Frequency
- 10 (TF_CDMACH_S = CDMA_FREQ_T and CDMACH_S = CDMA_FREQ_T)
- 11 + Complete search flag (COMPLETE_SEARCH_S = COMPLETE_SEARCH_T)
- 12 + Periodic search flag (PERIODIC_SEARCH_S = PERIODIC_SEARCH_T)
- 13 + Nominal code channel output power offset relative to the Reverse Pilot
- 14 Channel power (RLGAIN_TRAFFIC_PILOT_S = RLGAIN_TRAFFIC_PILOT_T)
- 15 – If EXTRA_PARMS is equal to '1' and DEFAULT_RLAG is equal to '1', the
- 16 mobile station shall set each entry of the Reverse Link Attribute
- 17 Adjustment Gain Table and Reverse Channel Adjustment Gain Table (see
- 18 2.1.2.3.3 of [2]) to 0.
- 19 – If REV_PARMS_INCLUDED is included and is equal to '1', the mobile station
- 20 shall store the following:
- 21 + Reverse Supplemental Code Channel Request Message neighbor
- 22 channel pilot strength offset (T_MULCHAN_S = T_MULCHAN_T)
- 23 + Reverse Supplemental Code Channel beginning of transmission
- 24 preamble length (BEGIN_PREAMBLE_S = BEGIN_PREAMBLE_T)
- 25 + Reverse Supplemental Code Channel resumption of transmission
- 26 preamble length (RESUME_PREAMBLE_S = RESUME_PREAMBLE_T)
- 27 – For each pilot included in the message, the mobile station shall store the
- 28 following:
- 29 + PILOT_PN, the pilot PN sequence offset index
- 30 + PWR_COMB_IND, the power control symbol combining indicator
- 31 – If USE_PWR_CNTL_STEP is equal to '1' and PWR_CNTL_STEP_T corresponds to
- 32 a power control step size supported by the mobile station (see 2.1.2.3.2 of [2]),
- 33 then the mobile station shall set PWR_CNTL_STEP_S to PWR_CNTL_STEP_T.
- 34 • Set the pilot detection threshold for the Target Frequency and the Candidate
- 35 Frequency:

- 1 – Set $TF_T_ADD_S$ to T_ADD_S .
- 2 – If the Target Frequency is the same as the Candidate Frequency
- 3 ($TF_CDMABAND_S$ is equal to $CF_CDMABAND_S$ and TF_CDMACH_S is equal to
- 4 CF_CDMACH_S), set $CF_T_ADD_S$ to T_ADD_S .
- 5 • If $FOR_INCLUDED$ is included and is equal to '0', the mobile station shall
- 6 perform the following:
- 7 – The mobile station shall update the Code Channel List, $CODE_CHAN_LIST_S$,
- 8 as specified in 2.6.8.
- 9 – If $USE_FOR_HDM_SEQ_S$ is equal to '1' and $FOR_LINKED_HDM_SEQ_S$ is equal
- 10 to HDM_SEQ_R (this indicates that there is pending Forward Supplemental
- 11 Code Channel assignment information, received in a *Supplemental Channel*
- 12 *Assignment Message*, linked to this *General Handoff Direction Message*), then
- 13 the mobile station shall perform the following actions:
- 14 + The mobile station shall set $USE_FOR_HDM_SEQ_S$ to '0'.
- 15 + If $SCAM_FOR_ORDER_S$ is equal to '0', the mobile station shall stop
- 16 processing all Forward Supplemental Code Channels at the action time
- 17 of the *General Handoff Direction Message*.
- 18 + If $SCAM_FOR_ORDER_S$ is equal to '1', the mobile station shall start
- 19 processing the Forward Supplemental Code Channels specified in
- 20 $CODE_CHAN_LIST_S$ at the action time of the *General Handoff Direction*
- 21 *Message*, for a period of time determined by the following rules:
- 22 o If $SCAM_FOR_DURATION_MODE_S$ is equal to '1', the mobile station
- 23 shall continue processing the Forward Supplemental Code Channels
- 24 for a period of $(FOR_DURATION_S \times 80)$ ms, until it receives a
- 25 subsequent *General Handoff Direction Message* or a *Supplemental*
- 26 *Channel Assignment Message* that specifies a different Forward
- 27 Supplemental Code Channel assignment.
- 28 o If $SCAM_FOR_DURATION_MODE_S$ is equal to '0', the mobile station
- 29 shall continue processing the Forward Supplemental Code Channels
- 30 until it receives a subsequent *Supplemental Channel Assignment*
- 31 *Message* or a *General Handoff Direction Message* that specifies a
- 32 different Forward Supplemental Code Channel assignment.
- 33 – If $USE_FOR_HDM_SEQ_S$ is equal to '0' or $FOR_LINKED_HDM_SEQ_S$ is not
- 34 equal to HDM_SEQ_R , and if the mobile station is currently processing
- 35 Forward Supplemental Code Channels, it shall continue processing the
- 36 Forward Supplemental Code Channels using the updated Code Channel List,
- 37 $CODE_CHAN_LIST_S$.

- 1 • If NNSCR_INCLUDED field is included and set to '1' and SCR_INCLUDED field is
2 either not included or included but set to '0', the mobile station shall process
3 the received Non-negotiable Service Configuration Record as specified in
4 2.6.4.1.13 at the action time of this message.
- 5 • If FOR_INCLUDED is included and is equal to '1', then the mobile station shall
6 process the Forward Supplemental Code Channel assignment information as
7 follows:
 - 8 – The mobile station shall set USE_FOR_HDM_SEQ_S to '0'.
 - 9 – If FOR_START_TIME_S specifies a time which is after the action time of the
10 *General Handoff Direction Message*, the mobile station shall cancel any
11 pending Forward Supplemental Code Channel assignment and shall set
12 FOR_START_TIME_S to NULL.
 - 13 – The mobile station shall update the Code Channel List,
14 CODE_CHAN_LIST_S, in accordance with the value of FOR_SUP_CONFIG, as
15 specified in 2.6.8.
 - 16 – If FOR_SUP_CONFIG is equal to '00' or '10', the mobile station should stop
17 processing Forward Supplemental Code Channels, if any, when the message
18 takes effect.
 - 19 – If FOR_SUP_CONFIG is equal to '01' or '11', the mobile station shall set
20 PILOT_GATING_USE_RATE to '0' at the action time of the message and start
21 processing the Forward Supplemental Code Channels in the updated Code
22 Channel List, CODE_CHAN_LIST_S, at the action time of the message, for a
23 period of time determined by the following rules:
 - 24 + If USE_FOR_DURATION is equal to '1', the mobile station shall set
25 FOR_DURATION_S to FOR_DURATION_T. The mobile station shall continue
26 processing the Forward Supplemental Code Channels for a period of
27 (FOR_DURATION_S × 80) ms, until it receives a subsequent *Supplemental*
28 *Channel Assignment Message* or a *General Handoff Direction Message* that
29 specifies a different Forward Supplemental Code Channel assignment.
 - 30 + If USE_FOR_DURATION is equal to '0', the mobile station shall continue
31 processing the Forward Supplemental Code Channels until it receives a
32 subsequent *Supplemental Channel Assignment Message* or a *General*
33 *Handoff Direction Message* that specifies a different Forward
34 Supplemental Code Channel assignment.
- 35 • If REV_INCLUDED is included and is equal to '0', the mobile station shall
36 perform the following:

- 1 – If $USE_REV_HDM_SEQ_S$ is equal to '1' and $REV_LINKED_HDM_SEQ_S$ is equal
2 to HDM_SEQ_R (this indicates that there is pending Reverse Supplemental
3 Code Channel assignment information, received in a *Supplemental Channel*
4 *Assignment Message*, linked to this *General Handoff Direction Message*), the
5 mobile station shall perform the following actions:
 - 6 + If $NUM_REV_CODES_S$ is equal to '000', the mobile station shall stop
7 transmitting on all Reverse Supplemental Code Channels at the action
8 time of the message.
 - 9 + If $NUM_REV_CODES_S$ is not equal to '000', the mobile station may start
10 transmitting on $NUM_REV_CODES_S$ Reverse Supplemental Code
11 Channels at the action time of the message, for a duration of time
12 determined by the following rules:
 - 13 o If $SCAM_REV_DURATION_MODE_S$ is equal to '1', the mobile station
14 may continue transmitting on the Reverse Supplemental Code
15 Channels for a period of $(REV_DURATION_S \times 80)$ ms, until it receives
16 a subsequent *General Handoff Direction Message* or a *Supplemental*
17 *Channel Assignment Message* that specifies a different Reverse
18 Supplemental Code Channel assignment.
 - 19 o If $SCAM_REV_DURATION_MODE_S$ is equal to '0', the mobile station
20 may continue transmitting on the Reverse Supplemental Code
21 Channels until it receives a subsequent *General Handoff Direction*
22 *Message* or a *Supplemental Channel Assignment Message* that specifies
23 a different Reverse Supplemental Code Channel assignment.
 - 24 + The mobile station shall set $USE_REV_HDM_SEQ_S$ to '0'.
- 25 – If $USE_REV_HDM_SEQ_S$ is equal to '0' or $REV_LINKED_HDM_SEQ_S$ is not
26 equal to HDM_SEQ_R , and if the previous Reverse Supplemental Code
27 Channel assignment is still valid, the mobile station may continue to
28 transmit on the Reverse Supplemental Code Channels according to the
29 previously specified Reverse Supplemental Code Channel assignment.
- 30 • If $REV_INCLUDED$ is included and is equal to '1', then the mobile station shall
31 process the Reverse Supplemental Code Channel assignment information as
32 follows:
 - 33 – The mobile station shall set $REV_DTX_DURATION_S$ to $REV_DTX_DURATION_R$.
 - 34 – The mobile station shall set $USE_REV_HDM_SEQ_S$ to '0'.
 - 35 – If $REV_START_TIME_S$ specifies a time which is after the action time of the
36 *General Handoff Direction Message*, the mobile station shall cancel any
37 pending Reverse Supplemental Code Channel assignment and shall set
38 $REV_START_TIME_S$ to NULL.

- 1 – If CLEAR_RETRY_DELAY is equal to '1', the mobile station shall cancel any
2 previously indicated retry delay and shall set RETRY_DELAY_S to 0; otherwise,
3 the mobile station shall continue to honor any previously active retry delay
4 stored in RETRY_DELAY_S.
- 5 – The mobile station shall set NUM_REV_CODES_S to NUM_REV_CODES_R, and
6 shall perform the following actions:
 - 7 + If NUM_REV_CODES_S is equal to '000', the mobile station shall stop
8 transmitting on all Reverse Supplemental Code Channels at the action
9 time of the message.
 - 10 + If NUM_REV_CODES_S is not equal to '000', the mobile station shall set
11 PILOT_GATING_USE_RATE to '0' at the action time of the message and
12 may start transmitting on NUM_REV_CODES_S Reverse Supplemental
13 Code Channels at the action time of the message, for a duration of time
14 determined by the following rules:
 - 15 o If USE_REV_DURATION_R is equal to '1', the mobile station shall set
16 REV_DURATION_S to REV_DURATION_R. The mobile station may
17 continue transmitting on the Reverse Supplemental Code Channels
18 for a period of (REV_DURATION_S × 80) ms, until it receives a
19 subsequent *General Handoff Direction Message* or a *Supplemental*
20 *Channel Assignment Message* that specifies a different Reverse
21 Supplemental Code Channel assignment.
 - 22 o If USE_REV_DURATION is equal to '0', the mobile station may
23 continue to transmit on the Reverse Supplemental Code Channels
24 until it receives a subsequent *General Handoff Direction Message* or a
25 *Supplemental Channel Assignment Message* that specifies a different
26 Reverse Supplemental Code Channel assignment.
- 27 – The mobile station shall store USE_T_ADD_ABORT_R, the Reverse
28 Supplemental Code Channel assignment T_ADD abort indicator, as
29 USE_T_ADD_ABORT_S.
- 30 • The mobile station shall set IGNORE_SCAM_S and IGNORE_ESCAM_S to '0'.
- 31 • If PERIODIC_SEARCH_S is equal to '0' and a periodic search is in progress, the
32 mobile station shall abort the periodic search (see 2.6.6.2.8.3.4 and
33 2.6.6.2.10.4).
- 34 • Perform a soft or hard handoff depending on the following conditions:
 - 35 – If any of the following conditions is true, the mobile station shall perform a
36 hard handoff:

- 1 + EXTRA_PARMS is set to '1' and either BAND_CLASS_r is not equal to
- 2 SF_CDMABAND_s, CDMA_FREQ_r is not equal to SF_CDMACH_s, or
- 3 FRAME_OFFSET_r is not equal to SF_FRAME_OFFSET_s, or
- 4 + The set of pilots specified by the message is disjoint from the Active
- 5 Set prior to the action time of the message.
- 6 – If the mobile station performs a hard handoff, it shall do the following:
 - 7 + If a Periodic Serving Frequency Pilot Report Procedure is in progress, the
 - 8 mobile station shall abort the procedure (see 2.6.6.2.12).
 - 9 + If a Candidate Frequency periodic search is in progress, the mobile station
 - 10 shall abort the periodic search (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4).
 - 11 + If RETURN_IF_HANDOFF_FAIL_s is equal to '0', the mobile station shall
 - 12 perform actions specified in 2.6.6.2.8.1. If the message specifies more than
 - 13 one pilot, the mobile station shall also perform actions specified in
 - 14 2.6.6.2.7.1 and 2.6.6.2.7.2.
 - 15 + If RETURN_IF_HANDOFF_FAIL_s is equal to '1', the mobile station shall
 - 16 perform actions specified in 2.6.6.2.8.2. If the message specifies more than
 - 17 one pilot, the mobile station shall also perform actions specified in
 - 18 2.6.6.2.7.1 and 2.6.6.2.7.2.
- 19 – Otherwise, the mobile station shall perform a soft handoff as specified in
- 20 2.6.6.2.7.
- 21 10. *Periodic Pilot Measurement Request Order*: The mobile station shall perform the
- 22 following:
 - 23 • If the PPSMM timer is enabled, disable it.
 - 24 • If ORDQ is equal to '1111111', the mobile station shall send a *Periodic Pilot*
 - 25 *Strength Measurement Message* to the base station within T_{56m} seconds.
 - 26 • If ORDQ is not equal to '1111111', the mobile station shall perform the
 - 27 following:
 - 28 – Set the MIN_PILOT_PWR_THRESH_s to MIN_PILOT_PWR_THRESH_r
 - 29 received from the *Periodic Pilot Strength Measurement Request Order*.
 - 30 – Set the MIN_PILOT_EC_IO_THRESH_s to MIN_PILOT_EC_IO_THRESH_r
 - 31 received from the *Periodic Pilot Strength Measurement Request Order*.
 - 32 – Set PPSMM_PERIOD_s equal to the larger value of ORDQ and the total
 - 33 length of time, in units of 80 ms, required by the mobile station to
 - 34 update the pilot strength measurement of each pilot in the Active Set
 - 35 and the Candidate Set.
 - 36 – Perform the Periodic Serving Frequency Pilot Report Procedure as
 - 37 specified in 2.6.6.2.12.

- If the mobile station sends the *Periodic Pilot Strength Measurement Message* and if INCL_SETPT_r is equal to '1', the mobile station shall include outer loop E_b/N_t setpoint information corresponding to the physical channel specified by FPC_PRI_CHAN_s , and Supplemental Channel outer loop E_b/N_t setpoint information if one or more Supplemental Channels are assigned, in the *Periodic Pilot Strength Measurement Message*.

11. *Universal Handoff Direction Message*: The mobile station shall process the message as follows:

In addition to the requirements in this section, if the SCR_INCLUDED field is included in this message and is set to '1' the mobile station shall also process this message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to the specified value if any of the following conditions is true, and shall not perform any other action described in this section for processing the *Universal Handoff Direction Message*:

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported), if the mobile station does not support the band class specified in the *Universal Handoff Direction Message*.
- If the SCR_INCLUDED field is included in this message and is set to '1', the mobile station shall do the following:
 - The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000111' (message cannot be handled by the current mobile station configuration), if the mobile station does not support the service configuration specified in the *Universal Handoff Direction Message*.
 - The mobile station shall send a *Mobile Station Reject Order* ($\text{ORDQ} = \text{'00000111'}$) within T_{56m} seconds, if the mobile station supports the service configuration specified but does not accept the service configuration specified in the *Universal Handoff Direction Message*.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000111' (message cannot be handled by the current mobile station configuration), if the NNSCR_INCLUDED field is included and set to '1' and the SCR_INCLUDED field is either not included or included but set to '0', and the mobile station does not support the configuration specified in the non-negotiable service configuration information record in the *Universal Handoff Direction Message*.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001010' (search set not specified), if the PERIODIC_SEARCH field is included in the *Universal Handoff Direction Message* and is set to '1' and the

Candidate Frequency Search Set is empty.

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000011' (message structure not acceptable), if the message specifies the Forward/Reverse Supplemental Channel assignment and the most significant bit of CH_IND_r is set to '0'.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000111' (message can not be handled by the current mobile station configuration), if the message includes a reverse Supplemental Channel assignment, and any of the mobile station's reverse supplemental channel configuration parameter for the corresponding Supplemental Channel (REV_SCH_MUX_s, REV_SCH_RC_s, REV_SCH_CODING_s, or REV_SCH_FRAME_LENGTH_s) is NULL.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000111' (message can not be handled by the current mobile station configuration), if the message includes a forward Supplemental Channel assignment and any of the mobile station's forward supplemental channel configuration parameters for the corresponding Supplemental Channel (FOR_SCH_MUX_s, FOR_SCH_RC_s, FOR_SCH_CODING_s, or FOR_SCH_FRAME_LENGTH_s) is NULL.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001101' (search period too short), if the PERIODIC_SEARCH field is included in the *Universal Handoff Direction Message* and is set to '1', and *search_period* is less than $(\max(fwd_time, rev_time) + T_{71m} \text{ seconds})$, where

$$search_period = \text{time period corresponding to SEARCH_PERIOD}_s \text{ shown in Table 2.6.6.2.8.3.2-1,}$$

$$fwd_time = \text{the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Forward Traffic Channel processing in order to tune to the CDMA Candidate Frequency, to search the Candidate Frequency Search Set, and to re-tune to the Serving Frequency; if the mobile station searches the Candidate Frequency Search Set in multiple visits, } fwd_time \text{ is the total time for all visits to the CDMA Candidate Frequency in a search period (see 2.6.6.2.8.3.2),}$$

and

$$rev_time = \text{the mobile station's estimate of the total length of time, in seconds, for which the mobile station will need to suspend its current Reverse Traffic Channel processing in order to tune to the CDMA Candidate Frequency, to search the Candidate Frequency Search Set, and to re-tune to the Serving Frequency; if the mobile station searches the Candidate Frequency Search Set in multiple visits, } rev_time \text{ is the total time for all visits to the CDMA Candidate Frequency in a search period.}$$

1 If none of the above conditions is true, the mobile station shall perform the actions
 2 described in the remainder of this section to process the *Universal Handoff Direction*
 3 Message at the action time of the message.

4 If EXTRA_PARMS is equal to '1', the mobile station shall store the return on failure
 5 indicator from the *Universal Handoff Direction Message* (RETURN_IF_HANDOFF_FAIL_S
 6 = RETURN_IF_HANDOFF_FAIL_r); otherwise the mobile station shall set
 7 RETURN_IF_HANDOFF_FAIL_S to '0'.

8 The mobile station shall set RETURN_IF_HANDOFF_FAIL_S to '0' (disable return on
 9 failure) if any of the following conditions is true:

- 10 • If P_REV_IN_USE_S is less than or equal to four and the mobile station does not
 11 support hard handoff with return on failure, or
- 12 • At least one of the pilots specified by the message is also included in the Active
 13 Set prior to the action time of the message, and one of the following conditions
 14 is true:
 - 15 – EXTRA_PARMS is equal to '0', or
 - 16 – EXTRA_PARMS is equal to '1', the message specifies the same Frequency
 17 Assignment as the Serving Frequency (BAND_CLASS_r is equal to
 18 CDMABAND_S and CDMA_FREQ_r is equal to CDMACH_S), and FRAME_OFFSET_r
 19 is equal to FRAME_OFFSET_S.

20 The mobile station shall store the following parameters from its current
 21 configuration:

- 22 • CDMA band class (SF_CDMABAND_S = CDMABAND_S)
- 23 • Frequency assignment (SF_CDMACH_S = CDMACH_S)
- 24 • Frame Offset (SF_FRAME_OFFSET_S = FRAME_OFFSET_S)

25 If RETURN_IF_HANDOFF_FAIL_S is equal to '1', the mobile station shall also store the
 26 following parameters from its current configuration:

- 27 • Protocol revision level (SF_P_REV_S = P_REV_S)
- 28 • Protocol revision level in use on the Serving Frequency (SF_P_REV_IN_USE_S
 29 = P_REV_IN_USE_S)
- 30 • Search window size for the Active Set and Candidate Set (SF_SRCH_WIN_A_S
 31 = SRCH_WIN_A_S)
- 32 • Search window size for the Neighbor Set
 33 (SF_SRCH_WIN_N_S = SRCH_WIN_N_S),
- 34 • Search window size for the Remainder Set
 35 (SF_SRCH_WIN_R_S = SRCH_WIN_R_S)

- 1 • Pilot detection threshold ($SF_T_ADD_S = T_ADD_S$)
- 2 • Pilot drop threshold ($SF_T_DROP_S = T_DROP_S$)
- 3 • Active Set versus Candidate Set comparison threshold
- 4 ($SF_T_COMP_S = T_COMP_S$)
- 5 • Drop timer value ($SF_T_TDROP_S = T_TDROP_S$)
- 6 • Soft slope for the dynamic add and drop thresholds
- 7 ($SF_SOFT_SLOPE_S = SOFT_SLOPE_S$)
- 8 • Intercept for the dynamic add threshold
- 9 ($SF_ADD_INTERCEPT_S = ADD_INTERCEPT_S$)
- 10 • Intercept for the dynamic drop threshold
- 11 ($SF_DROP_INTERCEPT_S = DROP_INTERCEPT_S$)
- 12 • Private long code mask indicator: If the mobile station is using the private
- 13 long code mask on the Serving Frequency, it shall set $SF_PRIVATE_LCM_S$ to
- 14 '1'; otherwise, it shall set $SF_PRIVATE_LCM_S$ to '0'.
- 15 • Service negotiation type ($SF_SERV_NEG_S = SERV_NEG_S$)
- 16 • Service configuration: Store the current service configuration (service
- 17 configuration record and non-negotiable service configuration record) in
- 18 $SF_SERVICE_CONFIG_S$
- 19 • Message encryption mode: If message encryption is on, the mobile station
- 20 shall set $SF_ENCRYPT_MODE_S$ to '1'; otherwise, the mobile station shall set
- 21 $SF_ENCRYPT_MODE_S$ to '0'.
- 22 • If $NNSCR_INCLUDED$ field is included and set to '1' and $SCR_INCLUDED$ field
- 23 is either not included or included but set to '0', the mobile station shall
- 24 process the received Non-negotiable Service Configuration Record as
- 25 specified in 2.6.4.1.13 at the action time of this message.
- 26 • Extended nominal power setting of the current cell
- 27 ($SF_NOM_PWR_EXT_S = NOM_PWR_EXT_S$)
- 28 • Nominal power setting of the current cell ($SF_NOM_PWR_S = NOM_PWR_S$)
- 29 • Power control step ($SF_PWR_CNTL_STEP_S = PWR_CNTL_STEP_S$)
- 30 • Serving Frequency Active Set (SF Active Set = (For each pilot in the current
- 31 Active Set: ($PILOT_PN$, PWR_COMB_IND)))
- 32 • Serving Frequency Code Channel List
- 33 ($SF_CODE_CHAN_LIST_S = CODE_CHAN_LIST_S$)

34 When the message takes effect, the mobile station shall perform the following
35 actions:

- 1 • The mobile station shall send a *Handoff Completion Message* or an *Extended*
2 *Handoff Completion Message* as specified in 2.6.6.2.5.2.
- 3 • Update the Active Set, Candidate Set, and Neighbor Set in accordance with
4 the *Universal Handoff Direction Message* processing (see 2.6.6.2.6.1,
5 2.6.6.2.6.2, and 2.6.6.2.6.3).
- 6 • Discontinue use of all Forward Traffic Channels associated with pilots not in
7 the updated Active Set.
- 8 • If PARMS_INCL is equal to '1', perform the following actions:
 - 9 – Set protocol revision level ($P_REV_S = P_REV_P$), and protocol revision level
10 currently in use ($P_REV_IN_USE_S = \min(P_REV_S, MOB_P_REV_P$ of the
11 current band class)).
 - 12 – If SERV_NEG_TYPE_P is equal to '1', set SERV_NEG_S to enabled; otherwise
13 set SERV_NEG_S to disabled. For operation in Band Class 1, SERV_NEG_S
14 is always equal to enabled.
- 15 • If EXTRA_PARMS is equal to '1', perform the following actions:
 - 16 – If FRAME_OFFSET_P is not equal to FRAME_OFFSET_S, change the frame
17 offset on all of the code channels of the Forward Traffic Channel and of
18 the Reverse Traffic Channel.
 - 19 – If RESET_L2_P is equal to '1', and RETURN_IF_HANDOFF_FAIL_S is equal to
20 '0', Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to
21 reset the acknowledgment procedures, as specified in 2.2.1.1 and 2.2.2.1
22 of [4]. The mobile station shall reset the acknowledgment procedures
23 immediately after the action time of the *Universal Handoff Direction*
24 *Message*.
 - 25 – If RESET_FPC_P is equal to '1' and RETURN_IF_HANDOFF_FAIL_S is equal to
26 '0', initialize the Forward Traffic Channel power control counters, as
27 specified in 2.6.4.1.1.1.
 - 28 – Use the long code mask specified by the PRIVATE_LCM_P (see 2.3.12.3)
29 and indicate to the user the voice privacy mode status.
 - 30 – Process the ENCRYPT_MODE field, as specified in 2.3.12.2.
- 31 • If EXTRA_PARMS is equal to '0', set the following variables to the values
32 indicated:
 - 33 – Hard handoff traffic channel preamble count required before
34 transmitting a *Handoff Completion Message* or an *Extended Handoff*
35 *Completion Message* (NUM_PREAMBLE_S = '000')
 - 36 – Complete search flag (COMPLETE_SEARCH_S = '1')

- 1 – CDMA band class for the Target Frequency
2 (TF_CDMABAND_S = SF_CDMABAND_S)
- 3 – Frequency assignment for the Target Frequency
4 (TF_CDMACH_S = SF_CDMACH_S)
- 5 • Store the following parameters from the *Universal Handoff Direction Message*:
 - 6 – *Universal Handoff Direction Message* sequence number
7 (HDM_SEQ_S = HDM_SEQ_T)
 - 8 – Forward power control subchannel relative gain (FPC_SUBCHAN_GAIN_S =
9 FPC_SUBCHAN_GAIN_T).
 - 10 – If the mobile station uses FPC_SUBCHAN_GAIN_S, the mobile station
11 shall perform the following:
 - 12 + If PC_ACTION_TIME_T is received, the mobile station shall apply its
13 usage of the FPC_SUBCHAN_GAIN_S at the time specified by
14 PC_ACTION_TIME_T.
 - 15 + If PC_ACTION_TIME is not received and the explicit action time is
16 received, the mobile station shall apply its usage of the
17 FPC_SUBCHAN_GAIN_S at the action time.
 - 18 + If neither PC_ACTION_TIME_T nor explicit action time is received, the
19 mobile station shall apply its usage of the FPC_SUBCHAN_GAIN_S at
20 the first 80ms boundary occurring at least 80ms after the end of the
21 frame containing the last bit of the *Universal Handoff Direction*
22 *Message* sent to the mobile station.
 - 23 – Reverse Eighth Gating Mode (REV_FCH_GATING_MODE_S =
24 REV_FCH_GATING_MODE_T).
 - 25 – Reverse Power Control Delay if REV_PWR_CNTL_DELAY_INCL_T is equal to
26 ‘1’ (REV_PWR_CNTL_DELAY_S = REV_PWR_CNTL_DELAY_T).
 - 27 – If SEARCH_INCLUDED is equal to ‘1’, store the following:
 - 28 + Search window size for the Active Set and Candidate Set
29 (SRCH_WIN_A_S = SRCH_WIN_A_T)
 - 30 + Pilot detection threshold (T_ADD_S = T_ADD_T)
 - 31 + Pilot drop threshold (T_DROP_S = T_DROP_T)
 - 32 + Active Set versus Candidate Set comparison threshold
33 (T_COMP_S = T_COMP_T)
 - 34 + Drop timer value (T_TDROPS = T_TDROPT)

- 1 + Soft slope for the dynamic add and drop thresholds
2 (SOFT_SLOPE_S = SOFT_SLOPE_T)
- 3 + Intercept for the dynamic add threshold
4 (ADD_INTERCEPT_S = ADD_INTERCEPT_T)
- 5 + Intercept for the dynamic drop threshold
6 (DROP_INTERCEPT_S = DROP_INTERCEPT_T)
- 7 – If EXTRA_PARMS is equal to '1', store the following:
 - 8 + If the mobile station supports packet data service options, the packet
9 data services zone identifier (PACKET_ZONE_ID_S =
10 PACKET_ZONE_ID_T)
 - 11 + Frame offset (FRAME_OFFSET_S = FRAME_OFFSET_T)
 - 12 + Acknowledgment procedures reset indicator
13 (If RETURN_IF_HANDOFF_FAIL_S is equal to '1', set TF_RESET_L2_S to
14 RESET_L2_T)
 - 15 + Indicator to initialize the Forward Traffic Channel power control
16 counters (If RETURN_IF_HANDOFF_FAIL_S is equal to '1', set
17 TF_RESET_FPC_S to RESET_FPC_T)
 - 18 + Nominal power setting of the target cell (NOM_PWR_S = NOM_PWR_T)
 - 19 + Extended nominal power setting of the target cell (If BAND_CLASS_T =
20 '00001', then NOM_PWR_EXT_S = NOM_PWR_EXT_T; otherwise,
21 NOM_PWR_EXT_S = '0')
 - 22 + Hard handoff traffic channel preamble count required before
23 transmitting a *Handoff Completion Message* or an *Extended Handoff*
24 *Completion Message* (NUM_PREAMBLE_S = NUM_PREAMBLE_T)
 - 25 + CDMA band class for the Target Frequency
26 (TF_CDMABAND_S = BAND_CLASS_T and CDMABAND_S =
27 BAND_CLASS_T)
 - 28 + Frequency assignment for the Target Frequency
29 (TF_CDMACH_S = CDMA_FREQ_T and CDMACH_S = CDMA_FREQ_T)
 - 30 + Complete search flag (COMPLETE_SEARCH_S = COMPLETE_SEARCH_T)
 - 31 + Periodic search flag (PERIODIC_SEARCH_S = PERIODIC_SEARCH_T)
 - 32 + Nominal code channel output power offset relative to the Reverse
33 Pilot Channel power (RLGAIN_TRAFFIC_PILOT_S =
34 RLGAIN_TRAFFIC_PILOT_T)

- 1 – If EXTRA_PARMS is equal to '1' and DEFAULT_RLAG is equal to '1', the
2 mobile station shall set each entry of the Reverse Link Attribute
3 Adjustment Gain Table and Reverse Channel Adjustment Gain Table
4 (see 2.1.2.3.3 of [2]) to 0.
- 5 – If USE_PWR_CNTL_STEP is equal to '1' and PWR_CNTL_STEP_r
6 corresponds to a power control step size supported by the mobile station
7 (see of [2]), then the mobile station shall set PWR_CNTL_STEP_s to
8 PWR_CNTL_STEP_r.
- 9 – If CLEAR_RETRY_DELAY_r is equal to '1', the mobile station shall cancel
10 any previously indicated retry delay and shall set
11 RETRY_DELAY_s[RETRY_TYPE] to 0, where RETRY_TYPE is equal to '001',
12 '010' or '011'; otherwise, the mobile station shall continue to honor any
13 previously active retry delay stored in RETRY_DELAY_s.
- 14 – If 3XFL_1XRL_INCL_r is equal to '1', the mobile station shall set
15 1XRL_FREQ_OFFSET_s to 1XRL_FREQ_OFFSET_r.
- 16 – If SCH_INCL_r is equal to '1' and NUM_FOR_ASSIGN_r is not equal to '00',
17 the mobile station shall store the following information for each
18 occurrence of the record and process the Forward Supplemental Burst as
19 specified in 2.6.6.2.5.1.1:
 - 20 + FOR_SCH_START_TIME_INCL_s[FOR_SCH_ID_r] =
21 FOR_SCH_START_TIME_INCL_r
 - 22 + If FOR_SCH_START_TIME_INCL_s[FOR_SCH_ID_r] is equal to '1', set
23 FOR_SCH_START_TIME_s[FOR_SCH_ID_r] = FOR_SCH_START_TIME_r
 - 24 + FOR_SCH_DURATION_s[FOR_SCH_ID_r] = FOR_SCH_DURATION_r
 - 25 + SCCL_INDEX_s[FOR_SCH_ID_r] = SCCL_INDEX_r
- 26 – If SCH_INCL_r is equal to '1' and NUM_REV_ASSIGN_r is not equal to '00',
27 the mobile station shall store the following information for each
28 occurrence of the record and process the Reverse Supplemental Burst as
29 specified in 2.6.6.2.5.1.2:
 - 30 + REV_SCH_START_TIME_INCL_s[REV_SCH_ID_r] =
31 REV_SCH_START_TIME_INCL_r
 - 32 + If REV_SCH_START_TIME_INCL_s[REV_SCH_ID_r] is equal to '1', set
33 REV_SCH_START_TIME_s[REV_SCH_ID_r] = REV_SCH_START_TIME_r
 - 34 + REV_SCH_DURATION_s[REV_SCH_ID_r] = REV_SCH_DURATION_r
 - 35 + REV_SCH_NUM_BITS_IDX_s[REV_SCH_ID_r] =
36 REV_SCH_NUM_BITS_IDX_r

- 1 – If CH_IND_r is equal to '101', the mobile station shall perform the
- 2 following:
- 3 + The mobile station shall set CH_IND_s = '01'.
- 4 + If SCH_INCL_r is equal to '1' and NUM_FOR_SCH is not equal to
- 5 '00000', for all the NUM_FOR_SCH occurrences, the mobile station
- 6 shall perform the following:
 - 7 o The mobile station shall determine,
 - 8 N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r], the number of
 - 9 information bits per Forward Supplemental Channel frame
 - 10 identified by FOR_SCH_ID and corresponding to the index
 - 11 SCCL_INDEX according to the following rules:
 - 12 If FSCH_VAR_TABLE_ID_s[FOR_SCH_ID_r] is equal to '000', then:
 - 13 – If USE_FLEX_NUM_BITS_s is equal to '0' or if
 - 14 USE_FLEX_NUM_BITS_s is equal to '1' and
 - 15 FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r] is equal to '0000',
 - 16 then the mobile station shall set the number of
 - 17 information bits per frame,
 - 18 N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r] and
 - 19 number of CRC bits per frame,
 - 20 FSCH_CRC_LEN_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r],
 - 21 according to Table 3.7.3.3.2.37-2 using
 - 22 FOR_SCH_NUM_BITS_IDX_r as the index to the table.
 - 23 – If USE_FLEX_NUM_BITS_s is equal to '1' and
 - 24 FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r] is not equal to
 - 25 '0000', then the mobile station shall set the number of
 - 26 CRC bits per frame,
 - 27 FSCH_CRC_LEN_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r],
 - 28 using Table 3.7.5.20-1 and
 - 29 CRC_LEN_IDX_s[FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]][FO
 - 30 R_SCH_NUM_BITS_IDX_r] as the index to the table.
 - 31 The mobile station shall also set the number of
 - 32 information bits per frame corresponding to
 - 33 SCCL_INDEX_r,
 - 34 N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r], to
 - 35 NUM_BITS_s[FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]][FOR_
 - 36 SCH_NUM_BITS_IDX_r].
 - 37 If FSCH_VAR_TABLE_ID_s[FOR_SCH_ID_r] is not equal to '000',
 - 38 then:

- 1 – The mobile station shall set
2 $N_FSCH_BITS_IDX_SET_s[FOR_SCH_ID_r]$, the set of indices
3 to the number of information bits per frame as follows:
 - 4 + If $FOR_SCH_NUM_BITS_IDX_r$ is equal to '0000', then
5 $N_FSCH_BITS_IDX_SET_s[FOR_SCH_ID_r] = \{$
6 $FOR_SCH_NUM_BITS_IDX_r\}$,
 - 7 + otherwise the mobile station shall set (initialize)
8 $N_FSCH_BITS_IDX_SET_s[FOR_SCH_ID_r] =$
9 $\{FOR_SCH_NUM_BITS_IDX_r\}$ and for $i=1, \dots,$
10 $FOR_SCH_NUM_BITS_IDX_r$ the mobile station shall
11 add $FOR_SCH_NUM_BITS_IDX_r -$
12 $VAR_FSCH_RATE_OFFSET_s[FOR_SCH_ID_r][FOR_SCH_$
13 $NUM_BITS_IDX_r][i]$ to the set specified by
14 $N_FSCH_BITS_IDX_SET_s[FOR_SCH_ID_r]$
- 15
 - 16 – If $USE_FLEX_NUM_BITS_s$ is equal to '0' or if
17 $USE_FLEX_NUM_BITS_s$ is equal to '1' and
18 $FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]$ is equal to '0000',
19 then the mobile station shall set
20 $N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set
21 of number of information bits per frame as follows.
22 The i^{th} member of the set
23 $N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r]$ is
24 obtained using Table 3.7.3.3.2.37-2 and the i^{th} member of
25 the set $N_FSCH_BITS_IDX_SET_s[FOR_SCH_ID_r]$ as the
26 index to the table.
 - 27 – If $USE_FLEX_NUM_BITS_s$ is equal to '1' and
28 $FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]$ is not equal to
29 '0000', then

- + the mobile station shall set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of number of information bits per frame as follows. The i^{th} member of the set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ is equal to $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]]$, where $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]$ denotes the i^{th} member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$ and,
 - + the mobile station shall set $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of number CRC bits per frame as follows. The i^{th} member of the set $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ using Table 3.7.5.20-1 and $CRC_LEN_IDX_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]]$ as the index to the table, where $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]$ denotes the i^{th} member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$.
 - + If SCH_INCL_r is equal to '1' and NUM_REV_SCH is not equal to '00000', for all the NUM_REV_SCH occurrences, the mobile station shall perform the following:
 - o Set $REV_SCH_NUM_BITS_IDX_S[REV_SCH_ID_r]$ to $REV_SCH_NUM_BITS_IDX_r$.
 - o Set $REV_WALSH_ID_S[REV_SCH_ID_r][REV_SCH_NUM_BITS_IDX_S]$ to $REV_WALSH_ID_r$.
 - + For each member of the Active Set included in the message, the mobile station shall perform the following:
 - o Set $PILOT_PN$ to $PILOT_PN_r$.
 - o If $SRCH_OFFSET_INCL_r$ equals to '1', set the $SRCH_OFFSET$ field of $PILOT_REC$ to $SRCH_OFFSET_r$; otherwise, set the $SRCH_OFFSET$ field of $PILOT_REC$ to '000'.
 - o Set $ADD_PILOT_REC_INCL$ to $ADD_PILOT_REC_INCL_r$.

o If ADD_PILOT_REC_INCL_r equals '1', the mobile station shall also perform the following:

- ◇ Set the PILOT_REC_TYPE field of PILOT_REC to PILOT_REC_TYPE_r.
- ◇ If PILOT_REC_TYPE_r is equal to '000', the mobile station shall set the TD_POWER_LEVEL field of PILOT_REC to TD_POWER_LEVEL_r and set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
- ◇ If PILOT_REC_TYPE_r is equal to '001', the mobile station shall:
 - Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
 - Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- ◇ If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
 - Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
 - Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to AUX_TD_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
 - Set the AUX_TD_POWER_LEVEL field of PILOT_REC to AUX_TD_POWER_LEVEL_r.
 - Set the TD_MODE field of PILOT_REC to TD_MODE_r.

If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.

If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.

- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.
 - Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
 - Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
 - If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code length specified by WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
 - If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code length specified by WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- ore PWR_COMB_IND, CODE_CHAN_FCH and OF_MASK_ID_FCH.
- SCH_INCL_r is equal to '1' and NUM_SCH is equal to '00000', the mobile station shall delete the corresponding pilot from the all tries of the corresponding Supplemental Channel.
- SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000', each Supplemental Channel included in this record, the mobile station shall:
- If PILOT_INCL is equal to '0', the mobile station shall delete the corresponding pilot from the Active Set of Supplemental Channel for the corresponding SCCL_INDEX_r.

- ◇ If PILOT_INCL is equal to '1', for each Supplemental Channel included in this record, the mobile station shall set PILOT_PN_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to PILOT_PN_R, QOF_ID_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to QOF_MASK_ID_SCH_R, and FOR_SCH_CC_INDEX_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to CODE_CHAN_SCH_R.
- ◇ The mobile station shall delete all pilots that are not included in the list specified by the NUM_PILOTS field from the Active Set of Supplemental Channel for the corresponding SCCL_INDEX_R.
- + If 3X_FCH_INFO_INCL_R equals to '1', for each included member of the Active Set, the mobile station store the following:

 - o If 3X_FCH_LOW_INCL_R equals '1', set the QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_LOW_R and the CODE_CHAN_FCH_LOW field to CODE_CHAN_FCH_LOW_R. Otherwise, set the QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_R and the CODE_CHAN_FCH_LOW to CODE_CHAN_FCH_R.
 - o If 3X_FCH_HIGH_INCL_R equals '1', set the QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_HIGH_R and the CODE_CHAN_FCH_HIGH field to CODE_CHAN_FCH_HIGH_R. Otherwise, set the QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_R and the CODE_CHAN_FCH_HIGH to CODE_CHAN_FCH_R.
 - o If 3X_SCH_INFO_INCL_R equals to '1', for each Supplemental Channel included, the mobile station store the following:

If 3X_SCH_LOW_INCL_R equals '1', set the QOF_ID_SCH_LOW_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to QOF_MASK_ID_SCH_LOW_R and the FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_R][SCCL_INDEX_R][i] field to CODE_CHAN_SCH_LOW_R. Otherwise, set QOF_ID_SCH_LOW_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to QOF_MASK_ID_SCH_R, and FOR_SCH_CC_INDEX_LOW_S[FOR_SCH_ID_R][SCCL_INDEX_R][i] to CODE_CHAN_SCH_R.

- 1 If $3X_SCH_HIGH_INCL_r$ equals '1', set the $QOF_ID_SCH_HIGH_s$
 2 $[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 3 $QOF_MASK_ID_SCH_HIGH_r$ and the
 4 $FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]$
 5 field to $CODE_CHAN_SCH_HIGH_r$. Otherwise, set
 6 $QOF_ID_SCH_HIGH_s[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 7 $QOF_MASK_ID_SCH_r$, and
 8 $FOR_SCH_CC_INDEX_HIGH_s[FOR_SCH_ID_r][SCCL_INDEX_r][i]$
 9 to $CODE_CHAN_SCH_r$.
- 10 + The mobile station shall delete all pilots that are not listed in the
 11 NUM_PILOTS field from the Active Set of Fundamental Channel.
- 12 - If CH_IND_r is equal to '010' or '110', the mobile station shall perform the
 13 following:
- 14 + The mobile station shall set $CH_IND_s = '10'$.
- 15 + If SCH_INCL_r is equal to '1' and NUM_FOR_SCH is not equal to
 16 '00000', for all the NUM_FOR_SCH occurrences, the mobile station
 17 shall perform the following:
- 18 o The mobile station shall determine,
 19 $N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r]$, the number of
 20 information bits per Forward Supplemental Channel frame
 21 identified by FOR_SCH_ID and corresponding to the index
 22 $SCCL_INDEX$ according to the following rules:
- 23 If $FSCH_VAR_TABLE_ID_s[FOR_SCH_ID_r]$ is equal to '000', then:
- 24 - If $USE_FLEX_NUM_BITS_s$ is equal to '0' or if
 25 $USE_FLEX_NUM_BITS_s$ is equal to '1' and
 26 $FSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]$ is equal to '0000',
 27 then the mobile station shall set the number of
 28 information bits per frame,
 29 $N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r]$ and
 30 number of CRC bits per frame,
 31 $FSCH_CRC_LEN_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r]$,
 32 according to Table 3.7.3.3.2.37-2 using
 33 $FOR_SCH_NUM_BITS_IDX_r$ as the index to the table.

- If $USE_FLEX_NUM_BITS_S$ is equal to '1' and $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]$ is not equal to '0000', then the mobile station shall set the number of CRC bits per frame, $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, using Table 3.7.5.20-1 and $CRC_LEN_IDX_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][FOR_SCH_NUM_BITS_IDX_r]$ as the index to the table. The mobile station shall also set the number of information bits per frame corresponding to $SCCL_INDEX_r$, $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, to $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][FOR_SCH_NUM_BITS_IDX_r]$.

If $FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r]$ is not equal to '000', then:

- The mobile station shall set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$, the set of indices to the number of information bits per frame as follows:
 - + If $FOR_SCH_NUM_BITS_IDX_r$ is equal to '0000', then $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r] = \{ FOR_SCH_NUM_BITS_IDX_r \}$,
 - + otherwise the mobile station shall set (initialize) $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r] = \{ FOR_SCH_NUM_BITS_IDX_r \}$ and for $i=1, \dots, FOR_SCH_NUM_BITS_IDX_r$ the mobile station shall add $FOR_SCH_NUM_BITS_IDX_r - VAR_FSCH_RATE_OFFSET_S[FOR_SCH_ID_r][FOR_SCH_NUM_BITS_IDX_r][i]$ to the set specified by $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$

- If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if $USE_FLEX_NUM_BITS_S$ is equal to '1' and $FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]$ is equal to '0000', then the mobile station shall set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of number of information bits per frame as follows.
The i^{th} member of the set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ is obtained using Table 3.7.3.3.2.37-2 and the i^{th} member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$ as the index to the table.
- If $USE_FLEX_NUM_BITS_S$ is equal to '1' and $FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]$ is not equal to '0000', then
 - + the mobile station shall set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of number of information bits per frame as follows.
The i^{th} member of the set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ is equal to $NUM_BITS_S[FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]][N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]]$, where $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]$ denotes the i^{th} member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$ and,
 - + the mobile station shall set $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of number CRC bits per frame as follows.
The i^{th} member of the set $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ using Table 3.7.5.20-1 and $CRC_LEN_IDX_S[FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]][N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]]$ as the index to the table, where $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]$ denotes the i^{th} member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$.
- + If SCH_INCL_r is equal to '1' and NUM_REV_SCH is not equal to '00000', for all the NUM_REV_SCH occurrences, the mobile station shall perform the following:

- 1 o Set REV_SCH_NUM_BITS_IDX_S[REV_SCH_ID_r] to
- 2 REV_SCH_NUM_BITS_IDX_r.
- 3 o Set REV_WALSH_ID_S [REV_SCH_ID_r][REV_SCH_NUM_BITS_IDX_S]
- 4 to REV_WALSH_ID_r.
- 5 + For each member of the Active Set included in the message, the
- 6 mobile station shall perform the followings:
- 7 o Set PILOT_PN to PILOT_PN_r.
- 8 o If SRCH_OFFSET_INCL_r equals to '1', set the SRCH_OFFSET field
- 9 of PILOT_REC to SRCH_OFFSET_r; otherwise, set the
- 10 SRCH_OFFSET field of PILOT_REC to '000'.
- 11 o Set ADD_PILOT_REC_INCL to ADD_PILOT_REC_INCL_r.
- 12 o If ADD_PILOT_REC_INCL_r equals '1', the mobile station shall also
- 13 perform the following:
- 14 ◇ Set the PILOT_REC_TYPE field of PILOT_REC to
- 15 PILOT_REC_TYPE_r.
- 16 ◇ If PILOT_REC_TYPE_r is equal to '000', the mobile station shall
- 17 set the TD_POWER_LEVEL field of PILOT_REC to
- 18 TD_POWER_LEVEL_r and set the TD_MODE field of PILOT_REC
- 19 to TD_MODE_r.
- 20 ◇ If PILOT_REC_TYPE_r is equal to '001', the mobile station shall:
- 21 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 22 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
- 23 AUX_PILOT_WALSH_r with the Walsh Code length specified
- 24 by WALSH_LENGTH_r.
- 25 ◇ If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
- 26 – Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- 27 – Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC
- 28 to AUX_TD_WALSH_r with the Walsh Code length specified
- 29 by WALSH_LENGTH_r.
- 30 – Set the AUX_TD_POWER_LEVEL field of PILOT_REC to
- 31 AUX_TD_POWER_LEVEL_r.
- 32 – Set the TD_MODE field of PILOT_REC to TD_MODE_r.
- 33 If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.

If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:

- Set the SR3_PRIMARY_PILOT field of PILOT_REC to SR3_PRIMARY_PILOT_r.
- Set the SR3_PILOT_POWER1 field of PILOT_REC to SR3_PILOT_POWER1_r.
- Set the SR3_PILOT_POWER2 field of PILOT_REC to SR3_PILOT_POWER2_r.
- Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1 field of PILOT_REC to QOF1_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH1_r with the Walsh Code length specified by WALSH_LENGTH1_r; otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.
- If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2 field of PILOT_REC to QOF2_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH2_r with the Walsh Code length specified by WALSH_LENGTH2_r; otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code length specified by WALSH_LENGTH_r.

- o Store PWR_COMB_IND, CODE_CHAN_DCCH and QOF_MASK_ID_DCCH.

- 1 o If SCH_INCL_r is equal to '1' and NUM_SCH is equal to '00000', the
- 2 mobile station shall delete the corresponding pilot from all
- 3 entries of the corresponding Supplemental Channel.
- 4 o If SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000',
- 5 the mobile station shall:
- 6 ◊ If PILOT_INCL is equal to '0', the mobile station shall delete
- 7 the corresponding pilot from the Active Set of Supplemental
- 8 Channel for the corresponding SCCL_INDEX_r.
- 9 ◊ If PILOT_INCL is equal to '1', for each Supplemental Channel
- 10 included in this record, the mobile station shall set
- 11 PILOT_PN_s [FOR_SCH_ID_r][SCCL_INDEX_s][i] to PILOT_PN_r,
- 12 QOF_ID_s [FOR_SCH_ID_r][SCCL_INDEX_s][i] to
- 13 QOF_MASK_ID_SCH_r, and FOR_SCH_CC_INDEX_s
- 14 [FOR_SCH_ID_s][SCCL_INDEX_s][i] to CODE_CHAN_SCH_r.
- 15 ◊ The mobile station shall delete all pilots that are not included
- 16 in the list specified by the NUM_PILOTS field from the Active
- 17 Set of Supplemental Channel for the corresponding
- 18 SCCL_INDEX_r.
- 19 + If 3X_DCCH_INFO_INCL_r equals to '1', for each included member of
- 20 the Active Set, the mobile station store the following:
- 21 o If 3X_DCCH_LOW_INCL_r equals '1', set the
- 22 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_DCCH_LOW_r
- 23 and the CODE_CHAN_DCCH_LOW field to
- 24 CODE_CHAN_DCCH_LOW_r. Otherwise, set the
- 25 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_FCH_r and the
- 26 CODE_CHAN_DCCH_LOW to CODE_CHAN_FCH_r.
- 27 o If 3X_DCCH_HIGH_INCL_r equals '1', set the
- 28 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_DCCH_HIGH_r
- 29 and the CODE_CHAN_DCCH_HIGH field to
- 30 CODE_CHAN_DCCH_HIGH_r. Otherwise, set the
- 31 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_FCH_r and the
- 32 CODE_CHAN_DCCH_HIGH to CODE_CHAN_FCH_r.
- 33 o If 3X_SCH_INFO_INCL_r equals to '1', for each Supplemental
- 34 Channel included, the mobile station store the following:

If 3X_SCH_LOW_INCL_r equals '1', set

QOF_ID_SCH_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i] to
 QOF_MASK_ID_SCH_LOW_r and
 FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i]
 field to CODE_CHAN_SCH_LOW_r. Otherwise, set
 QOF_ID_SCH_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i] to
 QOF_MASK_ID_SCH_r, and
 FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i] to
 CODE_CHAN_SCH_r.

If 3X_SCH_HIGH_INCL_r equals '1', set

QOF_ID_SCH_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i] to
 QOF_MASK_ID_SCH_HIGH_r and the
 FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]
 field to CODE_CHAN_SCH_HIGH_r. Otherwise, set
 QOF_ID_SCH_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i] to
 QOF_MASK_ID_SCH_r, and
 FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]
 to CODE_CHAN_SCH_r.

- + The mobile station shall delete all pilots that are not listed in the
 NUM_PILOTS field from the Active Set of Dedicated Control Channel.
- If CH_IND_r is equal to '111', the mobile station shall perform the
 following:
 - + The mobile station shall set CH_IND_s = '11'.
 - + If SCH_INCL_r is equal to '1' and NUM_FOR_SCH is not equal to
 '00000', for all the NUM_FOR_SCH occurrences, the mobile station
 shall perform the following:
 - o The mobile station shall determine,
 N_FSCH_BITS_SET_s[FOR_SCH_ID_r][SCCL_INDEX_r], the number of
 information bits per Forward Supplemental Channel frame
 identified by FOR_SCH_ID and corresponding to the index
 SCCL_INDEX according to the following rules:
 If FSCH_VAR_TABLE_ID_s[FOR_SCH_ID_r] is equal to '000', then:

- 1 – If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if
2 $USE_FLEX_NUM_BITS_S$ is equal to '1' and
3 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_R]$ is equal to '0000',
4 then the mobile station shall set the number of
5 information bits per frame,
6 $N_FSCH_BITS_SET_S[FOR_SCH_ID_R][SCCL_INDEX_R]$ and
7 number of CRC bits per frame,
8 $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_R][SCCL_INDEX_R]$,
9 according to Table 3.7.3.3.2.37-2 using
10 $FOR_SCH_NUM_BITS_IDX_R$ as the index to the table.
- 11 – If $USE_FLEX_NUM_BITS_S$ is equal to '1' and
12 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_R]$ is not equal to
13 '0000', then the mobile station shall set the number of
14 CRC bits per frame,
15 $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_R][SCCL_INDEX_R]$,
16 using Table 3.7.5.20-1 and
17 $CRC_LEN_IDX_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_R]][FOR_SCH_NUM_BITS_IDX_R]$ as the index to the table.
18 The mobile station shall also set the number of
19 information bits per frame corresponding to
20 $SCCL_INDEX_R$,
21 $N_FSCH_BITS_SET_S[FOR_SCH_ID_R][SCCL_INDEX_R]$, to
22 $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_R]][FOR_SCH_NUM_BITS_IDX_R]$.

25 If $FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_R]$ is not equal to '000',
26 then:

- 27 – The mobile station shall set
28 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_R]$, the set of indices
29 to the number of information bits per frame as follows:
 - 30 + If $FOR_SCH_NUM_BITS_IDX_R$ is equal to '0000', then
31 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_R] = \{$
32 $FOR_SCH_NUM_BITS_IDX_R \}$,

- 1 + otherwise the mobile station shall set (initialize)
2 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T] =$
3 $\{FOR_SCH_NUM_BITS_IDX_T\}$ and for $i=1, \dots,$
4 $FOR_SCH_NUM_BITS_IDX_T$ the mobile station shall
5 add $FOR_SCH_NUM_BITS_IDX_T -$
6 $VAR_FSCH_RATE_OFFSET_S[FOR_SCH_ID_T][FOR_SCH_NUM_BITS_IDX_T][i]$ to the set specified by
7 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T]$
8
- 9 - If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if
10 $USE_FLEX_NUM_BITS_S$ is equal to '1' and
11 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_T]$ is equal to '0000',
12 then the mobile station shall set
13 $N_FSCH_BITS_SET_S[FOR_SCH_ID_T][SCCL_INDEX_T]$, the set
14 of number of information bits per frame as follows.
15 The i^{th} member of the set
16 $N_FSCH_BITS_SET_S[FOR_SCH_ID_T][SCCL_INDEX_T]$ is
17 obtained using Table 3.7.3.3.2.37-2 and the i^{th} member of
18 the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T]$ as the
19 index to the table.
- 20 - If $USE_FLEX_NUM_BITS_S$ is equal to '1' and
21 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_T]$ is not equal to
22 '0000', then
- 23 + the mobile station shall set
24 $N_FSCH_BITS_SET_S[FOR_SCH_ID_T][SCCL_INDEX_T]$, the
25 set of number of information bits per frame as follows.
26 The i^{th} member of the set
27 $N_FSCH_BITS_SET_S[FOR_SCH_ID_T][SCCL_INDEX_T]$ is
28 equal to
29 $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_T]]$
30 $[N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T][i]]$, where
31 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T][i]$ denotes the
32 i^{th} member of the set
33 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_T]$ and,

- 1 + the mobile station shall set

2 FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r],

3 the set of number CRC bits per frame as follows.

4 The i^{th} member of the set

5 FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]

6 using Table 3.7.5.20-1 and

7 CRC_LEN_IDX_S[FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]

8 |[N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]] as the

9 index to the table, where

10 N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i] denotes the

11 i^{th} member of the set

12 N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r].
- 13 + If SCH_INCL_r is equal to '1' and NUM_REV_SCH is not equal to

14 '00000', for all the NUM_REV_SCH occurrences, the mobile station

15 shall perform the following:

 - 16 o Set REV_SCH_NUM_BITS_IDX_S[REV_SCH_ID_r] to

17 REV_SCH_NUM_BITS_IDX_r.
 - 18 o Set REV_WALSH_IDS[REV_SCH_ID_r][REV_SCH_NUM_BITS_IDX_S]

19 to REV_WALSH_ID_r.
- 20 + For each member in the Active Set included in the message, the

21 mobile station shall perform the followings:

 - 22 o Set PILOT_PN to PILOT_PN_r.
 - 23 o If SRCH_OFFSET_INCL_r equals to '1', set the SRCH_OFFSET field

24 of PILOT_REC to SRCH_OFFSET_r; otherwise, set the

25 SRCH_OFFSET field of PILOT_REC to '000'.
 - 26 o Set ADD_PILOT_REC_INCL to ADD_PILOT_REC_INCL_r.
 - 27 o If ADD_PILOT_REC_INCL_r equals '1', the mobile station shall also

28 perform the following:

 - 29 ◇ Set the PILOT_REC_TYPE field of PILOT_REC to

30 PILOT_REC_TYPE_r.
 - 31 ◇ If PILOT_REC_TYPE_r is equal to '000', the mobile station shall

32 set the TD_POWER_LEVEL field of PILOT_REC to

33 TD_POWER_LEVEL_r and set the TD_MODE field of PILOT_REC

34 to TD_MODE_r.
 - 35 ◇ If PILOT_REC_TYPE_r is equal to '001', the mobile station shall:

36 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.

- 1 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
2 AUX_PILOT_WALSH_r with the Walsh Code length specified
3 by WALSH_LENGTH_r.
- 4 ◇ If PILOT_REC_TYPE_r is equal to '010', the mobile station shall:
- 5 – Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- 6 – Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC
7 to AUX_TD_WALSH_r with the Walsh Code length specified
8 by WALSH_LENGTH_r.
- 9 – Set the AUX_TD_POWER_LEVEL field of PILOT_REC to
10 AUX_TD_POWER_LEVEL_r.
- 11 – Set the TD_MODE field of PILOT_REC to TD_MODE_r.
- 12 If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:
- 13 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
14 SR3_PRIMARY_PILOT_r.
- 15 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
16 SR3_PILOT_POWER1_r.
- 17 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
18 SR3_PILOT_POWER2_r.
- 19 If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:
- 20 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
21 SR3_PRIMARY_PILOT_r.
- 22 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
23 SR3_PILOT_POWER1_r.
- 24 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
25 SR3_PILOT_POWER2_r.
- 26 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 27 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
28 AUX_PILOT_WALSH_r with the Walsh Code length specified
29 by WALSH_LENGTH_r.

- 1 – If ADD_INFO_INCL1_r is equal to '1', set the

2 AUX_PILOT_QOF1 field of PILOT_REC to QOF1_r and set the

3 AUX_PILOT_WALSH_CODE1 field of PILOT_REC to

4 AUX_PILOT_WALSH1_r with the Walsh Code length

5 specified by WALSH_LENGTH1_r; otherwise, set the

6 AUX_PILOT_QOF1 field of PILOT_REC to QOF_r and set the

7 AUX_PILOT_WALSH_CODE1 field of PILOT_REC to

8 AUX_PILOT_WALSH_r with the Walsh Code length specified

9 by WALSH_LENGTH_r.
- 10 – If ADD_INFO_INCL2_r is equal to '1', set the

11 AUX_PILOT_QOF2 field of PILOT_REC to QOF2_r and set the

12 AUX_PILOT_WALSH_CODE2 field of PILOT_REC to

13 AUX_PILOT_WALSH2_r with the Walsh Code length

14 specified by WALSH_LENGTH2_r; otherwise, set the

15 AUX_PILOT_QOF2 field of PILOT_REC to QOF_r and set the

16 AUX_PILOT_WALSH_CODE2 field of PILOT_REC to

17 AUX_PILOT_WALSH_r with the Walsh Code length specified

18 by WALSH_LENGTH_r.
- 19 o Store PWR_COMB_IND, CODE_CHAN_FCH, QOF_MASK_ID_FCH,

20 CODE_CHAN_DCCH and QOF_MASK_ID_DCCH.
- 21 o If SCH_INCL_r is equal to '1' and NUM_SCH is equal to '00000', the

22 mobile station shall delete the corresponding pilot from all

23 entries of the corresponding Supplemental Channel.
- 24 o If SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000',

25 the mobile station shall:

 - 26 ◇ If PILOT_INCL is equal to '0', the mobile station shall delete

27 the corresponding pilot from the Active Set of Supplemental

28 Channel for the corresponding SCCL_INDEX_r.
 - 29 ◇ If PILOT_INCL is equal to '1', for each Supplemental Channel

30 included in this record, the mobile station shall set

31 PILOT_PN_s [FOR_SCH_ID_r][SCCL_INDEX_r][i] to PILOT_PN_r,

32 QOF_ID_s[FOR_SCH_ID_r][SCCL_INDEX_r][i] to

33 QOF_MASK_ID_SCH_r, and FOR_SCH_CC_INDEX_s

34 [FOR_SCH_ID_r][SCCL_INDEX_r][i] to CODE_CHAN_SCH_r.
 - 35 ◇ The mobile station shall delete all pilots that are not included

36 in the list specified by the NUM_PILOTS field from the Active

37 Set of Supplemental Channel for the corresponding

38 SCCL_INDEX_r.

- 1 + If 3X_FCH_INFO_INCL_r equals to '1', for each included member of the
- 2 Active Set, the mobile station store the following:
- 3 o If 3X_FCH_LOW_INCL_r equals '1', set the
- 4 QOF_MASK_ID_FCH_LOW field to QOF_MASK_ID_FCH_LOW_r and
- 5 the CODE_CHAN_FCH_LOW field to CODE_CHAN_FCH_LOW_r.
- 6 Otherwise, set the QOF_MASK_ID_FCH_LOW field to
- 7 QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_LOW to
- 8 CODE_CHAN_FCH_r.
- 9 o If 3X_FCH_HIGH_INCL_r equals '1', set the
- 10 QOF_MASK_ID_FCH_HIGH field to QOF_MASK_ID_FCH_HIGH_r and
- 11 the CODE_CHAN_FCH_HIGH field to CODE_CHAN_FCH_HIGH_r.
- 12 Otherwise, set the QOF_MASK_ID_FCH_HIGH field to
- 13 QOF_MASK_ID_FCH_r and the CODE_CHAN_FCH_HIGH to
- 14 CODE_CHAN_FCH_r.
- 15 + If 3X_DCCH_INFO_INCL_r equals to '1', for each included member of
- 16 the Active Set, the mobile station store the following:
- 17 o If 3X_DCCH_LOW_INCL_r equals '1', set the
- 18 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_DCCH_LOW_r
- 19 and the CODE_CHAN_DCCH_LOW field to
- 20 CODE_CHAN_DCCH_LOW_r. Otherwise, set the
- 21 QOF_MASK_ID_DCCH_LOW field to QOF_MASK_ID_FCH_r and the
- 22 CODE_CHAN_DCCH_LOW to CODE_CHAN_FCH_r.
- 23 o If 3X_DCCH_HIGH_INCL_r equals '1', set the
- 24 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_DCCH_HIGH_r
- 25 and the CODE_CHAN_DCCH_HIGH field to
- 26 CODE_CHAN_DCCH_HIGH_r. Otherwise, set the
- 27 QOF_MASK_ID_DCCH_HIGH field to QOF_MASK_ID_FCH_r and the
- 28 CODE_CHAN_DCCH_HIGH to CODE_CHAN_FCH_r.
- 29 + If 3X_FCH_INFO_INCL_r or 3X_DCCH_INFO_INCL_r equals to '1', for
- 30 each included member of the Active Set, the mobile station store the
- 31 following:
- 32 o If 3X_SCH_INFO_INCL_r equals to '1', for each Supplemental
- 33 Channel included, the mobile station store the following:

If $3X_SCH_LOW_INCL_r$ equals '1', set

$QOF_ID_SCH_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 $QOF_MASK_ID_SCH_LOW_r$ and the
 $FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i]$
field to $CODE_CHAN_SCH_LOW_r$. Otherwise, set
 $QOF_ID_SCH_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 $QOF_MASK_ID_SCH_r$, and
 $FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 $CODE_CHAN_SCH_r$.

If $3X_SCH_HIGH_INCL_r$ equals '1', set

$QOF_ID_SCH_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 $QOF_MASK_ID_SCH_HIGH_r$ and the
 $FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]$
field to $CODE_CHAN_SCH_HIGH_r$. Otherwise, set
 $QOF_ID_SCH_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]$ to
 $QOF_MASK_ID_SCH_r$, and
 $FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_r][SCCL_INDEX_r][i]$
to $CODE_CHAN_SCH_r$.

+ The mobile station shall delete all pilots that are not listed in the
 NUM_PILOTS field from the Active Set of Fundamental Channel and
Dedicated Control Channel.

- If the most significant bit of CH_IND_r is set to '1' and
 $PILOT_GATING_USE_RATE$ is equal to '1', the mobile station shall set
 $PILOT_GATING_USE_RATE$ to '0' and shall start the continuous reverse pilot
at the specified action time. If the most significant bit of CH_IND_r is set to
'0' and $PILOT_GATING_USE_RATE$ is equal to '0', the mobile station shall set
 $PILOT_GATING_USE_RATE$ to '1' and shall start the reverse pilot gating at
the specified action time.
- The mobile station shall set $IGNORE_ESCAM_s$ and $IGNORE_SCAM_s$ to '0'.
- Set the pilot detection threshold for the Target Frequency and the Candidate
Frequency:
 - Set $TF_T_ADD_s$ to T_ADD_s .
 - If the Target Frequency is the same as the Candidate Frequency
($TF_CDMABAND_s$ is equal to $CF_CDMABAND_s$ and TF_CDMACH_s is
equal to CF_CDMACH_s), set $CF_T_ADD_s$ to T_ADD_s .
- If $PERIODIC_SEARCH_s$ is equal to '0' and a periodic search is in progress,
the mobile station shall abort the periodic search (see 2.6.6.2.8.3.4 and
2.6.6.2.10.4).

- 1 • Perform a soft or hard handoff depending on the following conditions:
- 2 – If any of the following conditions is true, the mobile station shall perform a
- 3 hard handoff:
- 4 + EXTRA_PARMS is set to '1' and either BAND_CLASS_r is not equal to
- 5 SF_CDMABAND_s, CDMA_FREQ_r is not equal to SF_CDMACH_s, or
- 6 FRAME_OFFSET_r is not equal to SF_FRAME_OFFSET_s, or
- 7 + The set of pilots specified by the message is disjoint from the Active Set
- 8 prior to the action time of the message.
- 9 – If the mobile station performs a hard handoff, it shall do the following:
- 10 + If a Periodic Serving Frequency Pilot Report Procedure is in progress, the
- 11 mobile station shall abort the procedure (see 2.6.6.2.12).
- 12 + If a Candidate Frequency periodic search is in progress, the mobile
- 13 station shall abort the periodic search (see 2.6.6.2.8.3.4 and
- 14 2.6.6.2.10.4).
- 15 + If RETURN_IF_HANDOFF_FAIL_s is equal to '0', the mobile station shall
- 16 perform actions specified in 2.6.6.2.8.1. If the message specifies more
- 17 than one pilot, the mobile station shall also perform actions specified in
- 18 2.6.6.2.7.1 and 2.6.6.2.7.2.
- 19 + If RETURN_IF_HANDOFF_FAIL_s is equal to '1', the mobile station shall
- 20 perform actions specified in 2.6.6.2.8.2. If the message specifies more
- 21 than one pilot, the mobile station shall also perform actions specified in
- 22 2.6.6.2.7.1 and 2.6.6.2.7.2.
- 23 – Otherwise, the mobile station shall perform a soft handoff as specified in
- 24 2.6.6.2.7.

25 12. *Mobile Assisted Burst Operation Parameters Message*: The mobile station shall
 26 process this message as follows:

- 27 • The mobile station shall set ORDER_FLAG_s to ORDER_FLAG_r.
- 28 • If ORDER_FLAG_r is equal to '1', the mobile station shall perform the
- 29 following:
- 30 – The mobile station shall set PS_MIN_DELTA_s to PS_MIN_DELTA_r.
- 31 – The mobile station shall set ORDER_INTERVAL_s to ORDER_INTERVAL_r.
- 32 • If ORDER_FLAG_r is equal to '0', the mobile station shall perform the
- 33 following:
- 34 – The mobile station shall set PS_MIN_DELTA_s to 0.
- 35 – The mobile station shall set ORDER_INTERVAL_s to 0.

- 1 • The mobile station shall set PERIODIC_FLAG_s to PERIODIC_FLAG_r.
- 2 • If PERIODIC_FLAG_r is equal to '1', the mobile station shall perform the
- 3 following:
- 4 – The mobile station shall set NUM_PILOTS_s to NUM_PILOTS_r.
- 5 – The mobile station shall set PERIODIC_INTERVAL_s to
- 6 PERIODIC_INTERVAL_r.
- 7 • If PERIODIC_FLAG_r is equal to '0', the mobile station shall perform the
- 8 following:
- 9 – The mobile station shall set NUM_PILOTS_s to 0.
- 10 – The mobile station shall set PERIODIC_INTERVAL_s to 0.
- 11 • The mobile station shall set THRESHOLD_FLAG_s to THRESHOLD_FLAG_r.
- 12 • If THRESHOLD_FLAG_r is equal to '1', the mobile station shall perform the
- 13 following:
- 14 – The mobile station shall set PS_FLOOR_LOW_s to PS_FLOOR_LOW_r.
- 15 – The mobile station shall set PS_FLOOR_HIGH_s to PS_FLOOR_HIGH_r.
- 16 – The mobile station shall set PS_CEILING_LOW_s to PS_CEILING_LOW_r.
- 17 – The mobile station shall set PS_CEILING_HIGH_s to PS_CEILING_HIGH_r.
- 18 • If THRESHOLD_FLAG_r is equal to '0', the mobile station shall perform the
- 19 following:
- 20 – The mobile station shall set PS_FLOOR_LOW_s to '0'.
- 21 – The mobile station shall set PS_FLOOR_HIGH_s to '0'.
- 22 – The mobile station shall set PS_CEILING_LOW_s to '0'.
- 23 – The mobile station shall set PS_CEILING_HIGH_s to '0'.

24 13. *Extended Supplemental Channel Assignment Message*: The mobile station shall
25 process this message as follows:

26 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
27 set to the specified value if any of the following conditions is true, and shall not
28 perform any other action described in this section for processing the *Extended*
29 *Supplemental Channel Assignment Message*:

- 30 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ
31 field set to '00000110' (capability not supported), if the number of forward or
32 reverse Supplemental Channels specified in the *Extended Supplemental*
33 *Channel Assignment Message* is greater than the maximum number of
34 Supplemental Channels supported by the mobile station.

- 1 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ
2 field set to '00000100' (message field not in valid range), if PILOT_PN
3 specified in the *Extended Supplemental Channel Assignment Message* is not in
4 the Active Set.
- 5 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ
6 field set to '00000111' (message can not be handled by the current mobile
7 station configuration), if the message includes a reverse Supplemental
8 Channel assignment, and any of the mobile station's reverse supplemental
9 channel configuration parameter for the corresponding Supplemental
10 Channel (REV_SCH_MUX_S, REV_SCH_RC_S, REV_SCH_CODING_S, or
11 REV_SCH_FRAME_LENGTH_S) is NULL.
- 12 • The mobile station shall send a *Mobile Station Reject Order* with the ORDQ
13 field set to '00000111' (message can not be handled by the current mobile
14 station configuration), if the message includes a forward Supplemental
15 Channel assignment and any of the mobile station's forward supplemental
16 channel configuration parameter for the corresponding Supplemental
17 Channel (FOR_SCH_MUX_S, FOR_SCH_RC_S, FOR_SCH_CODING_S, or
18 FOR_SCH_FRAME_LENGTH_S) is NULL.

19 If none of the above conditions is true, the mobile station shall perform the
20 following:

- 21 • The mobile station shall store REV_DTX_DURATION_r, Reverse Supplemental
22 Channel Discontinuous Transmission Duration, as REV_DTX_DURATION_S.
- 23 • The mobile station shall store the unit for START_TIME_UNIT_S =
24 START_TIME_UNIT_r.
- 25 • The mobile station shall store USE_T_ADD_ABORT_r, Reverse Supplemental
26 Channel assignment T_ADD abort indicator, as USE_T_ADD_ABORT_S.
- 27 • If IGNORE_ESCAM_S is equal to '1' and SCRM_SEQ_NUM_r is not present or is
28 present and is not equal to SCRM_SEQ_NUM_S, then the mobile station shall
29 not process the remaining Reverse Supplemental Channel assignment
30 information in this message.
- 31 • If IGNORE_ESCAM_S is equal to '1' and SCRM_SEQ_NUM_r is present and is
32 equal to SCRM_SEQ_NUM_S, then the mobile station shall set
33 IGNORE_ESCAM_S to '0'.
- 34 • If ADD_INFO_INCL_r is equal to '1' and the message includes a Supplemental
35 Channel assignment, the mobile station shall process the following
36 information of the *Extended Supplemental Channel Assignment Message* at the
37 start time of the first assignment specified in the message.
- 38 – The mobile station shall set FPC_PRI_CHAN_S = FPC_PRI_CHAN_r.

- 1 • If REV_CFG_INCLUDED is equal to '1', for all the (NUM_REV_CFG_RECS + 1)
2 occurrences of the reverse configuration record, the mobile station shall
3 store the REV_WALSH_ID matrix as follows:
4 – REV_WALSH_IDS[REV_SCH_ID_r][REV_SCH_NUM_BITS_IDX_r] =
5 REV_WALSH_ID_r
- 6 • If NUM_REV_SCH_r is not equal to '00', then the mobile station set
7 PILOT_GATING_USE_RATE to '0' and shall store the following information for
8 each occurrence of the record and process the Reverse Supplemental Burst
9 as specified in 2.6.6.2.5.1.2:
10 – REV_SCH_START_TIME_INCL_s[REV_SCH_ID_r] =
11 REV_SCH_START_TIME_INCL_r
12 – If REV_SCH_START_TIME_INCL_s[REV_SCH_ID_r] is set to '1', set
13 REV_SCH_START_TIME_s[REV_SCH_ID_r] = REV_SCH_START_TIME_r
14 – REV_SCH_DURATION_s[REV_SCH_ID_r] = REV_SCH_DURATION_r
15 – REV_SCH_NUM_BITS_IDX_s[REV_SCH_ID_r] = REV_SCH_NUM_BITS_IDX_r
- 16 • If NUM_FOR_SCH_r is not equal to '00', then the mobile station shall set
17 PILOT_GATING_USE_RATE to '0' and store the following information for each
18 occurrence of the record and process the Forward Supplemental Burst as
19 specified in 2.6.6.2.5.1.1:
20 – FOR_SCH_START_TIME_INCL_s[FOR_SCH_ID_r] =
21 FOR_SCH_START_TIME_INCL_r
22 – If FOR_SCH_START_TIME_INCL_s[FOR_SCH_ID_r] is set to '1', set
23 FOR_SCH_START_TIME_s[FOR_SCH_ID_r] = FOR_SCH_START_TIME_r
24 – FOR_SCH_DURATION_s[FOR_SCH_ID_r] = FOR_SCH_DURATION_r
25 – FOR_SCH_FER_REP_s[FOR_SCH_ID_r] = FOR_SCH_FER_REP_r
26 – SCCL_INDEX_s[FOR_SCH_ID_r] = SCCL_INDEX_r
- 27 • If FOR_CFG_INCLUDED is equal to '1', the mobile station shall store
28 NUM_FOR_CFG_RECS occurrences of Forward Supplemental Channel
29 Configuration associated with the identification of Forward Supplemental
30 Channel.
- 31 • For each record of the Forward Supplemental Channel Code list the mobile
32 station shall store the Forward Supplemental Channel Code list associated
33 with the FOR_SCH_ID_r as follows:
34 – NUM_SUP_SHO_s[FOR_SCH_ID_r][SCCL_INDEX_r] = NUM_SUP_SHO_r.

- 1 – The mobile station shall determine,
2 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the number of
3 information bits per Forward Supplemental Channel frame identified by
4 FOR_SCH_ID and corresponding to the index $SCCL_INDEX$ according to
5 the following rules:
- 6 + If $FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r]$ is equal to '000', then:
- 7 o If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if
8 $USE_FLEX_NUM_BITS_S$ is equal to '1' and
9 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]$ is equal to '0000', then
10 the mobile station shall set the number of information bits per
11 frame, $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ and
12 number of CRC bits per frame,
13 $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, according to
14 Table 3.7.3.3.2.37-2 using $FOR_SCH_NUM_BITS_IDX_r$ as the
15 index to the table.
- 16 o If $USE_FLEX_NUM_BITS_S$ is equal to '1' and
17 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]$ is not equal to '0000', then
18 the mobile station shall set the number of CRC bits per frame,
19 $FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, using Table
20 3.7.5.20-1 and
21 $CRC_LEN_IDX_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][FOR_SCH_NUM_BITS_IDX_r]$
22 as the index to the table.
23 The mobile station shall also set the number of information bits
24 per frame corresponding to $SCCL_INDEX_r$,
25 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, to
26 $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]][FOR_SCH_NUM_BITS_IDX_r]$.
27
- 28 + If $FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r]$ is not equal to '000', then:
- 29 o The mobile station shall set
30 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$, the set of indices to the
31 number of information bits per frame as follows:
- 32 ◊ If $FOR_SCH_NUM_BITS_IDX_r$ is equal to '0000', then
33 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r] = \{$
34 $FOR_SCH_NUM_BITS_IDX_r\}$,

- 1 ◇ otherwise the mobile station shall set (initialize)
 2 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r] =$
 3 $\{FOR_SCH_NUM_BITS_IDX_r\}$ and for $i=1, \dots,$
 4 $FOR_SCH_NUM_BITS_IDX_r$ the mobile station shall add
 5 $FOR_SCH_NUM_BITS_IDX_r -$
 6 $VAR_FSCH_RATE_OFFSET_S[FOR_SCH_ID_r][FOR_SCH_NUM_BI$
 7 $TS_IDX_r][i]$ to the set specified by
 8 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$
- 9 o If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if
 10 $USE_FLEX_NUM_BITS_S$ is equal to '1' and
 11 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]$ is equal to '0000', then
 12 the mobile station shall set
 13 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of
 14 number of information bits per frame as follows.
 15 The i^{th} member of the set
 16 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ is obtained
 17 using Table 3.7.3.3.2.37-2 and the i^{th} member of the set
 18 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$ as the index to the table.
- 19 o If $USE_FLEX_NUM_BITS_S$ is equal to '1' and
 20 $FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]$ is not equal to '0000', then
- 21 ◇ the mobile station shall set
 22 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$, the set of
 23 number of information bits per frame as follows.
 24 The i^{th} member of the set
 25 $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ is equal to
 26 $NUM_BITS_S[FSCH_NBIT_TABLE_ID_S[FOR_SCH_ID_r]]$
 27 $[N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]]$, where
 28 $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][i]$ denotes the i^{th}
 29 member of the set $N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r]$
 30 and,

- 1 ◇ the mobile station shall set
2 FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r], the set
3 of number CRC bits per frame as follows.
4 The *i*th member of the set
5 FSCH_CRC_LEN_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r] using
6 Table 3.7.5.20-1 and
7 CRC_LEN_IDX_S[FSCH_NBIT_TABLE_IDS[FOR_SCH_ID_r]][N_FS
8 CH_BITS_IDX_SET_S[FOR_SCH_ID_r][*i*]] as the index to the
9 table, where N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r][*i*]
10 denotes the *i*th member of the set
11 N_FSCH_BITS_IDX_SET_S[FOR_SCH_ID_r].
- 12 – For the *i*th record of the Forward Supplemental Channel Active Set (for all
13 values of *i* between 1 and NUM_SUP_SHO+1) specified in this message,
14 the mobile station shall store the following three entries corresponding
15 to the SCCL_INDEX_r as follows:
- 16 + PILOT_PN_S[FOR_SCH_ID_r][SCCL_INDEX_r][*i*] = PILOT_PN_r,
- 17 + Set the ADD_PILOT_REC_INCL field to ADD_PILOT_REC_INCL_r. If
18 ADD_PILOT_REC_INCL_r equals '1', the mobile station shall store the
19 following:
- 20 o Set the PILOT_REC_TYPE field of PILOT_REC to
21 PILOT_REC_TYPE_r.
- 22 o If PILOT_REC_TYPE_r equals '000', the mobile station shall set the
23 TD_POWER_LEVEL field of PILOT_REC to TD_POWER_LEVEL_r and
24 set the TD_MODE field of PILOT_REC to TD_MODE_r.
- 25 o If PILOT_REC_TYPE_r is equal to '001', the mobile station shall.
- 26 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
- 27 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
28 AUX_PILOT_WALSH_r with the Walsh Code length specified by
29 WALSH_LENGTH_r.
- 30 o If NGHBR_PILOT_REC_TYPE_r is equal to '010', the mobile station
31 shall:
- 32 – Set the AUX_PILOT_TD_QOF field of PILOT_REC to QOF_r.
- 33 – Set the AUX_PILOT_TD_WALSH_CODE field of PILOT_REC to
34 AUX_TD_WALSH_r with the Walsh Code length specified by
35 WALSH_LENGTH_r.

- 1 – Set the AUX_TD_POWER_LEVEL field of PILOT_REC to
- 2 AUX_TD_POWER_LEVEL_r.
- 3 – Set the TD_MODE field of NGHBR_PILOT_REC to TD_MODE_r.
- 4 o If PILOT_REC_TYPE_r is equal to '011', the mobile station shall:
 - 5 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
 - 6 SR3_PRIMARY_PILOT_r.
 - 7 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
 - 8 SR3_PILOT_POWER1_r.
 - 9 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
 - 10 SR3_PILOT_POWER2_r.
 - 11 o If PILOT_REC_TYPE_r is equal to '100', the mobile station shall:
 - 12 – Set the SR3_PRIMARY_PILOT field of PILOT_REC to
 - 13 SR3_PRIMARY_PILOT_r.
 - 14 – Set the SR3_PILOT_POWER1 field of PILOT_REC to
 - 15 SR3_PILOT_POWER1_r.
 - 16 – Set the SR3_PILOT_POWER2 field of PILOT_REC to
 - 17 SR3_PILOT_POWER2_r.
 - 18 – Set the AUX_PILOT_QOF field of PILOT_REC to QOF_r.
 - 19 – Set the AUX_PILOT_WALSH_CODE field of PILOT_REC to
 - 20 AUX_PILOT_WALSH_r with the Walsh Code length specified by
 - 21 WALSH_LENGTH_r.
 - 22 – If ADD_INFO_INCL1_r is equal to '1', set the AUX_PILOT_QOF1
 - 23 field of PILOT_REC to QOF1_r and set the
 - 24 AUX_PILOT_WALSH_CODE1 field of PILOT_REC to
 - 25 AUX_PILOT_WALSH1_r with the Walsh Code length specified by
 - 26 WALSH_LENGTH1_r.
 - 27 – Otherwise, set the AUX_PILOT_QOF1 field of PILOT_REC to
 - 28 QOF_r and set the AUX_PILOT_WALSH_CODE1 field of
 - 29 PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code
 - 30 length specified by WALSH_LENGTH_r.
 - 31 – If ADD_INFO_INCL2_r is equal to '1', set the AUX_PILOT_QOF2
 - 32 field of PILOT_REC to QOF2_r and set the
 - 33 AUX_PILOT_WALSH_CODE2 field of PILOT_REC to
 - 34 AUX_PILOT_WALSH2_r with the Walsh Code length specified by
 - 35 WALSH_LENGTH2_r.

- 1 – Otherwise, set the AUX_PILOT_QOF2 field of PILOT_REC to
- 2 QOF_r and set the AUX_PILOT_WALSH_CODE2 field of
- 3 PILOT_REC to AUX_PILOT_WALSH_r with the Walsh Code
- 4 length specified by WALSH_LENGTH_r.
- 5 + QOF_MASK_ID_SCH_s[FOR_SCH_ID_r][SCCL_INDEX_r][i] =
- 6 QOF_MASK_ID_SCH_r,
- 7 + FOR_SCH_CC_INDEX_s[FOR_SCH_ID_r][SCCL_INDEX_r][i]=
- 8 CODE_CHAN_SCH_r.
- 9 • The mobile station may soft-combine the Forward Supplemental Channel
- 10 frames received on the Forward Supplemental Channels in the same
- 11 Forward Supplemental Channel Active Set.
- 12 • If the mobile station supports any Radio Configuration greater than 2, the
- 13 mobile station shall perform the following:
- 14 – If FPC_INCL_r is equal to '1', the mobile station shall:
- 15 + Set FPC_MODE_SCH_s to FPC_MODE_SCH_r.
- 16 – If FPC_INCL is equal to '1' and FPC_MODE is equal to '001', '010', '101', or
- 17 '110', the mobile station shall:
- 18 + Set FPC_SEC_CHAN_s to FPC_SEC_CHAN_r.
- 19 – If NUM_SUP_r is included and not equal to '00', for each Supplemental
- 20 Channel included in the message, the mobile station shall:
- 21 + Set SCH_ID_s to SCH_ID_r.
- 22 + Set FPC_SCH_FER_s to FPC_SCH_FER_r.
- 23 + Set FPC_SCH_INIT_SETPT_s as follows:
- 24 o If FPC_SCH_INIT_SETPT_OP_r is set to '0', set
- 25 FPC_SCH_INIT_SETPT_s to FPC_SCH_INIT_SETPT_r.
- 26 o If FPC_SCH_INIT_SETPT_OP_r is set to '1':
- 27 ◊ If FPC_PRI_CHAN_r is equal to '0', set FPC_SCH_INIT_SETPT_s
- 28 to (FPC_FCH_CURR_SETPT_s + FPC_SCH_INIT_SETPT_r).
- 29 ◊ Otherwise, set FPC_SCH_INIT_SETPT_s to
- 30 (FPC_DCCH_CURR_SETPT_s + FPC_SCH_INIT_SETPT_r).
- 31 + Set FPC_SCH_MIN_SETPT_s to FPC_SCH_MIN_SETPT_r.
- 32 + Set FPC_SCH_MAX_SETPT_s to FPC_SCH_MAX_SETPT_r.

- 1 – If FPC_THRESH_SCH_INCL is included and equal to '1', the mobile
2 station shall set FPC_SETPT_THRESH_SCH_S to SETPT_THRESH_SCH_R.
- 3 • If RPC_INCL is equal to '1', the mobile station shall set RLGAIN_SCH_PILOT_S
4 to RLGAIN_SCH_PILOT_R.
- 5 • If NUM_3X_CFG_R is not equal to '00', the mobile station shall store the
6 Forward 3X Supplemental Channel Configuration associated with the
7 identification of Forward Supplemental Channel (NUM_3X_CFG_S =
8 NUM_3X_CFG_R).
- 9 • For each 3X SCH record included in this message, the mobile station shall
10 update the Forward Supplemental Channel Code list associated with the
11 FOR_SCH_ID_R as follows:
 - 12 – For the i^{th} record of the Forward Supplemental Channel Active Set (for all
13 values of i between 1 and NUM_SUP_SHO+1) specified in this message,
14 the mobile station shall store the following three entries corresponding
15 to the SCCL_INDEX_R as follows:
 - 16 + If 3X_SCH_LOW_INCL_R equals '1', set
17 QOF_MASK_ID_SCH_LOW[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
18 QOF_MASK_ID_SCH_LOW_R and
19 FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
20 CODE_CHAN_SCH_LOW_R. Otherwise, set
21 QOF_MASK_ID_SCH_LOW[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
22 QOF_MASK_ID_SCH[FOR_SCH_ID_R][SCCL_INDEX_R][i] and
23 FOR_SCH_CC_INDEX_LOW[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
24 CODE_CHAN_SCH[FOR_SCH_ID_R][SCCL_INDEX_R][i].
 - 25 + If 3X_SCH_HIGH_INCL_R equals '1', set
26 QOF_MASK_ID_SCH_HIGH[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
27 QOF_MASK_ID_SCH_HIGH_R and
28 FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
29 CODE_CHAN_SCH_HIGH_R. Otherwise, set
30 QOF_MASK_ID_SCH_HIGH[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
31 QOF_MASK_ID_SCH[FOR_SCH_ID_R][SCCL_INDEX_R][i] and
32 FOR_SCH_CC_INDEX_HIGH[FOR_SCH_ID_R][SCCL_INDEX_R][i] to
33 CODE_CHAN_SCH[FOR_SCH_ID_R][SCCL_INDEX_R][i].

34 14. *Forward Supplemental Channel Assignment Mini Message:* The mobile station
35 shall process this message as follows:

36 The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field
37 set to '00000111' (message can not be handled by the current mobile station
38 configuration), if any of the mobile station's forward supplemental channel

configuration parameters for the corresponding Supplemental Channel (FOR_SCH_MUX_s, FOR_SCH_RC_s, FOR_SCH_CODING_s, or FOR_SCH_FRAME_LENGTH_s) is NULL.

Otherwise, the mobile station shall store the following information and process the Forward Supplemental Burst as specified in 2.6.6.2.5.1.1:

- Set FOR_SCH_START_TIME_INCL_s[FOR_SCH_ID_r] to '1'
- FOR_SCH_START_TIME_s[FOR_SCH_ID_r] = FOR_SCH_START_TIME_r
- FOR_SCH_DURATION_s[FOR_SCH_ID_r] = FOR_SCH_DURATION_r
- SCCL_INDEX_s[FOR_SCH_ID_r] = SCCL_INDEX_r
- If the PILOT_GATING_USE_RATE is set to '1', the mobile station shall set PILOT_GATING_USE_RATE to '0'

15. *Reverse Supplemental Channel Assignment Mini Message*: The mobile station shall process this message as follows:

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000111' (message can not be handled by the current mobile station configuration), if any of the mobile station's reverse supplemental channel configuration parameters for the corresponding Supplemental Channel (REV_SCH_MUX_s, REV_SCH_RC_s, REV_SCH_CODING_s, or REV_SCH_FRAME_LENGTH_s) is NULL.

Otherwise, the mobile station shall store the following information and process the Reverse Supplemental Burst as specified in 2.6.6.2.5.1.2:

- Set REV_SCH_START_TIME_INCL_s[REV_SCH_ID_r] to '1'
- REV_SCH_START_TIME_s[REV_SCH_ID_r] = REV_SCH_START_TIME_r
- REV_SCH_DURATION_s[REV_SCH_ID_r] = REV_SCH_DURATION_r
- REV_SCH_NUM_BITS_IDX_s[REV_SCH_ID_r] = REV_SCH_NUM_BITS_IDX_r
- If the PILOT_GATING_USE_RATE is set to '1', the mobile station shall set PILOT_GATING_USE_RATE to '0'

2.6.6.2.5.1.1 Processing of the Forward Supplemental Burst Assignment

A Forward Supplemental Assignment specifies the explicit start time identified by FOR_SCH_START_TIME or the implicit start time (if FOR_SCH_START_TIME_INCL is set to '0'), FOR_SCH_DURATION, and SCCL_INDEX of a forward burst assignment. The time interval of duration is specified by FOR_SCH_DURATION (see Table 3.7.3.3.2.37-3) and starts at the time specified by the explicit start time FOR_SCH_START_TIME or the implicit start time (if FOR_SCH_START_TIME_INCL is set to '0'). This time interval for a Forward Supplemental Assignment is called the Forward Supplemental Assignment Interval. A value of FOR_SCH_DURATION equal to '1111' indicates infinite duration. The

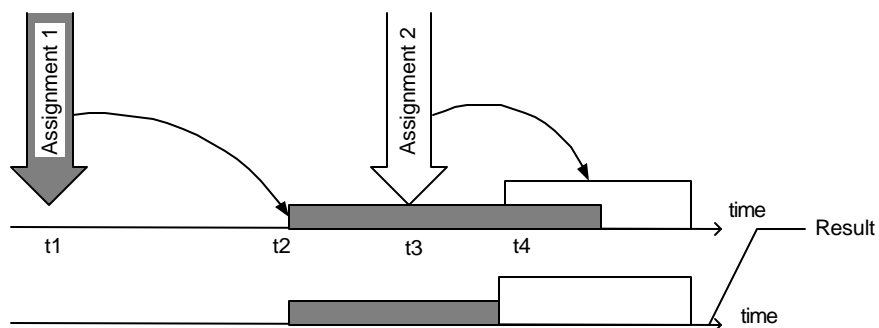
variable $SCCL_INDEX_s[FOR_SCH_ID]$ specifies the rate, QOF index and the Active Set for the Forward Supplemental Channel identified by FOR_SCH_ID for a given Forward Supplemental Assignment. A value of $FOR_SCH_DURATION$ equal to '0000' indicates that the mobile station should stop processing the forward Supplemental Channels at the explicit start time specified by $FOR_SCH_START_TIME$ or the implicit start time (if $FOR_SCH_START_TIME_INCL$ is set to '0'). The implicit start time is the time occurring no later than the first 80 ms boundary (relative to System Time) which occurs at least 80 ms after the end of the frame containing the last bit of the *Extended Supplemental Channel Assignment Message*.

For each Forward Supplemental Assignment the mobile station shall determine the start time for processing forward supplemental channel as the time for which the following equation holds:

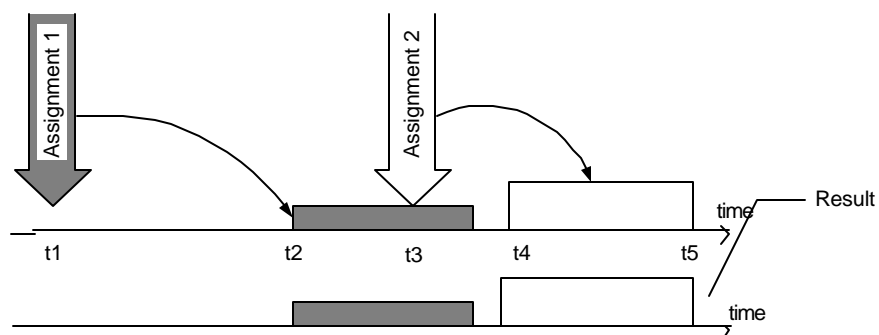
$$(\lfloor t / (START_TIME_UNIT_s + 1) \rfloor - FOR_SCH_START_TIME_r) \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

Figure 2.6.6.2.5.1.1-1 illustrates the scenario in which a second Forward Supplemental Assignment is received while the mobile station is processing the forward supplemental channel according to a previously received assignment. Two cases are displayed in Figure 2.6.6.2.5.1.1-1: Case a) where the first assignment extends beyond the start time of the second assignment and Case b) where the first assignment ends before the second one starts.



a) "Assignment 1" extends beyond the start time for "Assignment 2"



b) "Assignment 1" ends prior to the start time of "Assignment 2"

Figure 2.6.6.2.5.1.1-1. New Supplemental Channel Assignment Received while a Previous Supplemental Channel Assignment is in Progress

Figure 2.6.6.2.5.1.1-2 shows an example scenario in which the mobile station receives a second Forward Supplemental Assignment before it starts processing the supplemental channel according to the first assignment. In this case, the second assignment simply replaces the first assignment.

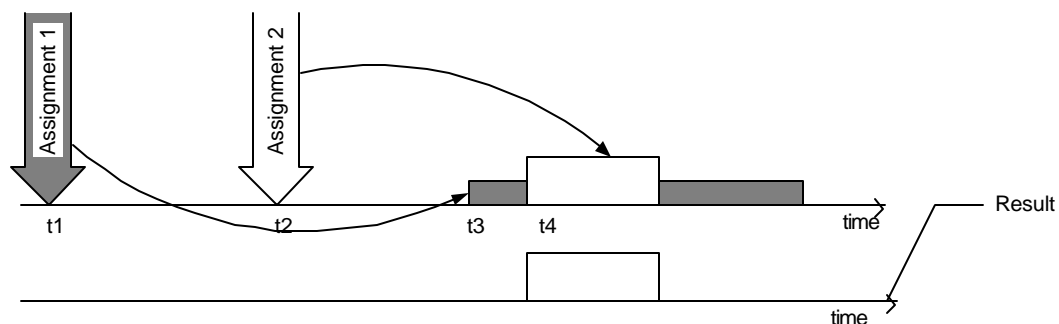


Figure 2.6.6.2.5.1.1-2. New Supplemental Channel Assignment Received before a Previous Supplemental Channel Assignment starts

The mobile station shall set FPC_MODE_S to $FPC_MODE_SCH_S$ at the $FOR_SCH_START_TIME_S$ of the forward Supplemental Channel assignment. The mobile station shall set FPC_MODE_S to $FPC_MODE_NO_SCH_S$ at the end of the forward Supplemental Channel assignment.

For each Forward Supplemental Channel assignment corresponding to each Forward Supplemental Channel (identified by FOR_SCH_ID), the mobile station should perform the following:

- If FOR_SCH_DURATION_S[FOR_SCH_ID] is not equal to '0000', then
 - If the mobile station is currently processing the Forward Supplemental Channel identified by FOR_SCH_ID, then the mobile station should continue processing the Forward Supplemental Channel identified by FOR_SCH_ID according to the Forward Supplemental Assignment previously received for the Forward Supplemental Channel identified by FOR_SCH_ID up to the time specified by the FOR_SCH_START_TIME_S[FOR_SCH_ID] (i.e., the mobile station should stop processing the forward supplemental channel identified by FOR_SCH_ID at either the time specified by FOR_SCH_START_TIME_S[FOR_SCH_ID], the start time of the new assignment, or at the time the previously received assignment ends, whichever time is earlier).

At the time specified by FOR_SCH_START_TIME_S[FOR_SCH_ID], the mobile station should start processing the Forward Supplemental Channel identified by FOR_SCH_ID for a duration of time specified by FOR_SCH_DURATION[FOR_SCH_ID]_S with the QOF index, the Supplemental Channel Active Set indexed by SCCL_INDEX_S[FOR_SCH_ID], and number of information bits per frame (or set of number of bits per frame if FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r] is not equal to '000') specified by N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r].

If the set of number of bits per frame, N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r], has more than one member and F_INC_RATE_ALLOWED_S is equal to '0', then the following rule applies for the duration of this assignment:

- + Once the mobile station determines the forward Supplemental Channel number of bits per frame, the number of bits per frame in the subsequent Forward Supplemental Channel frames may be any member of the set N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r] which is smaller or equal to the number of bits in the current frame.
- Otherwise, if the mobile station is not currently processing the Forward Supplemental Channel identified by FOR_SCH_ID, then at the time specified by FOR_SCH_START_TIME_S[FOR_SCH_ID], the mobile station should start processing the Forward Supplemental Channel identified by FOR_SCH_ID for a duration of time specified by FOR_SCH_DURATION_S[FOR_SCH_ID] with the QOF index, the Supplemental Channel Active Set indexed by SCCL_INDEX_S[FOR_SCH_ID], and number of bits per frame (or set of number of information bits per frame if FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r] is not equal to '000') specified by N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r].

If the set of number of bits per frame, $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ and $F_INC_RATE_ALLOWED_S$ is equal to '0', has more than one member, then the following rule applies for the duration of this assignment:

- + Once the mobile station determines the forward Supplemental Channel number of bits per frame, the number of bits per frame in the subsequent Forward Supplemental Channel frames may be any member of the set $N_FSCH_BITS_SET_S[FOR_SCH_ID_r][SCCL_INDEX_r]$ which is smaller or equal to the number of bits in the current frame.
- If $FOR_SCH_DURATION_S[FOR_SCH_ID]$ is equal to '0000', the mobile station should perform the following:
 - If $FOR_SCH_START_TIME_INCL_S$ is equal to '1', the mobile station should stop processing the Forward Supplemental Channel identified by FOR_SCH_ID at the time specified by $FOR_SCH_START_TIME_S[FOR_SCH_ID]$.
 - If $FOR_SCH_START_TIME_INCL_S$ is equal to '0', the mobile station should stop processing the Forward Supplemental Channel identified by FOR_SCH_ID no later than the first 80 ms boundary (relative to System Time) occurring at least 80 ms after the end of the frame containing the last bit of the message.
- If the $PILOT_GATING_USE_RATE$ to equal to '0', the mobile station shall start the continuous reverse pilot at the specified action time.

2.6.6.2.5.1.2 Processing of the Reverse Supplemental Burst Assignment

A Reverse Supplemental Assignment specifies the explicit start time identified by $REV_SCH_START_TIME$ or the implicit start time (if $REV_SCH_START_TIME_INCL$ is set to '0'), $REV_SCH_DURATION$, and $REV_SCH_NUM_BITS_IDX$ of a reverse burst assignment. The time interval of duration is specified by $REV_SCH_DURATION$ (see Table 3.7.3.3.2.37-3) and starts at the time specified by the explicit start time $REV_SCH_START_TIME$ or the implicit start time (if $REV_SCH_START_TIME_INCL$ is set to '0'). This time interval for a Reverse Supplemental Assignment is called the reverse supplemental assignment interval. A value of $REV_SCH_DURATION$ equal to '1111' indicates infinite duration. A value of $REV_SCH_DURATION$ equal to '0000' indicates that the mobile station should stop transmitting the reverse Supplemental Channels at the explicit start time specified by $REV_SCH_START_TIME$ or the implicit start time (if $REV_SCH_START_TIME_INCL$ is set to '0'). The implicit start time is the time occurring no later than the first 80 ms boundary (relative to System Time) which occurs at least 80 ms after the end of the frame containing the last bit of the *Extended Supplemental Channel Assignment Message*.

For each Reverse Supplemental Assignment the mobile station shall determine the start time for processing reverse supplemental channel as the time for which the following equation holds:

$$(\lfloor t / (START_TIME_UNIT_S + 1) \rfloor - REV_SCH_START_TIME_r) \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

Figure 2.6.6.2.5.1.1-1 illustrates the scenario in which a second Reverse Supplemental Assignment is received while the mobile station is transmitting on the reverse supplemental channel according to a previously received assignment. Two cases are displayed in Figure 2.6.6.2.5.1.1-1: Case a) where the first assignment extends beyond the start time of the second assignment and Case b) where the first assignment ends before the second one starts.

Figure 2.6.6.2.5.1.1-2 shows an example scenario in which the mobile station receives a second Reverse Supplemental Assignment before it starts transmitting on the supplemental channel according to the first assignment. In this case, the second assignment simply replaces the first assignment.

For each Reverse Supplemental Channel assignment corresponding to each Reverse Supplemental Channel (identified by REV_SCH_ID), the mobile station shall perform the following:

- The mobile station shall determine, $N_RSCH_BITS_S[REV_SCH_ID_r]$, the number of information bits per Reverse Supplemental Channel frame identified by REV_SCH_ID according to the following rules:
 - If $RSCH_VAR_TABLE_ID_S[REV_SCH_ID_r]$ is equal to '000', then:
 - + If $USE_FLEX_NUM_BITS_S$ is equal to '0' or if $USE_FLEX_NUM_BITS_S$ is equal to '1' and $RSCH_NBIT_TABLE_ID_S[REV_SCH_ID_r]$ is equal to '0000', then the mobile station shall set the number of information bits per frame, $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$ and number of CRC bits per frame, $RSCH_CRC_LEN_SET_S[REV_SCH_ID_r]$, according to Table 3.7.3.3.2.37-1 using $REV_SCH_NUM_BITS_IDX_r$ as the index to the table.
 - + If $USE_FLEX_NUM_BITS_S$ is equal to '1' and $RSCH_NBIT_TABLE_ID_S[REV_SCH_ID_r]$ is not equal to '0000', then the mobile station shall set the number of CRC bits per frame, $RSCH_CRC_LEN_SET_S[REV_SCH_ID_r]$, according to Table 3.7.5.20-1 using $CRC_LEN_IDX_S[RSCH_NBIT_TABLE_ID_S[REV_SCH_ID_r]][REV_SCH_NUM_BITS_IDX_r]$ as the index to the table. The mobile station shall also set the number of information bits per frame, $N_SCH_BITS_SET_S[REV_SCH_ID_r]$, to $NUM_BITS_S[RSCH_NBIT_TABLE_ID_S[REV_SCH_ID_r]][REV_SCH_NUM_BITS_IDX_r]$.
 - If $RSCH_VAR_TABLE_ID_S[REV_SCH_ID_r]$ is not equal to '000', then:
 - + The mobile station shall set $N_RSCH_BITS_IDX_SET_S[REV_SCH_ID_r]$, the set of indices to the number of information bits per frame as follows:
 - o If $REV_SCH_NUM_BITS_IDX_r$ is equal to '0000', then
 $N_RSCH_BITS_IDX_SET_S[REV_SCH_ID_r] = \{REV_SCH_NUM_BITS_IDX_r\}$,

- 1 o otherwise, the mobile station shall set (initialize)
2 $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r] = \{ REV_SCH_NUM_BITS_IDX_r \}$,
3 and for $i=1, \dots, REV_SCH_NUM_BITS_IDX_r$ the mobile station shall add
4 $REV_SCH_NUM_BITS_IDX_r -$
5 $VAR_RSCH_RATE_OFFSET_s[REV_SCH_ID_r][REV_SCH_NUM_BITS_IDX_r][i]$
6 to the set specified by $N_RSCH_BITS_IDX_SET_s[FOR_SCH_ID_r]$
- 7 + If $USE_FLEX_NUM_BITS_s$ is equal to '0' or if $USE_FLEX_NUM_BITS_s$ is equal
8 to '1' and $RSCH_NBIT_TABLE_ID_s[REV_SCH_ID_r]$ is equal to '0000', then the
9 mobile station shall determine $N_RSCH_BITS_SET_s[REV_SCH_ID_r]$, the set
10 of number of information bits per frame as follows. The i^{th} member of the set
11 $N_RSCH_BITS_SET_s[REV_SCH_ID_r]$ is obtained using Table 3.7.3.3.2.37-1
12 and the i^{th} member of the set $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r]$ as the
13 index to the table.
- 14 + If $USE_FLEX_NUM_BITS_s$ is equal to '1' and
15 $RSCH_NBIT_TABLE_ID_s[FOR_SCH_ID_r]$ is not equal to '0000', then
- 16 o the mobile station shall set $N_RSCH_BITS_SET_s[REV_SCH_ID_r]$, the set
17 of number of information bits per frame as follows.
18 The i^{th} member of the set $N_RSCH_BITS_SET_s[REV_SCH_ID_r]$ is equal to
19 $NUM_BITS_s[RSCH_NBIT_TABLE_ID_s[REV_SCH_ID_r]]$
20 $[N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r][i]]$, where
21 $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r][i]$ denotes the i^{th} member of the
22 set $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r]$.
- 23 o the mobile station shall set $RSCH_CRC_LEN_SET_s[REV_SCH_ID_r]$, the
24 set of number of information bits per frame as follows.
25 The i^{th} member of the set $RSCH_CRC_LEN_IDX_SET_s[REV_SCH_ID_r]$ is
26 equal to
27 $CRC_LEN_IDX_s[RSCH_NBIT_TABLE_ID_s[REV_SCH_ID_r]][N_RSCH_BITS_I$
28 $DX_SET_s[REV_SCH_ID_r][i]]$, where
29 $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r][i]$ denotes the i^{th} member of the
30 set $N_RSCH_BITS_IDX_SET_s[REV_SCH_ID_r]$.
- 31 • If $REV_SCH_DURATION_s[REV_SCH_ID]$ is not equal to '0000', then

- If the mobile station is currently transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID , then the mobile station may continue transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID with the Walsh cover specified by $REV_WALSH_ID_S[REV_SCH_ID][REV_SCH_NUM_BITS_IDX[REV_SCH_ID_r]]$ according to the current Reverse Supplemental Assignment for the Reverse Supplemental Channel identified by REV_SCH_ID up to the time specified by the $REV_SCH_START_TIME_S[REV_SCH_ID_r]$ (i.e., the mobile station shall stop transmitting on the reverse supplemental channel identified by REV_SCH_ID at either the time specified by $REV_SCH_START_TIME_S[REV_SCH_ID]$, the start time of the new assignment, or at the time the previously received assignment ends, whichever time is earlier).

At the time specified by $REV_SCH_START_TIME_S[REV_SCH_ID_r]$, the mobile station may start transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID with the Walsh cover specified by $REV_WALSH_ID_S[REV_SCH_ID][REV_SCH_NUM_BITS_IDX_S[REV_SCH_ID_r]]$ and number of bits per frame (or set of number of information bits per frame if $RSCH_VAR_TABLE_ID_S[REV_SCH_ID_r]$ is not equal to '000') specified by $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$.

If the set of number of bits per frame, $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$, has more than one member and $R_INC_RATE_ALLOWED_S$ is equal to '0', then the following rule applies for the duration of this assignment:

- + Once the mobile station transmits n number of bits per Reverse Supplemental Channel specifies by REV_SCH_ID , where n is a member of the set $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$, the mobile station shall not transmit at a rate higher than the one specifies by n information bits per frame for the duration of the assignment.
- If the mobile station is not currently transmitting on the Reverse Supplemental Channel identified by $REV_SCH_ID_r$, then at the time specified by $REV_SCH_START_TIME_S[REV_SCH_ID_r]$, the mobile station may start transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID with the Walsh cover specified by $REV_WALSH_ID_S[REV_SCH_ID][REV_SCH_NUM_BITS_IDX_S[REV_SCH_ID_r]]$ and number of bits per frame (or set of number of information bits per frame if $RSCH_VAR_TABLE_ID_S[REV_SCH_ID_r]$ is not equal to '000') specified by $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$. If the set of number of bits per frame, $N_RSCH_BITS_SET_S[REV_SCH_ID_r]$, has more than one member and $R_INC_RATE_ALLOWED_S$ is equal to '0', then the following rule applies for the duration of this assignment:

- 1 + Once the mobile station transmits n number of bits per Reverse
2 Supplemental Channel specifies by REV_SCH_ID, where n is a member of
3 the set N_RSCH_BITS_SET_S[REV_SCH_ID_r], the mobile station shall not
4 transmit at a rate higher than the one specifies by n information bits per
5 frame for the duration of the assignment.
- 6 • If REV_SCH_DURATION_S[REV_SCH_ID_r] is equal to '0000', the mobile station shall
7 perform the followings:
 - 8 – If REV_START_TIME_INCL_S is equal to '1', the mobile station shall stop
9 transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID_r
10 at the time specified by REV_SCH_START_TIME_S[REV_SCH_ID_r].
 - 11 – If REV_START_TIME_INCL_S is equal to '0', the mobile station shall stop
12 transmitting on the Reverse Supplemental Channel identified by REV_SCH_ID_r
13 no later than the first 80 ms boundary (relative to System Time) occurring at
14 least 80 ms after the end of the frame containing the last bit of the message.
- 15 • If the PILOT_GATING_USE_RATE to equal to '0', the mobile station shall start the
16 continuous reverse pilot at the specified action time.

17 2.6.6.2.5.2 Processing of Reverse Traffic Channel Handoff Messages

18 The mobile station sends the following messages on the Reverse Traffic Channel in
19 support of handoff when its transmitter is enabled, following the receipt of a *forward*
20 *dedicated channel acquired* indication from Layer 2 (see 2.2.2.1.2 of [4]):

- 21 1. *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message*:
22 The mobile station shall send an autonomous *Pilot Strength Measurement Message* if
23 P_REV_IN_USE is less than seven or *Extended Pilot Strength Measurement Message* if
24 P_REV_IN_USE is equal to or greater than seven in assured mode. The mobile
25 station shall send either *Pilot Strength Measurement Message* or *Extended Pilot*
26 *Strength Measurement Message* containing measurements consistent with the event
27 whenever any of the following events occur:
 - 28 • P_REV_IN_USE_S is less than or equal to three or SOFT_SLOPE_S is equal to
29 '000000' and the strength of a Neighbor Set or Remaining Set pilot is found to be
30 above T_ADD_S.
 - 31 • P_REV_IN_USE_S is greater than three, SOFT_SLOPE_S is not equal to '000000',
32 and the strength PS, as specified in 2.6.6.2.2, of any Candidate Set pilot is found
33 to satisfy the following inequality:

$$34 \quad 10 \times \log_{10} PS > \frac{SOFT_SLOPE_S}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD_INTERCEPT_S}{2}$$

where the summation is performed over all pilots currently in the Active Set and a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* carrying this information has not been sent since the last *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* was received.

- P_REV_IN_USE_s is greater than three, SOFT_SLOPE_s is not equal to '000000', and the strength PS, as specified in 2.6.6.2.2, of any Neighbor Set or Remaining Set pilot is found to satisfy the following inequality:

$$10 \times \log_{10} PS > \max\left(\frac{\text{SOFT_SLOPE}_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{\text{ADD_INTERCEPT}_s}{2}, -\frac{T_ADD_s}{2}\right)$$

where the summation is performed over all pilots currently in the Active Set.

- P_REV_IN_USE_s is less than or equal to three or SOFT_SLOPE_s is equal to '000000', the strength of a Candidate Set pilot exceeds the strength of an Active Set pilot by T_COMP_s × 0.5 dB, and a *Pilot Strength Measurement Message* carrying this information has not been sent since the last *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* was received.
- P_REV_IN_USE_s is greater than three, SOFT_SLOPE_s is not equal to '000000', and the strength of a Candidate Set pilot exceeds the strength of an Active Set pilot by T_COMP_s × 0.5 dB and satisfies the following inequality:

$$10 \times \log_{10} PS > \frac{\text{SOFT_SLOPE}_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{\text{ADD_INTERCEPT}_s}{2}$$

where the summation is performed over all pilots currently in the Active Set and a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* carrying this information has not been sent since the last *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* was received.

- The handoff drop timer of an Active Set pilot has expired and a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* carrying this information has not been sent since the last *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal handoff Direction Message* was received.

2. *Handoff Completion Message* or *Extended Handoff Completion Message*: The mobile station shall send a *Handoff Completion Message* if P_REV_IN_USE is less than seven or an *Extended Handoff Completion Message* if P_REV_IN_USE is equal to or greater than seven in assured mode as follows:

- 1 • If the handoff message (*Extended Handoff Direction Message*, *General Handoff*
2 *Direction Message* or *Universal Handoff Direction Message*) specifies a soft handoff,
3 the mobile station shall send the *Handoff Completion Message* if P_REV_IN_USE
4 is less than seven or an *Extended Handoff Completion Message* if P_REV_IN_USE
5 is equal to or greater than seven within T_{56m} seconds after the action time of
6 the received handoff message.
- 7 • If the handoff message (*Extended Handoff Direction Message*, *General Handoff*
8 *Direction Message* or *Universal Handoff Direction Message*) specifies a hard handoff
9 without return on failure (see 2.6.6.2.8.1), the mobile station shall send the
10 *Handoff Completion Message* if P_REV_IN_USE is less than seven or an *Extended*
11 *Handoff Completion Message* if P_REV_IN_USE is equal to or greater than seven
12 within T_{73m} seconds after the action time of the received handoff message.
- 13 • If the handoff message (*General Handoff Direction Message* or *Universal Handoff*
14 *Direction Message*) specifies a hard handoff with return on failure (see
15 2.6.6.2.8.2), the mobile station shall send the *Handoff Completion Message* if
16 P_REV_IN_USE is less than seven or an *Extended Handoff Completion Message* if
17 P_REV_IN_USE is equal to or greater than seven within T_{56m} seconds after
18 mobile station declares the handoff to be successful (see 2.6.6.2.8.2).
- 19 3. *Candidate Frequency Search Report Message*: The mobile station shall send a
20 *Candidate Frequency Search Report Message* in assured mode, whenever any of the
21 following events occur:
 - 22 • RETURN_IF_HANDOFF_FAIL_S is equal to '1', and a handoff attempt is
23 unsuccessful (see 2.6.6.2.8.2). In this case, the mobile station shall send a
24 *Candidate Frequency Search Report Message* within T_{56m} seconds after
25 completing a search of all pilots in the Candidate Frequency Search Set and
26 resuming the use of the Serving Frequency Active Set (see 2.6.6.2.8.2.1).
 - 27 • RETURN_IF_HANDOFF_FAIL_S is equal to '1', an inter-frequency handoff attempt
28 is unsuccessful (see 2.6.6.2.8.2), and PERIODIC_SEARCH_S is equal to '1'. In this
29 case, the mobile station shall send a *Candidate Frequency Search Report Message*
30 in a search period if the conditions specified in 2.6.6.2.8.3.2 are met.
 - 31 • The mobile station receives a *Candidate Frequency Search Request Message* or a
32 *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '01'. If
33 none of the conditions requiring the mobile station to send a *Mobile Station*
34 *Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall send a *Candidate*
35 *Frequency Search Report Message*, as described in 2.6.6.2.8.3.1 and 2.6.6.2.10.1.

- 1 • The mobile station receives a *Candidate Frequency Search Request Message* or

2 *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '11',

3 SEARCH_MODE_S is equal to '0000' and the Candidate Frequency Search Set is

4 not empty. If none of the conditions requiring the mobile station to send a

5 *Mobile Station Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall send

6 a *Candidate Frequency Search Report Message* in a search period if the conditions

7 specified in 2.6.6.2.8.3.2 are met.
- 8 • The mobile station receives a *Candidate Frequency Search Request Message* or

9 *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '11',

10 SEARCH_MODE_S is equal to '0001' and the Candidate Frequency Analog Search

11 Set is not empty. If none of the conditions requiring the mobile station to send

12 a *Mobile Station Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall

13 send a *Candidate Frequency Search Report Message* in a search period if the

14 conditions specified in 2.6.6.2.10.2 are met.
- 15 4. *Periodic Pilot Strength Measurement Message*: The mobile station shall send a *Periodic*

16 *Pilot Strength Measurement Message* in unassured mode, as specified in 2.6.6.2.5.1

17 and 2.6.6.2.12.
- 18 5. *Pilot Strength Measurement Mini Message*: If the mobile station supports the Mobile

19 Assisted Burst operation capability, the mobile station shall send this message

20 while processing any Supplemental Channel, according to the following:

 - 21 • The mobile station shall transmit a *Pilot Strength Measurement Mini Message* for

22 a pilot *p* in the Active Set on the r-dsch logical channel whenever all of the

23 following conditions are true:

 - 24 – ORDER_FLAG_S is equal to '1'.
 - 25 – The pilot *p* in the Active Set has a received signal strength that is greater

26 than the signal strength of another pilot in the Active Set by

27 $(PS_MIN_DELTA_S + 1) / 2$ dB at the current time and has been for

28 ORDER_INTERVAL_S successive 20 ms frame intervals.
 - 29 • If PERIODIC_FLAG_S is equal to '1', the mobile station shall transmit $n = (\min$

30 (NUM_PILOTS, the number of pilots in the Active Set)) *Pilot Strength*

31 *Measurements Mini Messages* on the r-dsch logical channel for each of the n

32 pilots in the Active Set with the largest signal strengths whenever the following

33 condition is true:

 - 34 – The mobile station has not transmitted another *Pilot Strength*

35 *Measurement Mini Message* during the last PERIODIC_INTERVAL_S 20 ms

36 frame intervals.
 - 37 • If THRESHOLD_FLAG_S is equal to '1', the mobile station shall transmit a *Pilot*

38 *Strength Measurement Mini Message* for pilot *p* on the r-dsch logical channel

39 whenever all of the following conditions are true:

- 1 – The mobile station has not transmitted a previous *Pilot Strength Measurement*
2 *Mini Message* for pilot p within the most recent $\text{THRESHOLD_INTERVAL}_s$ 20
3 ms frames intervals.
- 4 – Pilot p is in the Active Set for some SCH Physical Channel that is currently
5 being processed by the mobile station.
- 6 – The signal strength of pilot p is greater than PS_CEILING_HIGH_s and the
7 signal strength of pilot p was less than or equal to PS_CEILING_LOW_s at any
8 time since the mobile station last sent a *Pilot Strength Measurement Mini*
9 *Message* for pilot p ; or the signal strength of pilot p is less than
10 PS_FLOOR_LOW_s and the signal strength for pilot p was greater than or
11 equal to PS_FLOOR_HIGH_s at any time since the last time that the mobile
12 station sent a *Pilot Strength Measurement Mini Message* for pilot p .

13 2.6.6.2.6 Set Maintenance

14 2.6.6.2.6.1 Maintenance of the Active Set

15 The mobile station shall support a maximum Active Set size of N_{6m} pilots. The mobile
16 station shall track the pilot strengths of all pilots in the Active Set.

17 When the mobile station is first assigned Forward Traffic Channels, the mobile station
18 shall initialize the Active Set to contain the pilots associated with the assigned Forward
19 Traffic Channels. When the mobile station processes an *Extended Handoff Direction*
20 *Message*, a *General Handoff Direction Message* or *Universal Handoff Direction Message*, then
21 at the action time of the message the mobile station shall replace the pilots in the Active
22 Set with the pilots listed in the message.

23 2.6.6.2.6.2 Maintenance of the Candidate Set

24 The mobile station shall support a maximum Candidate Set size of N_{7m} pilots.

25 When the mobile station is first assigned a Forward Traffic Channel, the mobile station
26 shall initialize the Candidate Set to contain no pilots. The mobile station shall adjust the
27 Candidate Set whenever any of the following events occur:

- 28 • If the mobile station detects that the strength of a Neighbor Set pilot or a
29 Remaining Set pilot exceeds T_ADD_s , the mobile station shall add the pilot to the
30 Candidate Set.
- 31 • If the mobile station processes an *Extended Handoff Direction Message*, a *General*
32 *Handoff Direction Message* or a *Universal Handoff Direction Message* which does not
33 list a pilot in the current Active Set, and the handoff drop timer corresponding to
34 that pilot has not expired at the action time of the message, the mobile station
35 shall add the pilot to the Candidate Set at the action time of the message.

- 1 • If $P_REV_IN_USE_S$ is greater than three, and $SOFT_SLOPE_S$ is not equal to '000000',
2 the mobile station shall perform the following: If the mobile station processes a
3 *General Handoff Direction Message* or a *Universal Handoff Direction Message* which
4 does not list a pilot in the current Active Set, the handoff drop timer corresponding
5 to that pilot has expired at the action time of the message, and that pilot is found to
6 be above T_DROP_S , the mobile station shall add the pilot to the Candidate Set at the
7 action time of the message.
- 8 • If the mobile station processes an *Extended Handoff Direction Message*, a *General*
9 *Handoff Direction Message* or *Universal Handoff Direction Message*, which lists a pilot
10 in the current Candidate Set, the mobile station shall delete the pilot from the
11 Candidate Set at the action time of the message.
- 12 • If the handoff drop timer corresponding to a Candidate Set pilot expires, the mobile
13 station shall delete the pilot from the Candidate Set.
- 14 • If the mobile station adds a pilot to the Candidate Set, and the resulting Candidate
15 Set size exceeds N_{7m} , the mobile station shall delete from the Candidate Set the
16 pilot whose handoff drop timer is closest to expiration. If more than one such pilot
17 exists, the mobile station shall delete one such pilot that has the lowest strength.
18 If no pilot in the Candidate Set has an enabled handoff drop timer, the mobile
19 station shall delete from the Candidate Set the pilot that has the lowest strength.

20 2.6.6.2.6.3 Maintenance of the Neighbor Set

21 The mobile station shall support a Neighbor Set size of at least N_{8m} pilots.

22 When the mobile station is first assigned a Forward Traffic Channel, the mobile station
23 shall initialize the Neighbor Set to contain all the pilots specified in the most recently
24 received *Neighbor List Message*, *Extended Neighbor List Message* or *General Neighbor List*
25 *Message*.

26 The mobile station shall maintain a counter, AGE_S , for each pilot in the Neighbor Set. The
27 mobile station shall initialize this counter to zero when it moves the pilot from the Active
28 Set or the Candidate Set to the Neighbor Set. The mobile station shall initialize this
29 counter to $NGHBR_MAX_AGE_S$ when it moves the pilot from the Remaining Set to the
30 Neighbor Set. The mobile station shall increment AGE_S for each pilot in the Neighbor Set
31 upon receipt of a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*.
32 When the mobile station is first assigned to a Forward Traffic Channel, the mobile station
33 shall set AGE_S for each pilot in the Neighbor Set to $NGHBR_MAX_AGE_S$.

34 The mobile station shall adjust the Neighbor Set whenever any of the following events
35 occur:

- 36 • If the mobile station receives a *Neighbor List Update Message* or an *Extended*
37 *Neighbor List Update Message*, it shall perform the following:
38 – Increment AGE_S for each pilot in the Neighbor Set.

- 1 – Delete from the Neighbor Set all pilots whose AGE_S exceeds $NGHBR_MAX_AGE_S$.
- 2 – Add to the Neighbor Set each pilot named in the message, if it is not already a
- 3 pilot of the Active Set, Candidate Set, or Neighbor Set. If the mobile station can
- 4 store in the Neighbor Set only k additional pilots, and more than k new pilots
- 5 were sent in the *Neighbor List Update Message* or the *Extended Neighbor List*
- 6 *Update Message*, the mobile station shall store the first k new pilots listed in the
- 7 message.
- 8 • If the handoff drop timer of a pilot in the Candidate Set expires, the mobile station
- 9 shall add the pilot to the Neighbor Set.
- 10 • If $P_REV_IN_USE_S$ is less than or equal to three or $SOFT_SLOPE_S$ is equal to
- 11 ‘000000’, the mobile station shall perform the following: If the mobile station
- 12 processes an *Extended Handoff Direction Message*, a *General Handoff Direction*
- 13 *Message*, or a *Universal Handoff Direction Message* in which a pilot in the Active Set
- 14 is not listed, and the handoff drop timer corresponding to the pilot has expired, the
- 15 mobile station shall add the pilot to the Neighbor Set.
- 16 • If $P_REV_IN_USE_S$ is greater than three, and $SOFT_SLOPE_S$ is not equal to ‘000000’,
- 17 the mobile station shall perform the following: If the mobile station processes an
- 18 *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or a
- 19 *Universal Handoff Direction Message* which does not list a pilot in the current Active
- 20 Set, the handoff drop timer corresponding to that pilot has expired, and that pilot is
- 21 found to be below T_DROP_S , the mobile station shall add the pilot to the Neighbor
- 22 Set.
- 23 • If the mobile station adds a pilot to the Candidate Set, and the resulting Candidate
- 24 Set size exceeds the size supported by the mobile station, the mobile station shall
- 25 add the deleted Candidate Set pilot to the Neighbor Set (see 2.6.6.2.6.2).
- 26 • If the mobile station detects that the strength of a Neighbor Set pilot exceeds
- 27 T_ADD_S , the mobile station shall delete the pilot from the Neighbor Set.
- 28 • If the mobile station processes an *Extended Handoff Direction Message*, a *General*
- 29 *Handoff Direction Message* or a *Universal Handoff Direction Message* which lists a pilot
- 30 in the current Neighbor Set, the mobile station shall delete the pilot from the
- 31 Neighbor Set.
- 32 • If the mobile station adds a pilot to the Neighbor Set, and the resulting Neighbor Set
- 33 size exceeds the size supported by the mobile station, the mobile station shall
- 34 delete from the Neighbor Set the pilot whose AGE_S is the largest. If more than one
- 35 such pilot exists, the mobile station shall delete one such pilot that has the lowest
- 36 strength.

2.6.6.2.7 Soft Handoff

2.6.6.2.7.1 Forward Traffic Channel Processing

All Forward Traffic Channels associated with pilots in the Active Set of the mobile station carry identical modulation symbols with the exception of the power control subchannel (see [2]).

When the Active Set contains more than one pilot, the mobile station should provide diversity combining of the associated Forward Traffic Channels. The mobile station shall provide for differential propagation delays from zero to at least 150 μ s.

2.6.6.2.7.2 Reverse Traffic Channel Power Control During Soft Handoff

The *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message* identifies sets of Forward Fundamental Code Channels or Forward Dedicated Control Channels that carry identical closed loop power control subchannels. A set consists of one or more Forward Fundamental Code Channels or Forward Dedicated Control Channels with identical power control information.

In each power control group containing valid power control bits (see [2]), the mobile station should provide diversity combining of the identical closed loop power control subchannels and shall obtain at most one power control bit from each set of identical closed loop power control subchannels. The mobile station should only combine reliable power control bits (see 9.3.8 of [11]) as follows:

- If the reliable power control bits obtained from all sets are equal to '0', the mobile station shall increase its power as specified in [2].
- If the reliable power control bit obtained from any set is equal to '1', the mobile station shall decrease its power as specified in [2].

2.6.6.2.7.3 Starting Periodic Search following Soft Handoff

If the PERIODIC SEARCH_S is equal to '1', a periodic search is not already in progress, and the Frequency Assignment after handoff is different from the Candidate Frequency (CDMABAND_S is not equal to CF_CDMABAND_S or CDMACH_S is not equal to CF_CDMACH_S), the mobile station shall do the following:

- If the mobile station uses received power measurements in the search procedure, it should start monitoring the received power on the Target Frequency and should maintain an average of the received power over the last N_{12m} frames.
- The mobile station shall start a periodic search as described in 2.6.6.2.8.3.2.

2.6.6.2.8 CDMA-to-CDMA Hard Handoff

The base station directs the mobile station to perform a CDMA-to-CDMA hard handoff by sending an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message* in which the mobile station is transitioned between disjoint sets of base stations, different Frequency Assignments, or different frame offsets.

If RETURN_IF_HANDOFF_FAIL_S is equal to '0', the mobile station performs the actions described in 2.6.6.2.8.1. If RETURN_IF_HANDOFF_FAIL_S is equal to '1', the mobile station performs the actions described in 2.6.6.2.8.2.

2.6.6.2.8.1 Hard Handoff without Return on Failure

At the action time specified in the *Extended Handoff Direction Message*, the *General Handoff Direction Message* or *Universal Handoff Direction Message* the mobile station shall disable its transmitter, reset the fade timer specified in 2.6.4.1.8, suspend incrementing TOT_FRAMES_S and BAD_FRAMES_S as specified in 2.6.4.1.1, and tune to the assigned Forward Traffic Channel. The mobile station shall perform acquisition of the pilots in the new Active Set.

If a periodic Serving Frequency pilot report procedure is in progress, the mobile station shall abort it (see 2.6.6.2.12).

The mobile station shall begin monitoring the assigned Forward Traffic Channel within the time specified below:

- If the *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* specifies a CDMA Frequency Assignment different from the Serving Frequency and an Active Set containing pilots with pilot PN sequence offsets identical to those of the pilots in the Serving Frequency Active Set, the mobile station shall begin monitoring the assigned Forward Traffic Channel within T_{60m} seconds after the action time.
- If the *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* specifies a CDMA Frequency Assignment different from the Serving Frequency and an Active Set containing a pilot with pilot PN sequence offset not equal to that of any pilot in the Serving Frequency Active Set, the mobile station shall begin monitoring the assigned Forward Traffic Channel within T_{61m} seconds after the action time.
- If the *Extended Handoff Direction Message*, *General Handoff Direction Message* or *Universal Handoff Direction Message* specifies a CDMA-to-CDMA hard handoff without changing the CDMA Frequency Assignment, the mobile station shall begin monitoring the assigned Forward Traffic Channel within T_{62m} seconds after the action time.

Upon receiving a period of (N_{11m} × 20) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to FPC_PRI_CHAN_S on the assigned Forward Traffic Channel, the mobile station shall re-enable its transmitter. The mobile station shall transmit the Traffic Channel Preamble, as described in 2.1.3.6.2.3 of [2], followed by a *Handoff Completion Message* or *Extended Handoff Completion Message*.

Upon receiving a period of (N_{3m} × 20) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to FPC_PRI_CHAN_S, the mobile station shall resume incrementing TOT_FRAMES_S and BAD_FRAMES_S as specified in 2.6.4.1.1.

If the PERIODIC SEARCH_S is equal to '1', a periodic search is not already in progress, and the Frequency Assignment after handoff is different from the Candidate Frequency (CDMABAND_S is not equal to CF_CDMABAND_S or CDMACH_S is not equal to CF_CDMACH_S), the mobile station shall do the following:

- If the mobile station uses received power measurements in the search procedure, it should start monitoring the received power on the Target Frequency and should maintain an average of the received power over the last N_{12m} frames.
- The mobile station shall start a periodic search as described in 2.6.6.2.8.3.2.

2.6.6.2.8.2 Hard Handoff with Return on Failure

At the action time specified in the *General Handoff Direction Message* or *Universal Handoff Direction Message*, the mobile station shall do the following:

- The mobile station shall stop processing the Forward Fundamental Code Channel, the Forward Dedicated Control Channel, the Forward Supplemental Code Channels (if any), and the Forward Supplemental Channels (if any).
- The mobile station shall stop transmitting on the Reverse Fundamental Code Channel, on the Reverse Dedicated Control Channel, and on the Reverse Supplemental Code Channels (if any), and on the Reverse Supplemental Channels (if any).
- The mobile station shall disable the fade timer (see 2.6.4.1.8) and the handoff drop timers corresponding to the Serving Frequency Active Set and Candidate Set (see 2.6.6.2.3), and shall suspend incrementing TOT_FRAMES_S and BAD_FRAMES_S (see 2.6.4.1.1).
- The mobile station shall lock the accumulation of valid level changes in the closed loop mean output power and shall ignore received power control bits related to the period that the transmitter is disabled (see 2.1.2.3.2 of [2]).
- If the Serving Frequency is different from the Target Frequency (CDMACH_S is not equal to TF_CDMACH_S or CDMABAND_S is not equal to TF_CDMABAND_S), the mobile station shall set CDMACH_S to TF_CDMACH_S and CDMABAND_S to TF_CDMABAND_S, and shall tune to the Target Frequency.

The mobile station shall not change its time reference (see 2.1.5 of [2]) until the handoff is successfully completed (as described later in this section) or the mobile station resumes using the Serving Frequency Active Set (as described in 2.6.6.2.8.2.1).

The mobile station shall maintain a *handoff* timer. The mobile station shall set the expiration time for the handoff timer to $(0.08 \times TF_WAIT_TIME_S)$ seconds and enable the timer at the action time of the *General Handoff Direction Message* or *Universal Handoff Direction Message*.

The mobile station shall perform the following actions:

- 1 • If the Target Frequency is different from the Serving Frequency ($TF_CDMABAND_S$
2 is not equal to $SF_CDMABAND_S$, or TF_CDMACH_S is not equal to SF_CDMACH_S), the
3 mobile station shall measure the mean input power on the Target Frequency
4 ($target_freq_pwr$, in dBm/1.23 MHz) and may use $target_freq_pwr$ along with the
5 measurement of the average input power on the Serving Frequency
6 ($avg_serving_freq_pwr$, in dBm/1.23 MHz) in the handoff procedure. The mobile
7 station may declare the handoff attempt to be unsuccessful if all of the following
8 conditions are true:
 - 9 – $DIFF_RX_PWR_THRESH_S$ is not equal to '00000',
 - 10 – the mobile station has been measuring the received power on the Serving
11 Frequency for at least the last N_{12m} frames, and
 - 12 – $(target_freq_pwr - avg_serving_freq_pwr)$ is less than $(-30 + 2 \times$
13 $DIFF_RX_PWR_THRESH_S)$ dB.

14 If the mobile station declares the handoff attempt to be unsuccessful, it shall
15 restore the configuration to what it was before the handoff attempt (see 2.6.6.2.5.1)
16 and send a *Candidate Frequency Search Report Message* as described in 2.6.6.2.8.2.1.

- 17 • The mobile station shall measure E_c/I_o for each pilot in the Active Set using the
18 procedures specified in 2.6.6.2.2, if any of the following conditions is true:
 - 19 – the Target Frequency is the same as the Serving Frequency ($TF_CDMABAND_S$
20 is equal to $SF_CDMABAND_S$, and TF_CDMACH_S is equal to SF_CDMACH_S),
 - 21 – the mobile station does not use the power measurements in the handoff
22 procedure,
 - 23 – $DIFF_RX_PWR_THRESH_S$ is equal to '00000',
 - 24 – the mobile station has not been measuring the received power on the Serving
25 Frequency for at least the last N_{12m} frames, or
 - 26 – $(target_freq_pwr - avg_servng_freq_pwr)$ is not less than $(-30 + 2 \times$
27 $DIFF_RX_PWR_THRESH_S)$ dB.

28 If the mobile station measures E_c/I_o for pilots in the Active Set, it shall compare
29 the sum of the measured E_c/I_o for all pilots with the minimum total pilot E_c/I_o
30 threshold ($MIN_TOTAL_PILOT_EC_IO_S$).

- 31 – If $MIN_TOTAL_PILOT_EC_IO_S$ is not equal to '00000', and $(-20 \times \log_{10} (E_c/I_o)_{total})$
32 is less than $MIN_TOTAL_PILOT_EC_IO_S$, where $(E_c/I_o)_{total}$ is the sum of the
33 measured E_c/I_o for the pilots in the Active Set, the mobile station shall declare
34 the handoff attempt to be unsuccessful, and shall do the following:

- 1 + If COMPLETE_SEARCH_S is equal to '1', and the Target Frequency is the
2 same as the Candidate Frequency (TF_CDMABAND_S is equal to
3 CF_CDMABAND_S, and TF_CDMACH_S is equal to CF_CDMACH_S), the mobile
4 station shall measure the strength of each pilot in its Candidate Frequency
5 Search Set using the procedures specified in 2.6.6.2.2.
- 6 + Otherwise, the mobile station shall end the search.
- 7 - The mobile station shall then restore its configuration to what it was before the
8 handoff attempt (see 2.6.6.2.5.1) and send a *Candidate Frequency Search Report*
9 *Message* as described in 2.6.6.2.8.2.1.
- 10 - If MIN_TOTAL_PILOT_EC_IO_S is equal to '00000', or $(-20 \times \log_{10}(E_c/I_o)_{\text{total}})$ is
11 not less than MIN_TOTAL_PILOT_EC_IO_S, where $(E_c/I_o)_{\text{total}}$ is the sum of the
12 measured E_c/I_o for the pilots in the Active Set, the mobile station shall attempt
13 to demodulate the Forward Traffic Channel(s). If the Active Set contains more
14 than one pilot, the mobile station shall perform the actions specified in
15 2.6.6.2.7. If the Target Frequency is the same as the Candidate Frequency
16 (TF_CDMABAND_S is equal to CF_CDMABAND_S, and TF_CDMACH_S is equal to
17 CF_CDMACH_S), and is different for the Serving Frequency (TF_CDMABAND_S is
18 not equal to SF_CDMABAND_S, or TF_CDMACH_S is not equal to SF_CDMACH_S),
19 the mobile station shall measure the strength of each pilot in its Candidate
20 Frequency Search Set using the procedures specified in 2.6.6.2.2, while waiting
21 for good frames on the Forward Traffic Channel(s). The mobile station shall wait
22 for the first of the following events to occur:
 - 23 + The handoff timer expires and the mobile station has not received a period
24 of $(N_{11m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the
25 physical channel corresponding to FPC_PRI_CHAN_S. In this case, the mobile
26 station shall declare the handoff attempt to be unsuccessful, and do the
27 following:
 - 28 o If COMPLETE_SEARCH_S is equal to '1', and if the Target Frequency is the
29 same as the Candidate Frequency (TF_CDMABAND_S is equal to
30 CF_CDMABAND_S, and TF_CDMACH_S is equal to CF_CDMACH_S), and the
31 mobile station has not completed the search of all pilots in its Candidate
32 Frequency Search Set, then it shall complete the search, i.e., it shall
33 obtain at least one measurement of the strength of each pilot in its
34 Candidate Frequency Search Set, using the search procedures specified
35 in 2.6.6.2.8.3.
 - 36 o Otherwise, the mobile station shall end the search.
- 37 The mobile station shall then restore its configuration to what it was before
38 the handoff attempt (see 2.6.6.2.5.1) and send a *Candidate Frequency Search*
39 *Report Message* as described in 2.6.6.2.8.2.1.

- 1 + The mobile station receives a period of ($N_{11m} \times 20$) ms with sufficient
- 2 signal quality (e.g. good frames) on the physical channel corresponding to
- 3 FPC_PRI_CHAN_S. In this case, the mobile station shall declare the handoff
- 4 attempt to be successful, and do the following:
- 5 o The mobile station shall disable the handoff timer.
- 6 o If TF_RESET_L2_S is equal to '1', Layer 3 shall send a L2-
- 7 Supervision.Request primitive to Layer 2 to reset the acknowledgment
- 8 procedures as specified in 2.2.1.1 and 2.2.2.1 of [4].
- 9 o If TF_RESET_FPC_S is equal to '1', the mobile station shall initialize
- 10 the Forward Traffic Channel power control counters as specified in
- 11 2.6.4.1.1.1.
- 12 o If the Target Frequency is the same as the Candidate Frequency
- 13 (TF_CDMABAND_S is equal to CF_CDMABAND_S, and TF_CDMACH_S is
- 14 equal to CF_CDMACH_S) and is different from the Serving Frequency
- 15 (TF_CDMABAND_S is not equal to SF_CDMABAND_S, or TF_CDMACH_S is
- 16 not equal to SF_CDMACH_S), the mobile station shall do the following:
- 17 ◇ The mobile station shall replace its Neighbor Set with its Candidate
- 18 Frequency Neighbor Set, excluding the pilots in its Active Set. When
- 19 the mobile station adds a pilot from its Candidate Frequency
- 20 Neighbor Set to its Active Set, it shall maintain SEARCH_PRIORITY_S,
- 21 SRCH_WIN_NGHBR_S, and SRCH_OFFSET_NGHBR_S associated with
- 22 the pilot.
- 23 ◇ The mobile station shall set PILOT_INC_S to CF_PILOT_INC_S,
- 24 SRCH_WIN_N_S to CF_SRCH_WIN_N_S, and SRCH_WIN_R_S to
- 25 CF_SRCH_WIN_R_S.
- 26 ◇ The mobile station shall set SEARCH_PRIORITY_INCL_S to
- 27 CF_SEARCH_PRIORITY_INCL_S, SRCH_OFFSET_INCL_S to
- 28 CF_SRCH_OFFSET_INCL_S, and SRCH_WIN_NGHBR_INCL_S to
- 29 CF_SRCH_WIN_NGHBR_INCL_S.
- 30 o The mobile station shall re-enable its transmitter. Then, the mobile
- 31 station shall transmit the Traffic Channel Preamble, as described in
- 32 2.1.3.6.2.3 of [2], followed by a *Handoff Completion Message* if
- 33 P_REV_IN_USE is less than seven or an *Extended Handoff Completion*
- 34 *Message* if P_REV_IN_USE is equal to or greater than seven.
- 35 o Upon receiving a period of ($N_{3m} \times 20$) ms with sufficient signal
- 36 quality (e.g. good frames) on the physical channel corresponding to
- 37 FPC_PRI_CHAN_S, the mobile station shall resume incrementing
- 38 TOT_FRAMES_S and BAD_FRAMES_S as specified in 2.6.4.1.1.

- o If the Target Frequency is same as the Candidate Frequency (TF_CDMABAND_S is equal to CF_CDMABAND_S and TF_CDMACH_S is equal to CF_CDMACH_S), then the mobile station shall set PERIODIC_SEARCH_S to '0'.
- o If PERIODIC_SEARCH_S is equal to '0', the mobile station may stop maintaining the average of the Serving Frequency received power that is used in the handoff and search procedures.
- o If PERIODIC_SEARCH_S is equal to '1', the mobile station shall do the following:
 - ◊ If the mobile station uses received power measurements in the search procedure, it should start monitoring the received power on the Target Frequency and should maintain an average of the received power over the last N_{12m} frames.
 - ◊ The mobile station shall start a periodic search as described in 2.6.6.2.8.3.2.
- o The mobile station shall maintain its pilot sets using the procedures described in 2.6.6.2.6.

2.6.6.2.8.2.1 Restoring the Configuration

If the mobile station declares a handoff attempt to be unsuccessful (see 2.6.6.2.8.2), it shall perform the following actions:

- If the handoff timer is enabled, the mobile station shall disable it.
- The mobile station shall restore the following parameters:
 - Message encryption mode: If SF_ENCRYPT_MODE_S is equal to '0', the mobile station shall turn off message encryption; otherwise, it shall turn on message encryption.
 - Service configuration: The mobile station shall use the service configuration stored in SF_SERVICE_CONFIG_S to process Forward and Reverse Traffic Channel frames.
 - Protocol revision level (P_REV_S = SF_P_REV_S)
 - Protocol revision level in use on the serving frequency (P_REV_IN_USE_S = SF_P_REV_IN_USE_S)
 - Service negotiation type (SERV_NEG_S = SF_SERV_NEG_S)
 - Long code mask: If SF_PRIVATE_LCM_S is equal to '1', the mobile station shall use the private long code mask; otherwise, it shall use the public long code mask.

- 1 – Search window size for the Active Set and Candidate Set
2 (SRCH_WIN_A_S = SF_SRCH_WIN_A_S)
- 3 – Search window size for the Neighbor Set
4 (SRCH_WIN_N_S = SF_SRCH_WIN_N_S)
- 5 – Search window size for the Remaining Set
6 (SRCH_WIN_R_S = SF_SRCH_WIN_R_S)
- 7 – Pilot detection threshold (T_ADD_S = SF_T_ADD_S)
- 8 – Pilot drop threshold (T_DROP_S = SF_T_DROP_S)
- 9 – Soft slope for the dynamic add and drop threshold (SOFT_SLOPE_S =
10 SF_SOFT_SLOPE_S)
- 11 – Intercept for the dynamic add threshold (ADD_INTERCEPT_S =
12 SF_ADD_INTERCEPT_S)
- 13 – Intercept for the dynamic drop threshold (DROP_INTERCEPT_S =
14 SF_DROP_INTERCEPT_S)
- 15 – Active Set versus Candidate Set comparison threshold (T_COMP_S =
16 SF_T_COMP_S)
- 17 – Drop timer value (T_TDROPS_S = SF_T_TDROPS_S)
- 18 – Frame offset (FRAME_OFFSET_S = SF_FRAME_OFFSET_S)
- 19 – Nominal power setting (NOM_PWR_S = SF_NOM_PWR_S)
- 20 – Extended nominal power setting (NOM_PWR_EXT_S = SF_NOM_PWR_EXT_S)
- 21 – Power control step (PWR_CNTL_STEP_S = SF_PWR_CNTL_STEP_S)
- 22 – CDMA band class (CDMABAND_S = SF_CDMABAND_S)
- 23 – Frequency assignment (CDMACH_S = SF_CDMACH_S)
- 24 – Active Set (For each pilot in the Serving Frequency Active Set: (PILOT_REC,
25 PWR_COMB_IND))
- 26 – Code channel list (CODE_CHAN_LIST_S = SF_CODE_CHAN_LIST_S)
- 27 • The mobile station shall tune to the Serving Frequency and resume using the
28 Serving Frequency Active Set as follows:
 - 29 – If the mobile station was processing the Forward Fundamental Channel prior to
30 tuning to the Candidate Frequency, the mobile station shall resume processing
31 the Forward Fundamental Channel. If the mobile station was transmitting on
32 the Reverse Fundamental Channel prior to tuning to the Candidate Frequency,
33 the mobile station shall resume transmitting on the Reverse Fundamental
34 Channel.

- 1 – If the mobile station was processing the Forward Dedicated Control Channel
2 prior to tuning to the Candidate Frequency, the mobile station shall resume
3 processing the Forward Dedicated Control Channel. If the mobile station was
4 transmitting on the Reverse Dedicated Control Channel prior to tuning to the
5 Candidate Frequency, the mobile station shall resume transmitting on the
6 Reverse Dedicated Control Channel.
- 7 – The mobile station shall not resume transmitting on the Reverse Supplemental
8 Code Channels and Reverse Supplemental Channels (if any). The mobile
9 station shall not process on the Forward Supplemental Code Channels and
10 Forward Supplemental Channels (if any).
- 11 – When the mobile station resumes transmission on the Reverse Traffic
12 Channel, it shall use the following rules to re-enable its transmitter:
 - 13 + If the interval between the time that the mobile station disables its
14 transmitter and the time that it resumes using the Serving Frequency
15 Active Set is equal to or greater than $(N_{2m} \times 20)$ ms, then the mobile station
16 shall wait to receive a period of $(N_{3m} \times 20)$ ms with sufficient signal quality
17 (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$
18 before it re-enables its transmitter.
 - 19 + Otherwise, the mobile station shall re-enable its transmitter no later than
20 $N_{3m} \times 20$ ms after the mobile station tunes to the Serving Frequency. The
21 mobile station should re-enable its transmitter earlier. After the mobile
22 station re-enables its transmitter, the mean output power shall be as
23 specified in 2.1.2.4.1 of [2] for a step change in input power. If the mobile
24 station re-enables its transmitter earlier than $N_{3m} \times 20$ ms after it tunes to
25 the Serving Frequency, the initial mean output power shall be as specified
26 in 2.1.2.3.1 of [2], where the initial mean input power estimate is either:
 - 27 o within 6 dB of the actual mean input power, or
 - 28 o equal to the mean input power before the mobile station tuned to
29 the Target Frequency.
- 30 • The mobile station shall enable the fade timer and the handoff drop timers
31 corresponding to the pilots in its Active Set and Candidate Set. The mobile station
32 shall resume incrementing TOT_FRAMES_S and BAD_FRAMES_S as specified in
33 2.6.4.1.1.
- 34 • The mobile station shall send a *Candidate Frequency Search Report Message* within
35 T_{56m} seconds. The mobile station shall report the contents of the *Candidate*
36 *Frequency Search Report Message* as follows:
 - 37 – The mobile station shall report the two components of the Candidate Frequency
38 in the $CDMA_FREQ$ and $BAND_CLASS$ fields.

- 1 – The mobile station shall report the received power on the Target Frequency and
2 on the Serving Frequency in the CF_TOTAL_RX_PWR and SF_TOTAL_RX_PWR
3 fields, respectively.
- 4 – For each pilot in the Target Frequency Active Set that measures above
5 TF_T_ADD_S, the mobile station shall report its phase and strength in the fields
6 PILOT_PN_PHASE and PILOT_STRENGTH, respectively.
- 7 – If the Target Frequency is the same as the Candidate Frequency
8 (TF_CDMABAND_S is equal to CF_CDMABAND_S, and TF_CDMACH_S is equal to
9 CF_CDMACH_S), and is different from the Serving Frequency (TF_CDMABAND_S is
10 not equal to SF_CDMABAND_S or TF_CDMACH_S is not equal to SF_CDMACH_S),
11 the mobile station shall also report the strength of each pilot in the Candidate
12 Frequency Search Set that measures above CF_T_ADD_S.
- 13 • If PERIODIC_SEARCH_S is equal to '0', the mobile station may stop maintaining the
14 average of the Serving Frequency received power that is used in the handoff and
15 search procedures.
- 16 • If PERIODIC_SEARCH_S is equal to '1' and the Candidate Frequency Search Set is
17 not empty, the mobile station shall do the following:
 - 18 – If the mobile station uses received power measurements in the search
19 procedure, it should start monitoring the received power on the Target
20 Frequency and should maintain an average of the received power over the last
21 N_{12m} frames.
 - 22 – The mobile station shall carry out the periodic search procedures described in
23 2.6.6.2.8.3.2.

24 2.6.6.2.8.3 Search of Pilots on the CDMA Candidate Frequency

25 If SEARCH_MODE_S is equal to '0000', the mobile station shall do the following: If
26 PERIODIC_SEARCH_S is equal to '0', the mobile station shall search the Candidate
27 Frequency Search Set once, as described in 2.6.6.2.8.3.1; otherwise, the mobile station
28 shall search the Candidate Frequency Search Set periodically, as described in
29 2.6.6.2.8.3.2.

30 2.6.6.2.8.3.1 CDMA Candidate Frequency Single Search

31 The mobile station does a single search of the Candidate Frequency Search Set by
32 performing the following actions at the action time of the *Candidate Frequency Search*
33 *Control Message* or the *Candidate Frequency Search Request Message*.

- 34 • The mobile station shall measure the strength of all pilots in the Candidate
35 Frequency Search Set in one or more visits to the Candidate Frequency, as
36 described in 2.6.6.2.8.3.3.

- 1 • If $\text{ALIGN_TIMING_USED}_S$ is set to '1', the mobile station shall schedule visits to the
2 Candidate Frequency as follows:
 - 3 – The mobile station shall make the first visit to the Candidate Frequency at
4 $(0.00125 \times \text{SEARCH_OFFSET}_S)$ seconds after the action time of the *Candidate*
5 *Frequency Search Request Message* or the *Candidate Frequency Search Control*
6 *Message* that started the search.
 - 7 – If the mobile station makes multiple visits to the Candidate Frequency, the
8 mobile station shall schedule the second and each subsequent visit to occur
9 $(\text{SEARCH_TIME_RESOLUTION}_S \times \text{inter_visit_time})$ seconds after the previous
10 visit, where *inter_visit_time* is the value of the *INTER_VISIT_TIME* field of the
11 last *Candidate Frequency Search Response Message* sent by the mobile station.
- 12 • The mobile station shall complete the measurements and send a *Candidate*
13 *Frequency Search Report Message* within *freshness_interval* seconds after the action
14 time of the *Candidate Frequency Search Control Message*, or the *Candidate Frequency*
15 *Search Request Message*, where *freshness_interval* is determined as follows:
 - 16 – If the value of the *TOTAL_OFF_TIME_FWD* field or of the *TOTAL_OFF_TIME_REV*
17 field of the last *Candidate Frequency Search Response Message* sent by the mobile
18 station to the base station is greater than or equal to $\lceil (T_{70m} - T_{71m}) /$
19 $\text{SEARCH_TIME_RESOLUTION}_S \rceil$, then
20
$$\text{freshness_interval} = (\max(\text{fwd_time}, \text{rev_time}) + T_{71m}) \text{ seconds,}$$

21 where
22
$$\text{fwd_time} = \text{SEARCH_TIME_RESOLUTION}_S \times (\text{value of the}$$

23
$$\text{TOTAL_OFF_TIME_FWD field of the last } \textit{Candidate Frequency}$$

24
$$\textit{Search Response Message sent by the mobile station}),$$

25 and
26
$$\text{rev_time} = \text{SEARCH_TIME_RESOLUTION}_S \times (\text{value of the}$$

27
$$\text{TOTAL_OFF_TIME_REV field of the last } \textit{Candidate Frequency Search}$$

28
$$\textit{Response Message sent by the mobile station}).$$

29 – Otherwise,
30
$$\text{freshness_interval} = T_{70m} \text{ seconds.}$$

31 The mobile station shall set the fields of the *Candidate Frequency Search Report*
32 *Message* as follows:

- 33 – The mobile station shall report the two components of the Candidate Frequency
34 in the *CDMA_FREQ* and *BAND_CLASS* fields.
- 35 – The mobile station shall report the received power on the Candidate Frequency
36 and on the Serving Frequency in the *CF_TOTAL_RX_PWR* and
37 *SF_TOTAL_RX_PWR* fields, respectively.

- 1 – For each pilot in the Candidate Frequency Search Set that measures above
2 CF_T_ADD_S, the mobile station shall report its phase and strength in the fields
3 PILOT_PN_PHASE and PILOT_STRENGTH, respectively.
- 4 • The mobile station may stop maintaining the average of the Serving Frequency
5 received power that is used in the handoff and search procedures.

6 2.6.6.2.8.3.2 Candidate Frequency Periodic Search

7 When the mobile station performs a periodic search, it periodically searches the Candidate
8 Frequency Search Set and reports the results to the base station in the *Candidate*
9 *Frequency Search Report Message*, as described in this section. The mobile station may
10 measure all pilots in the Candidate Frequency Search Set in one visit to the Candidate
11 Frequency, or it may visit the Candidate Frequency several times in a search period, each
12 time measuring all or some of the pilots in the Candidate Frequency Search Set, as
13 described in 2.6.6.2.8.3.3.

14 If SF_TOTAL_EC_THRESH_S is not equal to '11111', while tuned to the Serving Frequency,
15 the mobile station shall measure the total received power spectral density, in
16 mW/1.23 MHz, on the Serving Frequency at least once every frame (0.02 second) and shall
17 maintain the average of the spectral density (*spec_density*) over the last N_{12m} frames.

18 (In the following, $(E_c/I_o)_{total}$ is the total E_c/I_o of the pilots in the Active Set, measured as
19 specified in 2.6.6.2.2, and *total_ec* is defined as $(10 \times \log_{10} ((E_c/I_o)_{total} \times spec_density))$.)

20 The mobile station shall maintain a periodic search timer as follows:

- 21 • When the mobile station starts a periodic search, it shall set the periodic search
22 timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S and
23 shall enable the timer. If ALIGN_TIMING_USED_S is set to '1', then the mobile
24 station shall begin the first search ($0.00125 \times SEARCH_OFFSET_S$) seconds after the
25 action time of the *Candidate Frequency Search Request Message* or the *Candidate*
26 *Frequency Search Control Message* that started the search; otherwise, the mobile
27 station shall begin the first search at the action time of the *Candidate Frequency*
28 *Search Request Message* or the *Candidate Frequency Search Control Message* that
29 started the search.
- 30 • When the periodic search timer expires, the mobile station shall reset the periodic
31 search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to
32 SEARCH_PERIOD_S and shall re-enable the timer.
- 33 • If ALIGN_TIMING_USED_S is set to '0', SF_TOTAL_EC_THRESH_S is not equal to
34 '11111' and SF_TOTAL_EC_IO_THRESH_S is equal to '11111', the mobile station shall
35 perform the following actions once per frame:
 - 36 – Disable the periodic search timer if *total_ec* is not less than
37 $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$.

- 1 – Reset the expiration time of the periodic search timer to the value in
2 Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S, and re-enable the
3 timer if the following conditions are true:
 - 4 + the periodic search timer is disabled, and
 - 5 + $total_ec$ is less than $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$.
- 6 • If ALIGN_TIMING_USED_S is set to '0', SF_TOTAL_EC_THRESH_S is equal to '11111'
7 and SF_TOTAL_EC_IO_THRESH_S is not equal to '11111', the mobile station shall
8 perform the following actions once per frame:
 - 9 – Disable the periodic search timer if $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not greater than
10 SF_TOTAL_EC_IO_THRESH_S.
 - 11 – Reset the expiration time of the periodic search timer to the value in
12 Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S, and re-enable the
13 timer if the following conditions are true:
 - 14 + the periodic search timer is disabled, and
 - 15 + $(-20 \times \log_{10} (E_c/I_o)_{total})$ is greater than SF_TOTAL_EC_IO_THRESH_S.
- 16 • If ALIGN_TIMING_USED_S is set to '0', SF_TOTAL_EC_THRESH_S is not equal to
17 '11111' and SF_TOTAL_EC_IO_THRESH_S is not equal to '11111', the mobile station
18 shall perform the following actions once per frame:
 - 19 – Disable the periodic search timer if the following conditions are true:
 - 20 + $total_ec$ is not less than $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$, and
 - 21 + $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not greater than SF_TOTAL_EC_IO_THRESH_S.
 - 22 – Reset the expiration time of the periodic search timer to the value in
23 Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S, and re-enable the
24 timer if the following conditions are true:
 - 25 + the periodic search timer is disabled, and
 - 26 + $total_ec$ is less than $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$, or $(-20 \times \log_{10}$
27 $(E_c/I_o)_{total})$ is greater than SF_TOTAL_EC_IO_THRESH_S.
- 28 • The mobile station shall maintain the periodic search timer independent of the
29 total E_c and the total E_c/I_o of the pilots in the Serving Frequency Active Set, if any
30 of the following conditions is true:
 - 31 – ALIGN_TIMING_USED_S is set to '1, or
 - 32 – SF_TOTAL_EC_THRESH_S is equal to '11111' and SF_TOTAL_EC_IO_THRESH_S is
33 equal to '11111'.

Table 2.6.6.2.8.3.2-1. Search Period Values

SEARCH_PERIOD_S	Search Period (seconds)	SEARCH_PERIOD_S	Search Period (seconds)
0	0.48	8	30
1	0.96	9	40
2	2	10	50
3	2.96	11	60
4	4	12	80
5	4.96	13	100
6	10	14	150
7	20	15	200

If the periodic search timer is enabled, the mobile station shall perform the following actions before the timer expires:

- The mobile station shall measure the strength of all pilots in the Candidate Frequency Search Set at least once in one or more visits to the Candidate Frequency, as described in 2.6.6.2.8.3.3.
- If ALIGN_TIMING_USED_S is set to '1', the mobile station shall schedule visits to the Candidate Frequency as follows:
 - The mobile station shall make the first visit to the Candidate Frequency when the search period begins, i.e., when the periodic search timer is reset.
 - If the mobile station makes multiple visits to the Candidate Frequency during a search period, it shall schedule the second and each subsequent visit within the same search period to occur ($\text{SEARCH_TIME_RESOLUTION}_S \times \text{inter_visit_time}$) seconds after the previous visit, where *inter_visit_time* is the value of the INTER_VISIT_TIME field of the last *Candidate Frequency Search Response Message* sent by the mobile station.
 - The mobile station shall abort a scheduled visit to the Candidate Frequency if at the scheduled time, one or both of the following conditions hold:
 - + SF_TOTAL_EC_THRESH_S is not equal to '11111' and *total_ec* is not less than $(-120 + 2 \times \text{SF_TOTAL_EC_THRESH}_S)$, or
 - + SF_TOTAL_EC_IO_THRESH_S is not equal to '11111' and $(-20 \times \log_{10} (E_c/I_o)_{\text{total}})$ is not greater than SF_TOTAL_EC_IO_THRESH_S.
 - If the mobile station aborts a scheduled visit during a search period, it may abort all remaining scheduled visits in that search period.

- The mobile station shall send a *Candidate Frequency Search Report Message* if $\text{MIN_TOTAL_PILOT_EC_IO}_S$ is equal to '00000' or if $(-20 \times \log_{10} (E_c/I_o)_{\text{total}})$ is not less than $\text{MIN_TOTAL_PILOT_EC_IO}_S$, where $(E_c/I_o)_{\text{total}}$ is the sum of E_c/I_o for all those pilots that measure above CF_T_ADD_S in the current search period.

The mobile station shall report the contents of the *Candidate Frequency Search Report Message* as follows:

- The mobile station shall report the two components of the Candidate Frequency in the CDMA_FREQ and BAND_CLASS fields.
- The mobile station shall report the received power on the Candidate Frequency and on the Serving Frequency in the CF_TOTAL_RX_PWR and SF_TOTAL_RX_PWR fields, respectively.
- For each pilot in the Candidate Frequency Search Set that measures above CF_T_ADD_S , the mobile station shall report its phase and strength in the fields PILOT_PN_PHASE and PILOT_STRENGTH , respectively.
- The mobile station shall ensure that the strength measurement for all pilots in the Candidate Frequency Search Set were obtained within *freshness_interval* before the *Candidate Frequency Search Report Message* is sent, where *freshness_interval* is determined as follows:
 - If the value of the $\text{TOTAL_OFF_TIME_FWD}$ field or of the $\text{TOTAL_OFF_TIME_REV}$ field of the last *Candidate Frequency Search Response Message* sent by the mobile station to the base station is greater than or equal to $\lceil (T_{70m} - T_{71m}) / \text{SEARCH_TIME_RESOLUTION}_S \rceil$, then

$$\text{freshness_interval} = (\max(\text{fwd_time}, \text{rev_time}) + T_{71m}) \text{ seconds,}$$
 where

$$\text{fwd_time} = \text{SEARCH_TIME_RESOLUTION}_S \times (\text{value of the } \text{TOTAL_OFF_TIME_FWD} \text{ field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}),$$
 and

$$\text{rev_time} = \text{SEARCH_TIME_RESOLUTION}_S \times (\text{value of the } \text{TOTAL_OFF_TIME_REV} \text{ field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}).$$
 - Otherwise,

$$\text{freshness_interval} = T_{70m} \text{ seconds.}$$

2.6.6.2.8.3.3 Candidate Frequency Pilot Measurements

The mobile station measures the strength of all pilots in the Candidate Frequency Search Set in one or more visits to the Candidate Frequency. The mobile station shall perform

the following actions each time it visits the Candidate Frequency to measure pilot strengths:

- If the mobile station is processing the Forward Fundamental Channel, the mobile station shall stop processing the Forward Fundamental Code Channel. If the mobile station is transmitting on the Reverse Fundamental Channel, the mobile station shall stop transmitting on the Reverse Fundamental Channel.
- If the mobile station is processing the Forward Dedicated Control Channel, the mobile station shall stop processing the Forward Dedicated Control Channel. If the mobile station is transmitting on the Reverse Dedicated Control Channel, the mobile station shall stop transmitting on the Reverse Dedicated Control Channel.
- The mobile station shall stop the Forward Supplemental Code Channels and Forward Supplemental Channels (if any). The mobile station shall stop transmitting on the Reverse Supplemental Code Channels and Reverse Supplemental Channels (if any).
- The mobile station shall disable the fade timer (see 2.6.4.1.8) and the handoff drop timers corresponding to its current Active Set and Candidate Set (see 2.6.6.2.3), and shall suspend incrementing TOT_FRAMES_S and BAD_FRAMES_S (see 2.6.4.1.1).
- The mobile station shall lock the accumulation of valid level changes in the closed loop mean output power and shall ignore received power control bits related to the period that the transmitter is disabled (see 2.1.2.3.1 of [2]).
- The mobile station shall set the following parameters:
 - CDMABAND_S = CF_CDMABAND_S
 - CDMACH_S = CF_CDMACH_S
 - T_ADD_S = CF_T_ADD_S

The mobile station shall tune to the Candidate Frequency.

- The mobile station shall not change its time reference (see 2.1.5 of [2]) until it resumes using the Serving Frequency Active Set, as described below.
- The mobile station shall measure the mean input power on the Candidate Frequency (*cand_freq_pwr*, in dBm / 1.23 MHz), and may use *cand_freq_pwr* along with the measurement of the mean input power on the Serving Frequency (*avg_serving_freq_pwr*, in dBm / 1.23 MHz) in the search procedure as follows:
 - If DIFF_RX_PWR_THRESH_S is not equal to '00000', and (*cand_freq_pwr* - *avg_serving_freq_pwr*) is less than (-30 + 2 × DIFF_RX_PWR_THRESH_S) dB, the mobile station may terminate the search for pilots in the current visit to the Candidate Frequency.

- 1 – If $\text{DIFF_RX_PWR_THRESH}_S$ is equal to '00000', the mobile station does not use
- 2 the power measurements in the search procedure, or ($\text{cand_freq_pwr} -$
- 3 $\text{avg_serving_freq_pwr}$) is not less than $(-30 + 2 \times \text{DIFF_RX_PWR_THRESH}_S)$ dB, the
- 4 mobile station shall measure E_C/I_0 for all or some of the pilots in its Candidate
- 5 Frequency Search Set, using the search procedures specified in 2.6.6.2.2.
- 6 • The mobile station shall restore the following parameters:
- 7 – Pilot detection threshold ($T_ADD_S = SF_T_ADD_S$)
- 8 – CDMA band class ($CDMABAND_S = SF_CDMABAND_S$)
- 9 – Frequency assignment ($CDMACH_S = SF_CDMACH_S$)
- 10 • The mobile station shall tune to the Serving Frequency and shall resume using the
- 11 Serving Frequency Active Set as follows:
- 12 – If the mobile station was processing the Forward Fundamental Channel prior to
- 13 tuning to the Candidate Frequency, the mobile station shall resume processing
- 14 the Forward Fundamental Channel. If the mobile station was transmitting on
- 15 the Reverse Fundamental Channel prior to tuning to the Candidate Frequency,
- 16 the mobile station shall resume transmitting on the Reverse Fundamental
- 17 Channel.
- 18 – If the mobile station was processing the Forward Dedicated Control Channel
- 19 prior to tuning to the Candidate Frequency, the mobile station shall resume
- 20 processing the Forward Dedicated Control Channel. If the mobile station was
- 21 transmitting on the Reverse Dedicated Control Channel prior to tuning to the
- 22 Candidate Frequency, the mobile station shall resume transmitting on the
- 23 Reverse Dedicated Control Channel.
- 24 – If the Forward Supplemental Code Channels and Forward Supplemental
- 25 Channels assignment has not expired, the mobile station shall resume
- 26 processing the Forward Supplemental Code Channels and Forward
- 27 Supplemental Channels (if any). If the Reverse Supplemental Code Channel
- 28 and Reverse Supplemental Channels assignment has not expired, the mobile
- 29 station may resume transmitting on the Reverse Supplemental Code Channels
- 30 and Reverse Supplemental Channels (if any).
- 31 – When the mobile station resumes transmission on the Reverse Traffic
- 32 Channel, it shall use the following rules to re-enable its transmitter:
- 33 + If the interval between the time that the mobile station disables its
- 34 transmitter and the time that it resumes using the Serving Frequency
- 35 Active Set is equal to or greater than $(N_{2m} \times 20)$ ms, then the mobile station
- 36 shall wait to receive a period of $(N_{3m} \times 20)$ ms with sufficient signal quality
- 37 (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$
- 38 before it re-enables its transmitter.

- + Otherwise, the mobile station shall re-enable its transmitter no later than $N_{3m} \times 20$ ms after the mobile station tunes to the Serving Frequency. The mobile station should re-enable its transmitter earlier. After the mobile station re-enables its transmitter, the mean output power shall be as specified in 2.1.2.4.1 for a step change in input power. If the mobile station re-enables its transmitter earlier than $N_{3m} \times 20$ ms after it tunes to the Serving Frequency, the initial mean output power shall be as specified in 2.1.2.3.1 of [2], where the initial mean input power estimate is either:
 - o within 6 dB of the actual mean input power, or
 - o equal to the mean input power before the mobile station tuned to the Target Frequency.
- The mobile station shall enable the fade timer and the handoff drop timers corresponding to the pilots in its Active Set and Candidate Set. The mobile station shall resume incrementing TOT_FRAMES_S and BAD_FRAMES_S as specified in 2.6.4.1.8.

2.6.6.2.8.3.4 Aborting CDMA Candidate Frequency Periodic Search

When the mobile station aborts a periodic search, it shall do the following:

- The mobile station shall cancel any remaining visits to the Candidate Frequency in the current search period, and shall not send a *Candidate Frequency Search Report Message* for the current search period.
- The mobile station shall disable the periodic search timer.
- The mobile station may stop maintaining the average of the Serving Frequency received power that is used in the handoff and search procedures.

2.6.6.2.9 CDMA-to-Analog Handoff

The base station directs the mobile station to perform a CDMA-to-Analog handoff by sending an *Analog Handoff Direction Message*. If the mobile station has narrow analog capability, the base station may direct the handoff to a narrow analog channel.

If the mobile station supports analog operation in the requested band class, the mobile station shall set DTX_S to '00' and store the following parameters from the *Analog Handoff Direction Message*.

- System identification (SID_S = SID_T)
- Voice mobile station attenuation code (VMAC_S = VMAC_T)
- Analog voice channel number (ANALOG_CHAN_S = ANALOG_CHAN_T)
- SAT color code (SCC_S = SCC_T)
- Message encryption mode indicator (MEM_S = MEM_T)
- Analog voice channel type (AN_CHAN_TYPE_S = AN_CHAN_TYPE_T)

- Digital supervisory audio color code ($DSCC_S = DSCC_MSB_r \times 4 + SCC_r$)

If the mobile station does not support analog operation in the requested band class, the mobile station shall discard the message and send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported by the mobile station).

At the action time specified by the *Analog Handoff Direction Message* (see 2.6.4.1.5), the mobile station shall disable its transmitter. The mobile station shall enable its transmitter on the wide analog voice channel or optional narrow analog voice channel within T_{63m} seconds after the action time.

2.6.6.2.10 Search of Analog Frequencies

If $SEARCH_MODE_S$ is equal to '0001', and the mobile station supports analog searching, the mobile station shall do the following: If $PERIODIC_SEARCH_S$ is equal to '0', the mobile station shall search the Candidate Analog Frequency Search Set once, as described in 2.6.6.2.10.1; otherwise, the mobile station shall search the Candidate Frequency Analog Search Set periodically, as described in 2.6.6.2.10.2.

2.6.6.2.10.1 Analog Frequencies Single Search

The mobile station does a single search of the Candidate Frequency Analog Search Set by performing the following actions at the action time of the *Candidate Frequency Search Control Message* or the *Candidate Frequency Search Request Message*:

- The mobile station shall measure the strength of all analog frequencies in the Candidate Frequency Analog Search Set in one or more visits away from the Serving Frequency, as described in 2.6.6.2.10.3.
- If $ALIGN_TIMING_USED_S$ is set to '1', the mobile station shall schedule visits to the Candidate Frequency as follows:
 - The mobile station shall make the first visit away from the Serving Frequency schedule at $(0.00125 \times SEARCH_OFFSET_S)$ seconds after the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that started the search.
 - If the mobile station makes multiple visits away from the Serving Frequency, the mobile station shall schedule the second and each subsequent visit to occur $(SEARCH_TIME_RESOLUTION_S \times inter_visit_time)$ seconds after the previous visit, where *inter_visit_time* is the value of the INTER_VISIT_TIME field of the last *Candidate Frequency Search Response Message* sent by the mobile station.
- The mobile station shall complete the measurements and send a *Candidate Frequency Search Report Message* within *freshness_interval* seconds after the action time of the *Candidate Frequency Search Control Message* or the *Candidate Frequency Search Request Message*, where *freshness_interval* is determined as follows:

- 1 – If the value of the TOTAL_OFF_TIME_FWD field or of the TOTAL_OFF_TIME_REV
2 field of the last *Candidate Frequency Search Response Message* sent by the mobile
3 station to the base station is greater than or equal to $\lceil (T_{70m} - T_{71m}) /$
4 $SEARCH_TIME_RESOLUTION_S \rceil$, then

5 $freshness_interval = (\max(fwd_time, rev_time) + T_{71m})$ seconds,

6 where

7 $fwd_time = SEARCH_TIME_RESOLUTION_S \times$ (value of the
8 TOTAL_OFF_TIME_FWD field of the last *Candidate Frequency*
9 *Search Response Message* sent by the mobile station),

10 and

11 $rev_time = SEARCH_TIME_RESOLUTION_S \times$ (value of the
12 TOTAL_OFF_TIME_REV field of the last *Candidate Frequency Search*
13 *Response Message* sent by the mobile station).

- 14 – Otherwise,

15 $freshness_interval = T_{70m}$ seconds.

- 16 • The mobile station may stop maintaining the average of the Serving Frequency
17 received power that is used in the handoff and search procedures.

18 2.6.6.2.10.2 Analog Frequencies Periodic Search

19 When the mobile station performs a periodic search, it periodically searches the Candidate
20 Frequency Analog Search Set, and reports the results to the base station in the *Candidate*
21 *Frequency Search Report Message*, as described in this section. The mobile station may
22 measure all analog frequencies in the Candidate Frequency Analog Search Set in one visit
23 away from the Serving Frequency, or it may make multiple visits in a search period, each
24 time measuring all or some of the analog frequencies in the Candidate Frequency Analog
25 Search Set, as described in 2.6.6.2.10.3.

26 If SF_TOTAL_EC_THRESH_S is not equal to '11111', while tuned to the Serving Frequency,
27 the mobile station shall measure the total received power spectral density, in
28 mW/1.23 MHz, on the Serving Frequency at least once every frame (0.02 second) and shall
29 maintain the average of the spectral density (*spec_density*) over the last N_{12m} frames.

30 (In the following, $(E_c/I_o)_{total}$ is the total E_c/I_o of the pilots in the Active Set, measured as
31 specified in 2.6.6.2.2, and *total_ec* is defined as $(10 \times \log_{10} ((E_c/I_o)_{total} \times spec_density))$.)

32 The mobile station shall maintain a periodic search timer as follows:

- 1 • When the mobile station starts a periodic search, it shall set the periodic search
2 timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S and
3 shall enable the timer. If $\text{ALIGN_TIMING_USED}_S$ is set to '1', then the mobile
4 station shall begin the first search ($0.00125 \times \text{SEARCH_OFFSET}_S$) seconds after the
5 action time of the *Candidate Frequency Search Request Message* or the *Candidate*
6 *Frequency Search Control Message* that started the search; otherwise, the mobile
7 station shall begin the first search at the action time of the *Candidate Frequency*
8 *Search Request Message* or the *Candidate Frequency Search Control Message* that
9 started the search.
- 10 • When the periodic search timer expires, the mobile station shall reset the periodic
11 search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to
12 SEARCH_PERIOD_S and shall re-enable the timer.
- 13 • If $\text{ALIGN_TIMING_USED}_S$ is set to '0', $\text{SF_TOTAL_EC_THRESH}_S$ is not equal to
14 '11111' and $\text{SF_TOTAL_EC_IO_THRESH}_S$ is equal to '11111', the mobile station shall
15 perform the following actions once per frame:
 - 16 – Disable the periodic search timer if total_ec is not less than
17 $(-120 + 2 \times \text{SF_TOTAL_EC_THRESH}_S)$.
 - 18 – Reset the expiration time of the periodic search timer to the value in
19 Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S , and re-enable the
20 timer if the following conditions are true:
 - 21 + the periodic search timer is disabled, and
 - 22 + total_ec is less than $(-120 + 2 \times \text{SF_TOTAL_EC_THRESH}_S)$.
- 23 • If $\text{ALIGN_TIMING_USED}_S$ is set to '0', $\text{SF_TOTAL_EC_THRESH}_S$ is equal to '11111'
24 and $\text{SF_TOTAL_EC_IO_THRESH}_S$ is not equal to '11111', the mobile station shall
25 perform the following actions once per frame:
 - 26 – Disable the periodic search timer if $(-20 \times \log_{10} (E_c/I_o)_{\text{total}})$ is not greater than
27 $\text{SF_TOTAL_EC_IO_THRESH}_S$.
 - 28 – Reset the expiration time of the periodic search timer to the value in
29 Table 2.6.6.2.8.3.2-1 corresponding to SEARCH_PERIOD_S , and re-enable the
30 timer if the following conditions are true:
 - 31 + the periodic search timer is disabled, and
 - 32 + $(-20 \times \log_{10} (E_c/I_o)_{\text{total}})$ is greater than $\text{SF_TOTAL_EC_IO_THRESH}_S$.
- 33 • If $\text{ALIGN_TIMING_USED}_S$ is set to '0', $\text{SF_TOTAL_EC_THRESH}_S$ is not equal to
34 '11111' and $\text{SF_TOTAL_EC_IO_THRESH}_S$ is not equal to '11111', the mobile station
35 shall perform the following actions once per frame:
 - 36 – Disable the periodic search timer if the following conditions are true:

- 1 + $total_ec$ is not less than $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$, and
- 2 + $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not greater than $SF_TOTAL_EC_IO_THRESH_S$.
- 3 - Reset the expiration time of the periodic search timer to the value in
- 4 Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH_PERIOD_S$, and re-enable the
- 5 timer if the following conditions are true:
 - 6 + the periodic search timer is disabled, and
 - 7 + $total_ec$ is less than $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$, or
 - 8 $(-20 \times \log_{10} (E_c/I_o)_{total})$ is greater than $SF_TOTAL_EC_IO_THRESH_S$.
- 9 • The mobile station shall maintain the periodic search timer independent of the
- 10 total E_c and the total E_c/I_o of the pilots in the Serving Frequency Active Set, if any
- 11 of the following conditions is true:
 - 12 - $ALIGN_TIMING_USED_S$ is set to '1', or
 - 13 - $SF_TOTAL_EC_THRESH_S$ is equal to '11111' and $SF_TOTAL_EC_IO_THRESH_S$ is
 - 14 equal to '11111'.
- 15 If the periodic search timer is enabled, the mobile station shall perform the following
- 16 actions before the timer expires:
 - 17 • The mobile station shall measure the strength of all analog frequencies in the
 - 18 Candidate Frequency Analog Search Set at least once in one or more visits away
 - 19 from the Serving Frequency, as described in 2.6.6.2.10.3.
 - 20 • If $ALIGN_TIMING_USED_S$ is set to '1', the mobile station shall schedule visits away
 - 21 from the Serving Frequency as follows:
 - 22 - The mobile station shall make the first visit away from the Serving Frequency
 - 23 when the search period begins, i.e., when the periodic search timer is reset.
 - 24 - If the mobile station makes multiple visits away from the Serving Frequency
 - 25 during a search period, it shall schedule the second and each subsequent visit
 - 26 within the same search period to occur $(SEARCH_TIME_RESOLUTION_S \times$
 - 27 $inter_visit_time)$ seconds after the previous visit, where $inter_visit_time$ is the
 - 28 value of the $INTER_VISIT_TIME$ field of the last *Candidate Frequency Search*
 - 29 *Response Message* sent by the mobile station.
 - 30 - The mobile station shall abort a scheduled visit away from the Serving
 - 31 Frequency if at the scheduled time, one or both of the following conditions hold:
 - 32 + $SF_TOTAL_EC_THRESH_S$ is not equal to '11111' and $total_ec$ is not less than
 - 33 $(-120 + 2 \times SF_TOTAL_EC_THRESH_S)$, or
 - 34 + $SF_TOTAL_EC_IO_THRESH_S$ is not equal to '11111' and $(-20 \times \log_{10}$
 - 35 $(E_c/I_o)_{total})$ is not greater than $SF_TOTAL_EC_IO_THRESH_S$.

- 1 – If the mobile station aborts a scheduled visit during a search period, it may
2 abort all remaining scheduled visits in that search period.
- 3 • The mobile station shall set the fields of the *Candidate Frequency Search Report*
4 *Message* as follows: The mobile station shall report the received power on the
5 Serving Frequency in the TOTAL_RX_PWR_SF field. For each frequency in the
6 Candidate Frequency Analog Search Set, the mobile station shall report its
7 frequency and strength in the fields ANALOG_FREQ and SIGNAL_STRENGTH,
8 respectively.
- 9 • The mobile station shall ensure that the strength measurements for all analog
10 frequencies in the Candidate Frequency Analog Search Set were obtained within
11 *freshness_interval* before the *Candidate Frequency Search Report Message* is sent,
12 where *freshness_interval* is determined as follows:
 - 13 – If the value of the TOTAL_OFF_TIME_FWD field or of the TOTAL_OFF_TIME_REV
14 field of the last *Candidate Frequency Search Response Message* sent by the mobile
15 station to the base station is greater than or equal to $\lceil (T_{70m} - T_{71m}) /$
16 $SEARCH_TIME_RESOLUTION_S \rceil$, then

$$freshness_interval = (\max(fwd_time, rev_time) + T_{71m}) \text{ seconds,}$$
 17
 18 where

$$fwd_time = SEARCH_TIME_RESOLUTION_S \times (\text{value of the}$$
 19
 20 TOTAL_OFF_TIME_FWD field of the last *Candidate Frequency*
 21 *Search Response Message* sent by the mobile station),

$$\text{and}$$
 22
 23
$$rev_time = SEARCH_TIME_RESOLUTION_S \times (\text{value of the}$$
 24 TOTAL_OFF_TIME_REV field of the last *Candidate Frequency*
 25 *Search Response Message* sent by the mobile station).
 - 26 – Otherwise,
27
$$freshness_interval = T_{70m} \text{ seconds.}$$

28 2.6.6.2.10.3 Analog Frequency Measurements

29 The mobile station measures the strength of all analog frequencies in the Candidate
30 Frequency Analog Search Set in one or more visits away from the Serving Frequency. The
31 mobile station shall perform the following actions during each visit away from the Serving
32 Frequency to measure analog frequency signal strengths:

- 33 • If the mobile station is processing the Forward Fundamental Channel, the mobile
34 station shall stop processing the Forward Fundamental Channel. If the mobile
35 station is transmitting on the Reverse Fundamental Channel, the mobile station
36 shall stop transmitting on Reverse Fundamental Channel.

- 1 • If the mobile station is processing the Forward Dedicated Control Channel, the
2 mobile station shall stop processing Forward Dedicated Control Channel. If the
3 mobile station is transmitting on the Reverse Dedicated Control Channel, the
4 mobile station shall stop transmitting on Reverse Dedicated Control Channel.
- 5 • The mobile station shall stop processing the Forward Supplemental Code Channels
6 and Forward Supplemental Channels (if any). The mobile station shall stop
7 transmitting on the Reverse Supplemental Code Channels and Reverse
8 Supplemental Channels (if any).
- 9 • The mobile station shall disable the fade timer (see 2.6.4.1.8) and the handoff drop
10 timers corresponding to its current Active Set and Candidate Set (see 2.6.6.2.3),
11 and shall suspend incrementing TOT_FRAMES_S and BAD_FRAMES_S (see 2.6.4.1.1).
- 12 • The mobile station shall lock the accumulation of valid level changes in the closed
13 loop mean output power and shall ignore received power control bits related to the
14 period that the transmitter is disabled (see [2]).
- 15 • The mobile station shall tune to one of the analog frequencies in the Candidate
16 Frequency Analog Search Set, and shall measure the mean input power on the
17 analog frequency.
- 18 • The mobile station may tune to other frequencies in the Candidate Frequency
19 Analog Search Set and make power measurements during this visit away from the
20 Serving Frequency.
- 21 • The mobile station shall not change its time reference (see 2.1.5 of [2]) until it
22 resumes using the Serving Frequency Active Set, as described below.
- 23 • The mobile station shall tune to the Serving Frequency and resume using the
24 Serving Frequency Active Set as follows:
 - 25 – If the mobile station was processing the Forward Fundamental Channel prior to
26 tuning to the Candidate Frequency, the mobile station shall resume processing
27 the Forward Fundamental Channel. If the mobile station was transmitting on
28 the Reverse Fundamental Channel prior to tuning to the Candidate Frequency,
29 the mobile station shall resume transmitting on the Reverse Fundamental
30 Channel.
 - 31 – If the mobile station was processing the Forward Dedicated Control Channel
32 prior to tuning to the Candidate Frequency, the mobile station shall resume
33 processing the Forward Dedicated Control Channel. If the mobile station was
34 transmitting on the Reverse Dedicated Control Channel prior to tuning to the
35 Candidate Frequency, the mobile station shall resume transmitting on the
36 Reverse Dedicated Control Channel.
 - 37 – If the Forward Supplemental Code Channels or Forward Supplemental Channels
38 assignment has not expired, the mobile station shall resume processing the
39 Forward Supplemental Code Channels or Forward Supplemental Channels
40 respectively (if any).

- 1 – If the Reverse Supplemental Code Channel or Reverse Supplemental Channels
2 assignment has not expired, the mobile station may resume transmitting on
3 the Reverse Supplemental Code Channels or Reverse Supplemental Channels
4 respectively (if any).
- 5 – When the mobile station resumes transmission on the Reverse Traffic
6 Channel, it shall use the following rules to re-enable its transmitter:
 - 7 + If the interval between the time that the mobile station disables its
8 transmitter and the time that it resumes using the Serving Frequency
9 Active Set is equal to or greater than $(N_{2m} \times 20)$ ms, then the mobile station
10 shall wait to receive a period of $(N_{3m} \times 20)$ ms with sufficient signal quality
11 (e.g. good frames) on the physical channel corresponding to $FPC_PRI_CHAN_S$
12 before it re-enables its transmitter.
 - 13 + Otherwise, the mobile station shall re-enable its transmitter no later than
14 $N_{3m} \times 20$ ms after the mobile station tunes to the Serving Frequency. The
15 mobile station should re-enable its transmitter earlier. After the mobile
16 station re-enables its transmitter, the mean output power shall be as
17 specified in 2.1.2.4.1 of [2] for a step change in input power. If the mobile
18 station re-enables its transmitter earlier than $N_{3m} \times 20$ ms after it tunes to
19 the Serving Frequency, the initial mean output power shall be as specified
20 in 2.1.2.3.1 of [2], where the initial mean input power estimate is either:
 - 21 o within 6 dB of the actual mean input power, or
 - 22 o equal to the mean input power before the mobile station tuned to
23 the Target Frequency.
- 24 • The mobile station shall enable the fade timer and the handoff drop timers
25 corresponding to the pilots in its Active Set and Candidate Set. The mobile station
26 shall resume incrementing TOT_FRAMES_S and BAD_FRAMES_S as specified in
27 2.6.4.1.1.

28 2.6.6.2.10.4 Aborting Analog Frequencies Periodic Search

29 When the mobile station aborts a periodic search, it shall do the following:

- 30 • The mobile station shall cancel any remaining visits away from the Serving
31 Frequency in the current search period and shall not send a *Candidate Frequency*
32 *Search Report Message* for the current search period.
- 33 • The mobile station shall disable the periodic search timer.
- 34 • The mobile station may stop maintaining the average of the Serving Frequency
35 received power that is used in the handoff and search procedures.

2.6.6.2.11 Processing of Reverse Supplemental Code Channels and Reverse Supplemental Channels

If $USE_T_ADD_ABORT_S$ is set to '1', and the strength of a Neighbor Set or Remaining Set pilot is found to be above T_ADD_S , then the mobile station shall terminate any active transmission on Reverse Supplemental Code Channels or Reverse Supplemental Channels at the end of the current 20 ms frame. The mobile station shall do the following:

- Any previously active Reverse Supplemental Code Channel or Reverse Supplemental Channel assignment shall be considered implicitly terminated.
- If active transmission on Reverse Supplemental Code Channels is terminated, the mobile station shall set $NUM_REV_CODES_S$ to '000' and shall set $IGNORE_SCAM_S$ to '1'.
- If active transmission on Reverse Supplemental Channels is terminated, the mobile station shall set $IGNORE_ESCAM_S$ to '1'.
- The mobile station shall set $SCRM_SEQ_NUM_S$ to $(SCRM_SEQ_NUM_S + 1) \bmod 16$.
- The mobile station shall transmit a *Supplemental Channel Request Message* with $USE_SCRM_SEQ_NUM$ set to '1', $SCRM_SEQ_NUM$ set to $SCRM_SEQ_NUM_S$, and $SIZE_OF_REQ_BLOB$ set to '0000'.

2.6.6.2.12 Periodic Serving Frequency Pilot Report Procedure

The mobile station shall continuously measure the total received power spectral density, in mW/1.23 MHz, on the Serving Frequency at least once every frame (0.02 seconds) and maintain the average value, *spec_density*, over the last N_{12m} frames. The mobile station shall maintain the PPSMM timer as follows:

- When the mobile station starts a Periodic Serving Frequency Pilot Report Procedure, it shall set the PPSMM timer to $PPSMM_PERIOD_S \times 0.08$ seconds and shall enable the timer.
- When the PPSMM timer expires, the mobile station shall send a *Periodic Pilot Strength Measurement Message* (2.6.6.2.5.2) to the base station, reset the PPSMM timer to $PPSMM_PERIOD_S \times 0.08$ seconds and shall re-enable the timer.
- When the mobile station receives an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message* directing the mobile station to perform a hard handoff (see 2.6.6.2.5.1), it shall abort the Periodic Serving Frequency Pilot Report Procedure and disable the PPSMM timer if it is enabled.
- If $MIN_PILOT_PWR_THRESH_S$ is not equal to '11111' and $MIN_PILOT_EC_IO_THRESH_S$ is equal to '11111', the mobile station shall perform the following actions once per frame:

- 1 – Disable the PPSMM timer if the received total energy per PN chip, E_c , of the
2 pilots in the Active Set is not less than $(-120 + 2 \times \text{MIN_PILOT_PWR_THRESH}_S)$,
3 where the value of E_c is computed as $10 \times \log_{10}(\text{PS} \times \text{spec_density})$ and PS is the
4 total E_c/I_0 of the pilots in the Active Set measured as specified in 2.6.6.2.2.
- 5 – Reset the expiration time of the PPSMM timer to $\text{PPSMM_PERIOD}_S \times 0.08$
6 seconds and re-enable the timer if the following conditions are true:
 - 7 o the PPSMM timer is disabled, and
 - 8 o the received total energy per PN chip, E_c , of the pilots in the Active Set is
9 less than $(-120 + 2 \times \text{MIN_PILOT_PWR_THRESH}_S)$.
- 10 • If $\text{MIN_PILOT_PWR_THRESH}_S$ is equal to '11111' and $\text{MIN_PILOT_EC_IO_THRESH}_S$ is
11 not equal to '11111', the mobile station shall perform the following actions once per
12 frame:
 - 13 – Disable the PPSMM timer if the total pilot strength of the pilots in the Active
14 Set, PS, satisfies the condition that $(-20 \times \log_{10}(\text{PS}))$ is not greater than
15 $\text{MIN_PILOT_EC_IO_THRESH}_S$.
 - 16 – Reset the expiration time of the PPSMM timer to $\text{PPSMM_PERIOD}_S \times 0.08$
17 seconds and re-enable the timer if the following conditions are true:
 - 18 o the PPSMM timer is disabled, and
 - 19 o the total pilot strength of the pilots in the Active Set, PS, satisfies the
20 condition that $(-20 \times \log_{10}(\text{PS}))$ is greater than $\text{MIN_PILOT_EC_IO_THRESH}_S$.
- 21 • If $\text{MIN_PILOT_PWR_THRESH}_S$ is not equal to '11111' and
22 $\text{MIN_PILOT_EC_IO_THRESH}_S$ is not equal to '11111', the mobile station shall
23 perform the following actions once per frame:
 - 24 – Disable the PPSMM timer if the following conditions are true:
 - 25 o the received total energy per PN chip, E_c , of the pilots in the Active Set is
26 not less than $(-120 + 2 \times \text{MIN_PILOT_PWR_THRESH}_S)$, and
 - 27 o the total pilot strength of the pilots in the Active Set, PS, satisfies the
28 condition that $(-20 \times \log_{10}(\text{PS}))$ is not greater than
29 $\text{MIN_PILOT_EC_IO_THRESH}_S$.
 - 30 – Reset the expiration time of the PPSMM timer to $\text{PPSMM_PERIOD}_S \times 0.08$
31 seconds and re-enable the timer if the following conditions are true:
 - 32 o the PPSMM timer is disabled, and

- o the received total energy per PN chip, E_c , of the pilots in the Active Set is less than $(-120 + 2 \times \text{MIN_PILOT_PWR_THRESH}_S)$, or the total pilot strength of the pilots in the Active Set, PS , satisfies the condition that $(-20 \times \log_{10}(PS))$ is greater than $\text{MIN_PILOT_EC_IO_THRESH}_S$.
- If $\text{MIN_PILOT_PWR_THRESH}_S$ is equal to '11111' and $\text{MIN_PILOT_EC_IO_THRESH}_S$ is equal to '11111', the mobile station shall maintain the PPSMM timer independent of the received power and the total E_c/I_0 of the pilots.

2.6.6.3 Examples

The following examples illustrate typical message exchanges between the mobile station and the base station during handoff. Refer to Annex B for examples of call processing during handoff.

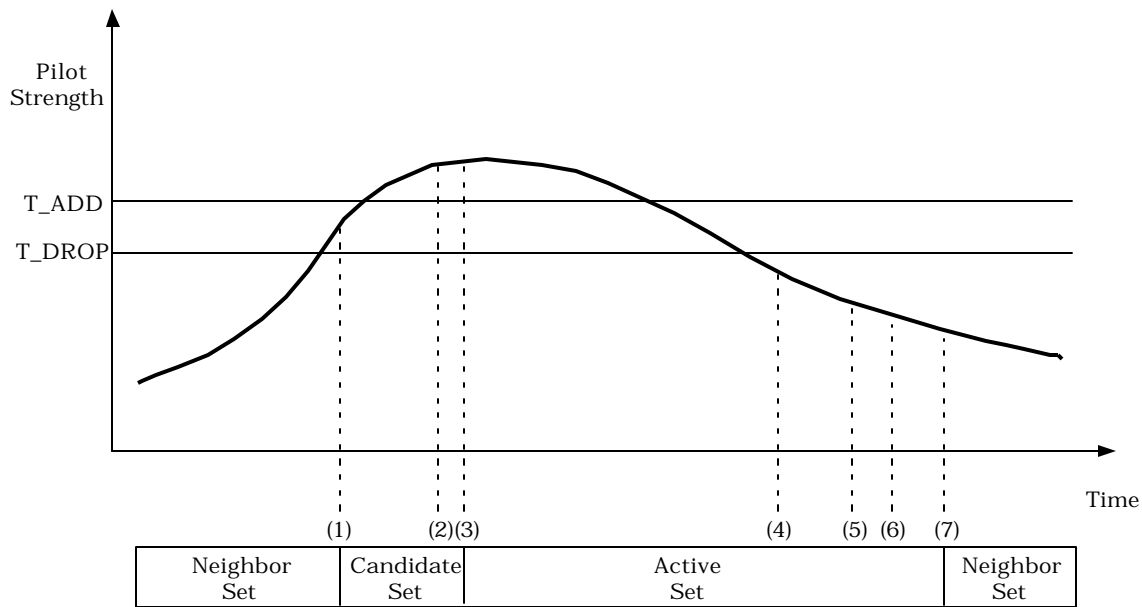
Figure 2.6.6.3-1 shows an example of the messages exchanged between the mobile station and the base station during a typical handoff process if $P_REV_IN_USE_S$ is less than or equal to three or SOFT_SLOPE_S is equal to '000000'.

Figure 2.6.6.3-2 shows an example of the messages exchanged between the mobile station and the base station during a typical handoff process if $P_REV_IN_USE_S$ is greater than three and SOFT_SLOPE_S is not equal to '000000'.

Figure 2.6.6.3-3 illustrates the messaging triggered by a pilot of the Candidate Set as its strength gradually rises above the strength of each pilot of the Active Set if $P_REV_IN_USE_S$ is less than or equal to three, or SOFT_SLOPE_S is equal to '000000'. Note that the mobile station reports that a Candidate Set pilot is stronger than an Active Set pilot only if the difference between their respective strengths is at least $T_COMP \times 0.5$ dB.

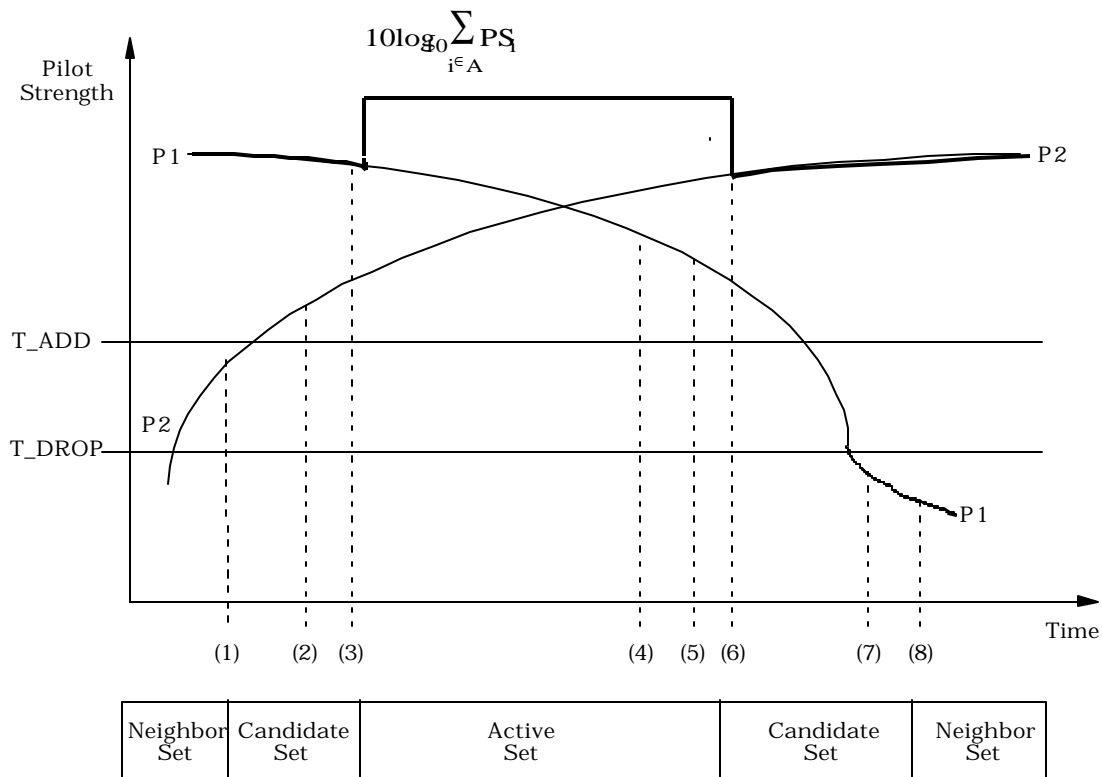
Figure 2.6.6.3-4 illustrates the messaging triggered by a pilot of the Candidate Set as its strength gradually rises above the strength of each pilot of the Active Set if $P_REV_IN_USE_S$ is greater than three and SOFT_SLOPE_S is not equal to '000000'. Note that the mobile station reports that a Candidate Set pilot is stronger than an Active Set pilot only if the difference between their respective strengths is at least $T_COMP \times 0.5$ dB and Pilot P_0 strength exceeds $[(\text{SOFT_SLOPE}/8) \times 10 \times \log_{10}(PS_1 + PS_2) + \text{ADD_INTERCEPT}/2]$.

29



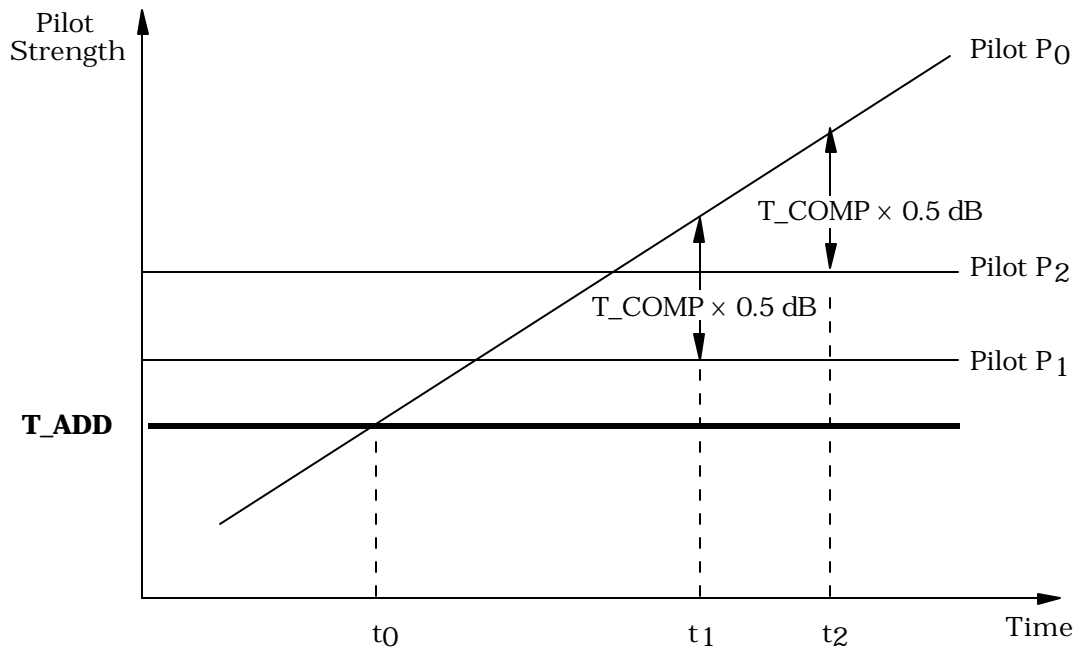
- (1) Pilot strength exceeds T_ADD . Mobile station sends a *Pilot Strength Measurement Message* and transfers pilot to the Candidate Set.
- (2) Base station sends an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message*.
- (3) Mobile station transfers pilot to the Active Set and sends a *Handoff Completion Message*.
- (4) Pilot strength drops below T_DROP . Mobile station starts the handoff drop timer.
- (5) Handoff drop timer expires. Mobile station sends a *Pilot Strength Measurement Message*.
- (6) Base station sends an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message*.
- (7) Mobile station moves pilot from the Active Set to the Neighbor Set and sends a *Handoff Completion Message*.

Figure 2.6.6.3-1. Handoff Threshold Example if $P_REV_IN_USE_s$ is Less Than or Equal to Three, or $SOFT_SLOPE_s$ is Equal to '000000'



- (1) Pilot P₂ strength exceeds T_ADD. Mobile station transfers the pilot to the Candidate Set.
- (2) Pilot P₂ strength exceeds $[(\text{SOFT_SLOPE}/8) \times 10 \times \log_{10}(\text{PS}_1) + \text{ADD_INTERCEPT}/2]$. Mobile station sends a *Pilot Strength Measurement Message*.
- (3) Mobile station receives an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message*, transfers the pilot P₂ to the Active Set, and sends a *Handoff Completion Message*.
- (4) Pilot P₁ strength drops below $[(\text{SOFT_SLOPE}/8) \times 10 \times \log_{10}(\text{PS}_2) + \text{DROP_INTERCEPT}/2]$. Mobile station starts the handoff drop timer.
- (5) Handoff drop timer expires. Mobile station sends a *Pilot Strength Measurement Message*.
- (6) Mobile station receives an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message*, transfers the pilot P₁ to the Candidate Set and sends a *Handoff Completion Message*.
- (7) Pilot P₁ strength drops below T_DROP. Mobile station starts the handoff drop timer.
- (8) Handoff drop timer expires. Mobile station moves the pilot P₁ from the Candidate Set to the Neighbor Set.

Figure 2.6.6.3-2. Handoff Threshold Example if P_REV_IN_USE_s is Greater Than Three, and SOFT_SLOPE_s is Not Equal to '000000'



Candidate Set: Pilot P_0

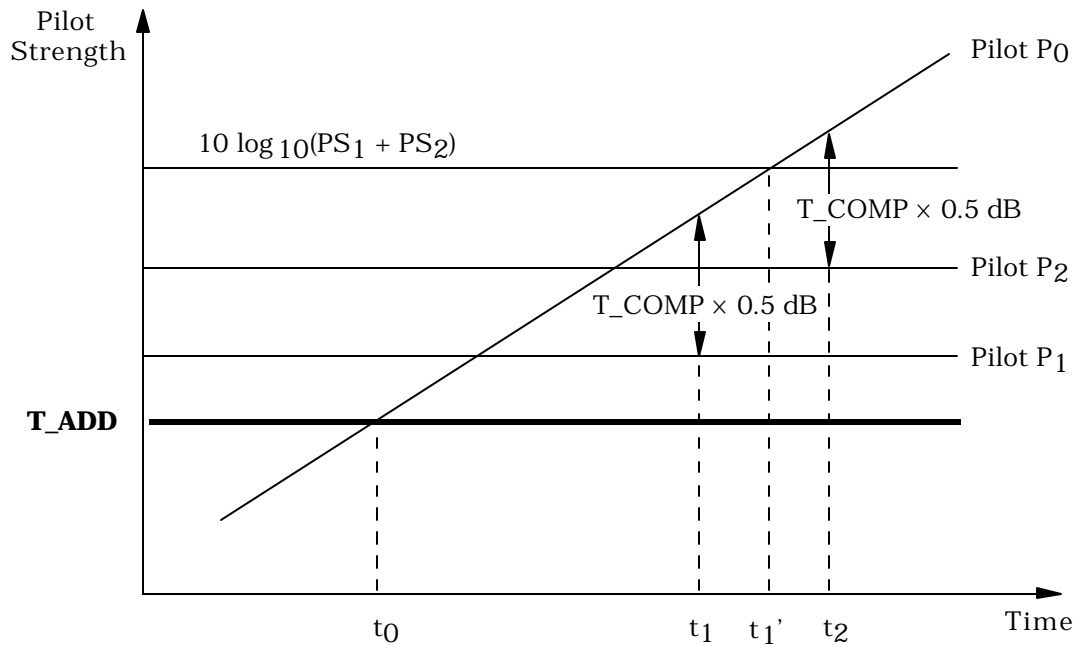
Active Set: Pilots P_1 , P_2

t_0 – Pilot Strength Measurement Message sent, $P_0 > T_ADD$

t_1 – Pilot Strength Measurement Message sent, $P_0 > P_1 + T_COMP \times 0.5 \text{ dB}$

t_2 – Pilot Strength Measurement Message sent, $P_0 > P_2 + T_COMP \times 0.5 \text{ dB}$

Figure 2.6.6.3-3. Pilot Strength Measurements Triggered by a Candidate Pilot if $P_REV_IN_USE_s = 3$ or $SOFT_SLOPE_s = '000000'$



Candidate Set: Pilot P_0

Active Set: Pilots P_1 , P_2

t_0 – Pilot Strength Measurement Message not sent because

$$[10 \times \log_{10}(PS_0)] < [(SOFT_SLOPE/8) \times 10 \times \log_{10}(PS_1 + PS_2) + ADD_INTERCEPT/2]$$

t_1 – Pilot Strength Measurement Message not sent because

$$P_0 > [P_1 + T_COMP \times 0.5 \text{ dB}] \text{ but}$$

$$[10 \times \log_{10}(PS_0)] < [(SOFT_SLOPE/8) \times 10 \times \log_{10}(PS_1 + PS_2) + ADD_INTERCEPT/2]$$

t_1' – Pilot Strength Measurement Message sent because

$$[10 \times \log_{10}(PS_0)] > [(SOFT_SLOPE/8) \times 10 \times \log_{10}(PS_1 + PS_2) + ADD_INTERCEPT/2]$$

t_2 – Pilot Strength Measurement Message sent because

$$P_0 > [P_2 + T_COMP \times 0.5 \text{ dB}] \text{ and}$$

$$[10 \times \log_{10}(PS_0)] > [(SOFT_SLOPE/8) \times 10 \times \log_{10}(PS_1 + PS_2) + ADD_INTERCEPT/2]$$

Figure 2.6.6.3-4. Pilot Strength Measurements Triggered by a Candidate Pilot if $P_REV_IN_USE_s > 3$ and $SOFT_SLOPE_s$ is Not Equal to '000000'

2.6.7 Hash Functions and Randomization

2.6.7.1 Hash Function

Certain procedures require a uniform distribution of mobile stations among N resources. The following function returns an integer, using as arguments the mobile station's IMSI, the number of resources N, and a modifier DECORR. The modifier serves to decorrelate the values obtained for the various applications from the same mobile station.

HASH_KEY shall be equal to the 32 least significant bits of $(\text{IMSI_O_S1} + 2^{24} \times \text{IMSI_O_S2})$.

Define:

- Word L to be bits 0-15 of HASH_KEY
- Word H to be bits 16-31 of HASH_KEY

where bit 0 is the least significant bit of HASH_KEY.

For determining CDMA Channel Number, Paging Channel Number, Forward Common Control Channel Number, Quick Paging Channel Number, and Paging Slot Number, the hash value is computed as follows:²⁰

$$R = \lfloor N \times ((40503 \times (L \oplus H \oplus \text{DECORR})) \bmod 2^{16}) / 2^{16} \rfloor$$

For determining a mobile station's assigned paging indicator bit positions, the hash value is computed as follows:

$$R_1 = \lfloor N \times ((40503 \times (L \oplus H \oplus \text{DECORR}_1)) \bmod 2^{16}) / 2^{16} \rfloor$$

and

$$R_2 = \lfloor (1 - \lfloor (2 \times R_1) / (N+4) \rfloor) \times (N+4) / 2 + \lfloor (2 \times R_1) / (N+4) \rfloor \times ((N+4) / 2 - 4) \times ((40503 \times (L \oplus H \oplus \text{DECORR}_2)) \bmod 2^{16}) / 2^{16} \rfloor + N + 4 + \lfloor (2 \times R_1) / (N+4) \rfloor \times ((N+4) / 2) \text{ for Quick Paging Channel data rate of 4800 bps, or}$$

$$R_2 = \lfloor (1 - \lfloor (2 \times R_1) / (N+8) \rfloor) \times (N+8) / 2 + \lfloor (2 \times R_1) / (N+8) \rfloor \times ((N+8) / 2 - 8) \times ((40503 \times (L \oplus H \oplus \text{DECORR}_2)) \bmod 2^{16}) / 2^{16} \rfloor + N + 8 + \lfloor (2 \times R_1) / (N+8) \rfloor \times ((N+8) / 2) \text{ for Quick Paging Channel data rate of 9600 bps.}$$

The mobile station shall choose the range N and the modifiers DECORR, DECORR₁, and DECORR₂ according to the application as shown in Table 2.6.7.1-1. In the table, HASH_KEY [0...11] denotes the 12 least significant bits of HASH_KEY.

²⁰ This formula is adapted from Knuth, Donald N., *The Art of Computer Programming*, 2 volumes, (Reading, MA, Addison-Wesley, 1998).

Table 2.6.7.1-1. Hash Function Modifier

Application	N	DECORR	Return Value
CDMA Channel Number	Number of channels in last <i>CDMA Channel List Message</i> or the number of qualified channels in the last <i>Extended Channel List Message</i>	0	R + 1
Paging Channel Number	PAGE_CHAN _S from <i>System Parameters Message</i> (up to 7)	2 × HASH_KEY [0...11]	R + 1
Quick Paging Channel Number	NUM_QPCH _S from <i>Extended System Parameters Message</i> or <i>MC-RR Parameters Message</i> (up to 3)	2 × HASH_KEY [0...11]	R + 1
Paging Slot Number	2048	6 × HASH_KEY[0...11]	R
Paging Indicator Positions	376 (for 9600 bps), 188 (for 4800 bps)	DECORR ₁ = $\lfloor t / 64 \rfloor \bmod 2^{16}$, DECORR ₂ = $\lfloor t / 64 + 1 \rfloor \bmod 2^{16}$, where t is the System Time in frames.	R ₁ and R ₂
Forward Common Control Channel Number	NUM_FCCCH _S from <i>MC-RR Parameters Message</i> (up to 7)	2 × HASH_KEY [0...11]	R + 1

2.6.7.2 Pseudorandom Number Generator

Where pseudorandom numbers are needed, a linear congruential generator shall be used. The mobile station shall implement the linear congruential generator defined by:

$$z_n = a \times z_{n-1} \bmod m$$

where $a = 7^5 = 16807$ and $m = 2^{31} - 1 = 2147483647$. z_n is the output of the generator.²¹

²¹ This generator has full period, ranging over all integers from 1 to m-1; the values 0 and m are never produced. Several suitable implementations can be found in Park, Stephen K. and Miller,

(footnote continued on next page)

During the *Mobile Station Initialization State*, the mobile station shall seed its generator with

$$z_0 = (\text{ESN} \oplus \text{RANDOM_TIME}) \bmod m$$

where RANDOM_TIME shall be the least-significant 32-bits of SYS_TIME_s stored from the *Sync Channel Message*. If the initial value so produced is found to be zero, it shall be replaced with one. The mobile station shall compute a new z_n for each subsequent use.

The mobile station shall use the value $u_n = z_n / m$ for those applications that require a binary fraction u_n , $0 < u_n < 1$.

The mobile station shall use the value $k_n = \lfloor N \times z_n / m \rfloor$ for those applications that require a small integer k_n , $0 \leq k_n \leq N - 1$.

2.6.8 CODE_CHAN_LIST_s Maintenance

The CODE_CHAN_LIST_s is a descriptive structure used to manage the Forward Fundamental Code Channel and Forward Supplemental Code Channels, if any, associated with the mobile station's Active Set. Associated with each member of the mobile station's Active Set, there is an ordered array of code channels. The first entry of the ordered array specifies the Forward Fundamental Code Channel associated with the pilot and the subsequent entries, if any, specify the Forward Supplemental Code Channels associated with the pilot. The CODE_CHAN_LIST_s is the collection of ordered arrays of code channels for each member of the mobile station's Active Set. The i^{th} entry in every array (of code channels associated with a member of the Active Set) corresponds to the i^{th} code channel.

The mobile station shall maintain the CODE_CHAN_LIST_s as follows:

- When the mobile station is first assigned a Forward Fundamental Code Channel, it shall initialize the CODE_CHAN_LIST_s to contain the Forward Fundamental Code Channel for each member of the Active Set.
- When the mobile station processes the *Extended Handoff Direction Message*, the mobile station shall update the CODE_CHAN_LIST_s as follows:
 - For each pilot listed in the *Extended Handoff Direction Message* which does not have a corresponding code channel in the CODE_CHAN_LIST_s, the mobile station shall add the code channel, CODE_CHAN, of that pilot to the CODE_CHAN_LIST_s, as the Forward Fundamental Code Channel for the pilot.

Keith W., "Random Number Generators: Good Ones are Hard to Find," *Communications of the ACM*, vol. 31, no. 10, October 1988, pp. 1192-1201.

- 1 – The mobile station shall delete all information in the CODE_CHAN_LIST_S
2 associated with a pilot that is not included in the *Extended Handoff Direction*
3 *Message*.
- 4 • When the mobile station processes the *General Handoff Direction Message*, the
5 mobile station shall update the CODE_CHAN_LIST_S to contain the Forward
6 Fundamental Code Channel associated with each pilot included in the *General*
7 *Handoff Direction Message*. The first code channel occurrence associated with each
8 pilot included in the *General Handoff Direction Message* corresponds to the Forward
9 Fundamental Code Channel. The mobile station shall do the following:
 - 10 – If FOR_SUP_CONFIG_R is included and FOR_SUP_CONFIG_R is equal to '10' or '11',
11 the mobile station shall perform the following actions:
 - 12 + For each pilot listed in the *General Handoff Direction Message*, the mobile
13 station shall set the Forward Supplemental Code Channels (associated with
14 the pilot) in the CODE_CHAN_LIST_S to the Forward Supplemental Code
15 Channels specified in the *General Handoff Direction Message*.
 - 16 + The mobile station shall delete all information in the CODE_CHAN_LIST_S
17 associated with a pilot that is not included in the *General Handoff Direction*
18 *Message*.
 - 19 – If FOR_SUP_CONFIG_R is equal to '00' or '01' or if FOR_SUP_CONFIG_R is not
20 included in the *General Handoff Direction Message*, the mobile station shall not
21 update Supplemental Code Channels associated with the pilots included in the
22 *General Handoff Direction Message*. The mobile station shall perform the
23 following actions:
 - 24 + For each pilot listed in the *General Handoff Direction Message* which does not
25 have a corresponding code channel in the CODE_CHAN_LIST_S, the mobile
26 station shall add the code channel, CODE_CHAN, of that pilot to the
27 CODE_CHAN_LIST_S, as the Forward Fundamental Code Channel for the
28 pilot.
 - 29 + The mobile station shall delete all information in the CODE_CHAN_LIST_S
30 associated with a pilot that is not included in the *General Handoff Direction*
31 *Message*.
- 32 • When the mobile station processes the *Supplemental Channel Assignment Message* it
33 shall follow the following rules:
 - 34 – If FOR_SUP_CONFIG_R is equal to '10' or '11', the mobile station shall update the
35 Forward Supplemental Code Channels for each pilot in the Active Set.
 - 36 – If the pilot is not listed in the *Supplemental Channel Assignment Message*, the
37 mobile station shall delete all occurrences of Forward Supplemental Code
38 Channels associated with the pilot from the Code Channel List.

- If a pilot is listed in the *Supplemental Channel Assignment Message*, then the mobile station shall set the Forward Supplemental Code Channels (associated with the pilot) in the CODE_CHAN_LIST_s to the Forward Supplemental Code Channels specified in the *Supplemental Channel Assignment Message*.
- If FOR_SUP_CONFIG_r is equal to '00' or '01', the mobile station shall not update Supplemental Code Channels associated with the pilots included in the *Supplemental Channel Assignment Message*.

2.6.9 CDMA Tiered Services

This section presents an overview and mobile station requirements for the support of CDMA Tiered services while the mobile station is in the *Mobile Station Idle State* and in the *Mobile Station Control on the Traffic Channel State*.

2.6.9.1 Overview

2.6.9.1.1 Definition

The mobile station may support Tiered Services based upon User Zones. Tiered Services provide the user custom services and special features based upon the mobile station location. Tiered Services also provides private network support. Important to the operation of CDMA Tiered Services is the concept of User Zones. It is via User Zones by which the base station offers custom services based upon the mobile station location.

User Zones are associated with a set of features and services, plus a geographic area in which the User Zone features/services are made available to the customers that have subscribed to that User Zone. The boundary of the User Zone Geographic area may be established based on the coverage area of a public or private base station or it may be established independent of RF topology.

User Zones may be supported by the public system on the same frequency as the serving base station, or they may be supported on a private system operating on a different frequency.

2.6.9.1.2 Types of User Zones

User Zones may be of two basic types:

- *Broadcast User Zones*: Broadcast User Zones are identified to the mobile station using the Paging Channel or the Broadcast Control Channel. In this case, the base station broadcasts on the Paging Channel or the Broadcast Control Channel messages identifying the User Zones that fall within the coverage area of the particular cell/sector. Mobile stations, as part of their monitoring of the Paging Channel or the Broadcast Control Channel, will identify the presence of a particular User Zone.
- *Mobile Specific User Zones*: Mobile Specific User Zones are not broadcast by the base station. The mobile station may use other overhead message parameters and compare them with internally stored User Zone parameters to identify the presence

of a particular User Zone. These parameters may include: SID, NID, BASE_ID, BASE_LAT, and BASE_LONG.

Broadcast User Zones allow for permanent as well as temporary subscription. Temporary subscription provides User Zone features and capabilities to users who are not subscribed to the User Zone. In this case, a mobile station, upon entering a new coverage area, may detect the presence of a User Zone that it presently does not subscribe to, but one that supports temporary subscription. The mobile station then queries the network to obtain the User Zone parameters. Once these parameters are received, the mobile station offers to the user via the mobile station user interface, the option of subscribing to the particular User Zone.

Some User Zones may require active registration (Active User Zones) upon the mobile station's entry to immediately trigger a change in a feature(s). For others, the implicit registration at call setup is sufficient (Passive User Zones). Active User Zones are used where inbound features change as a result of being in the User Zone. During the *Mobile Station Idle State*, a mobile stations needs to register to update the User Zone ID whenever the User Zone that the mobile station is entering and/or leaving is of the Active type.

A mobile station that supports User Zone services may store a list of User Zones, where each User Zone is identified by a User Zone ID (UZID). Associated with each stored User Zone, the mobile station may also store a number of determinant parameters used for identifying User Zones.

2.6.9.2 Requirements

If the mobile station supports User Zone services, it shall maintain and update UZID_S according the following rule:

If the mobile station selects a User Zone supported by the base station, the mobile station shall set UZID_S to the User Zone Identifier associated with the User Zone; otherwise, the mobile station shall set UZID_S to '0000000000000000'. The precise process for determining how to select a User Zone that is supported by the base station is left to the mobile station manufacturer.

If the mobile station does not support User Zone services, the mobile station shall set UZID_S to '0000000000000000'.

The mobile station may search pilots of private neighbor base stations on other frequencies and band classes as identified in the *Private Neighbor List Message*. Search performance criteria are defined [11].

2.6.9.2.1 User Zone Operation in the Mobile Station Idle State:

When a mobile station performs an idle handoff, it selects User Zones based on internally stored parameters and information broadcast on the Paging Channel or on the Broadcast Control Channel as described in 2.6.9.1.

After the mobile station performs idle handoff, if the mobile station determines that a change from one Broadcast User Zone to another Broadcast User Zone is required, the

mobile station shall not update UZID_S, UZ_EXIT_IN_USE_S and shall not perform User Zone registration until the pilot strength of the currently serving base station exceeds that of the base station corresponding to the old User Zone by the value of UZ_EXIT_IN_USE_S.

If the mobile station determines that it needs to change User Zone, and if the difference between the pilot strengths exceeds UZ_EXIT_IN_USE_S, then the mobile station shall do the following:

- Perform User Zone registration.
- Update UZID_S.
- Set UZ_EXIT_IN_USE_S to UZ_EXIT_RCVD_S.

The mobile station may also implement other means to avoid the premature exiting of a User Zone due to rapid changes in signal strength. The exact implementation of such techniques is left to mobile station implementation.

If the mobile station is in the *Mobile Station Idle State* and it receives a *User Zone Reject Message* the mobile station shall perform the following:

- Set REJECT_ACTION_INDI_S to REJECT_ACTION_INDI_R.
- If UZID_ASSIGN_INCL_R = '0', the mobile station shall set UZID_S to '0000000000000000', otherwise; the mobile station shall set UZID_S to ASSIGN_UZID_R.

If the mobile station is in the *Mobile Station Idle State* and it selects an active User Zone, then the mobile station shall perform User Zone registration (see 2.6.5.1.10) by entering the *System Access State* with a registration indication.

The mobile station should provide the user with a User Zone indication corresponding to the User Zone in service each time UZID_S is updated.

2.6.9.2.2 User Zone Operation in the Mobile Station Control on the Traffic Channel State

If the mobile station is in the *Traffic Channel Substate* of the *Mobile Station Control on the Traffic Channel State* and if it determines that the User Zone has changed, it shall update UZID_S and send a *User Zone Update Request Message* to the base station.

If the mobile station is in the *Traffic Channel Substate* or *Release Substate* of the *Mobile Station Control on the Traffic Channel State* and it receives a *User Zone Update Message*, then the mobile station shall update UZID_S and set it equal to UZID_R.

If the mobile station is in the *Traffic Channel Substate* or *Release Substate* of the *Mobile Station Control on the Traffic Channel State* and it receives a *User Zone Reject Message*, then the mobile station shall do the following:

- Set REJECT_ACTION_INDI_S to REJECT_ACTION_INDI_R.

- 1 • If $UZID_ASSIGN_INCL_R = 0$, the mobile station shall set $UZID_S$ to '0', otherwise; the
2 mobile station shall set $UZID_S$ to $ASSIGN_UZID_R$.

3 The mobile station should provide the user with a User Zone indication corresponding to
4 the User Zone in service each time $UZID_S$ is updated.

5 2.6.10 Call Control Processing

6 As illustrated in Figure 2.6.10-1, the Call Control consists of the following states:

- 7 • *Waiting for Order Substate* - In this substate, the Call Control instance waits for an
8 *Alert With Information Message* or an *Extended Alert With Information Message*.
- 9 • *Waiting for Mobile Station Answer Substate* - In this substate, the Call Control
10 instance waits for the user to answer the call.
- 11 • *Conversation Substate* - In this substate, the parties involved in this call
12 communicate.
- 13 • *Call Release Substate* - In this substate, the Call Control instance waits for the call
14 to be disconnected.

15

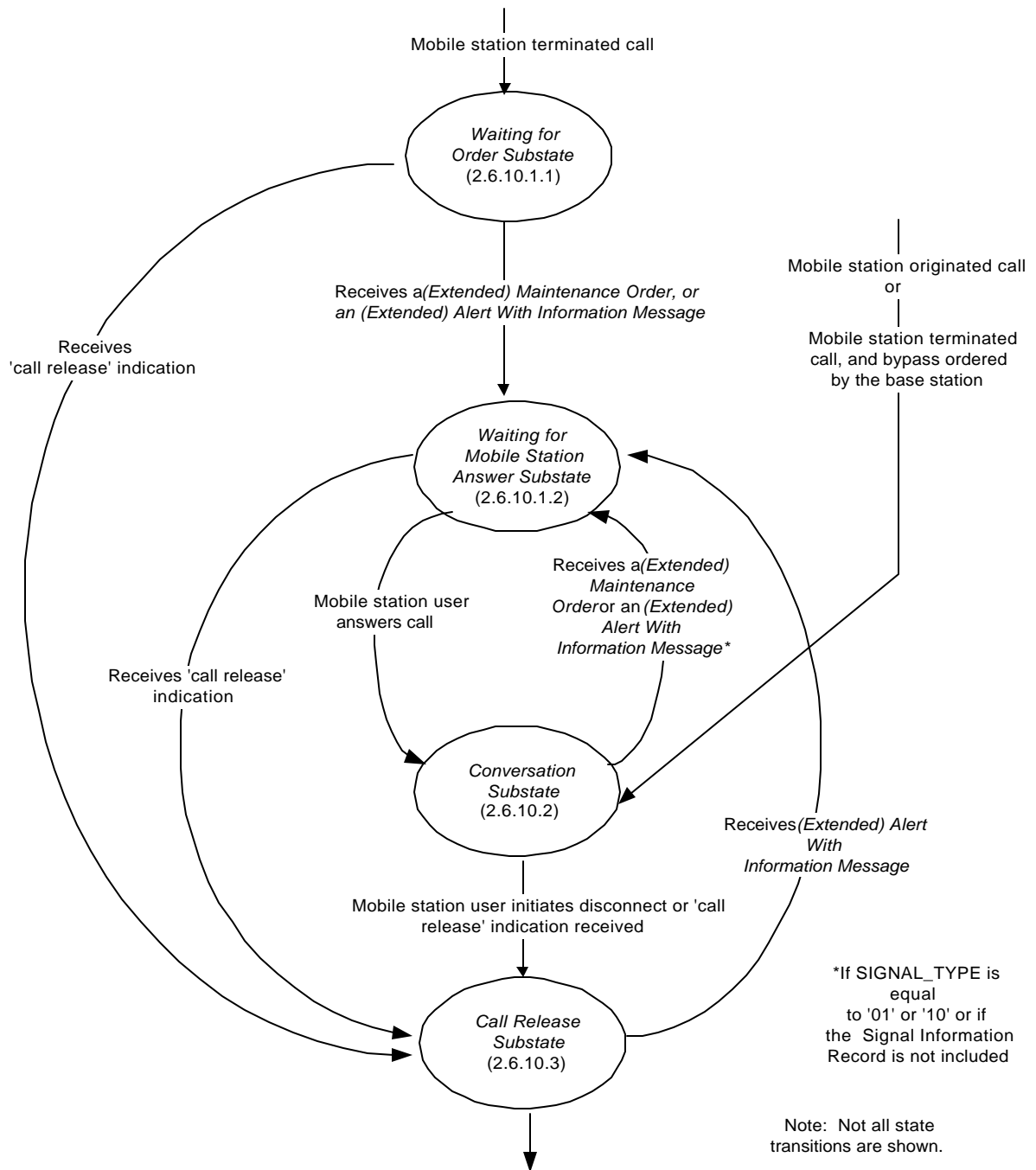


Figure 2.6.10-1. Call Control

The following messages are processed by the Call Control:

- *Alert With Information Message*
- *Extended Alert with Information Message:*
- *Flash With Information Message*
- *Extended Flash With Information Message*
- *Send Burst DTMF Message*
- *Origination Continuation Message*

The following orders are processed by the Call Control:

- *Continuous DTMF Tone Order*
- *Maintenance Order*
- *Connect Order*

Upon instantiation, the Call Control instance shall perform the following:

- If the call is mobile station terminated, and BYPASS_ALERT_ANSWER_s is '1', the Control shall enter the *Conversation Substate*. If the call is mobile station terminated and BYPASS_ALERT_ANSWER_s is '0', the Call Control instance shall enter the *Waiting for Order Substate*.
- If the call is mobile station originated, the Call Control instance shall enter the *Conversation Substate*.

2.6.10.1 Alerting

2.6.10.1.1 Waiting for Order Substate

In this substate, the Call Control instance waits for an *Alert With Information Message* or an *Extended Alert With Information Message*.

Upon entering the *Waiting for Order Substate*, the Call Control instance shall set the substate timer for T_{52m} seconds.

While in the *Waiting for Order Substate*, the Call Control instance shall perform the following:

- If the substate timer expires, the Call Control instance shall send a "substate timer expired indication" to the layer 3.

- 1 • If the Call Control instance receives a “reset waiting for order substate timer
2 indication” from the layer 3, the Call Control instance shall reset the substate
3 timer for T_{52m} seconds.

- 4 • If the Call Control instance receives a “release indication” from the layer 3, the
5 Call Control instance shall enter the *Call Release Substate*.

- 6 • If the Call Control instance determines that the user directs it to originate an
7 emergency call, the mobile station shall send a *Flash With Information Message* or
8 an *Extended Flash With Information Message* in assured mode with a Global
9 Emergency Call Information Record (see 2.7.4.30), as follows:
 - 10 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
11 *Information Message*.

 - 12 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
13 perform the following: if this Call Control instance is identified by NULL, the
14 mobile station shall send either a *Flash With Information Message* or an *Extended*
15 *Flash With Information Message* (with either the CON_REF_INCL field of the
16 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field
17 set to the connection reference of the service option connection corresponding
18 to this call); otherwise, the mobile station shall send an *Extended Flash With*
19 *Information Message*, with the CON_REF_INCL field of the message set to '1' and
20 the CON_REF field of the message set to the connection reference of the service
21 option connection corresponding to this call.

- 22 • If the Call Control instance receives a message from the layer 3 which is included
23 in the following list and every message field value is within its permissible range,
24 the Call Control instance shall process the message as described below and in
25 accordance with the message's action time (see 2.6.4.1.5).
 - 26 1. *Alert With Information Message*: If the message contains a Signal information
27 record, the mobile station should alert the user in accordance with the Signal
28 information record; otherwise, the mobile station should use standard alert as
29 defined in 3.7.5.5. The Call Control instance shall enter the *Waiting for Mobile*
30 *Station Answer Substate* (see 2.6.10.1.2).

 - 31 2. *Extended Alert with Information Message*: If the message contains a Signal
32 information record, the mobile station should alert the user in accordance with
33 the Signal information record; otherwise, the mobile station should use
34 standard alert as defined in 3.7.5.5. The Call Control instance shall enter the
35 *Waiting for Mobile Station Answer Substate* (see 2.6.10.1.2).

 - 36 3. *Maintenance Order*: The Call Control instance shall enter the *Waiting for Mobile*
37 *Station Answer Substate*.

2.6.10.1.2 Waiting for Mobile Station Answer Substate

In this substate, the Call Control instance waits for the user to answer the mobile station terminated call or to invoke special treatment.

Upon entering the *Waiting for Mobile Station Answer Substate*, the Call Control instance shall set the substate timer for T_{53m} seconds.

While in the *Waiting for Mobile Station Answer Substate*, the Call Control instance shall perform the following:

- If the substate timer expires, the Call Control instance shall send a “substate timer expired indication” to the layer 3.
- If the Call Control instance receives a “release indication” from the layer 3, the Call Control instance shall enter the *Call Release Substate*.
- If the Call Control instance is directed by the user to answer the call, the mobile station shall send a *Connect Order* in assured mode:
 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall perform the following: If this Call Control instance is identified by NULL, the mobile station shall either set the CON_REF_INCL field of the message to '0' or set the CON_REF_INCL field to '1' and set the CON_REF field to the connection reference of the service option connection corresponding to this call; otherwise, the mobile station shall set the CON_REF_INCL field of the message to '1' and the CON_REF field of the message to the connection reference of the service option connection corresponding to this call.

The Call Control instance shall enter the *Conversation Substate*.

- If the Call Control instance is directed by the user to forward the incoming call, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode with a *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-programmed feature code which indicates User Selective Call Forwarding with a pre-registered number, as follows:
 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With Information Message*.

1 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
 2 perform the following: if this Call Control instance is identified by NULL, the
 3 mobile station shall send either a *Flash With Information Message* or an *Extended*
 4 *Flash With Information Message* (with either the CON_REF_INCL field of the
 5 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field
 6 set to the connection reference of the service option connection corresponding
 7 to this call); otherwise, the mobile station shall send an *Extended Flash With*
 8 *Information Message*, with the CON_REF_INCL field of the message set to '1' and
 9 the CON_REF field of the message set to the connection reference of the service
 10 option connection corresponding to this call.

- 11 • If the Call Control instance is directed by user to forward the incoming call to a
 12 number stored in the mobile station, the mobile station shall send a *Flash With*
 13 *Information Message* or an *Extended Flash With Information Message* in assured mode
 14 with a Feature Indicator information record (see 2.7.4.1) with a *Keypad Facility*
 15 information record (see 2.7.4.2) with the CHARi field set to the following:
 - 16 - a pre-programmed feature code which indicates User Selective Call
 17 Forwarding to a number stored in the mobile station as the first digits in
 18 the field and
 - 19 - the forwarding to number immediately following the pre-programmed
 20 feature code.

21 The mobile station shall send the message as follows:

- 22 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
 23 *Information Message*.
- 24 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
 25 perform the following: if this Call Control instance is identified by NULL, the
 26 mobile station shall send either a *Flash With Information Message* or an *Extended*
 27 *Flash With Information Message* (with either the CON_REF_INCL field of the
 28 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field
 29 set to the connection reference of the service option connection corresponding
 30 to this call); otherwise, the mobile station shall send an *Extended Flash With*
 31 *Information Message*, with the CON_REF_INCL field of the message set to '1' and
 32 the CON_REF field of the message set to the connection reference of the service
 33 option connection corresponding to this call.
- 34 • If the Call Control instance is directed by the user to forward the incoming call to
 35 network-based voice mail, the mobile station shall send a *Flash With Information*
 36 *Message* or an *Extended Flash With Information Message* in assured mode with a
 37 *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-
 38 programmed feature code which indicates User Selective Call Forwarding to voice
 39 mail, as follows:

- 1 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
2 *Information Message*.
- 3 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
4 perform the following: if this Call Control instance is identified by NULL, the
5 mobile station shall send either a *Flash With Information Message* or an *Extended*
6 *Flash With Information Message* (with either the CON_REF_INCL field of the
7 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field
8 set to the connection reference of the service option connection corresponding
9 to this call); otherwise, the mobile station shall send an *Extended Flash With*
10 *Information Message*, with the CON_REF_INCL field of the message set to '1' and
11 the CON_REF field of the message set to the connection reference of the service
12 option connection corresponding to this call.
- 13 • If the Call Control instance is directed by the user to activate answer holding, the
14 mobile station shall send a *Flash With Information Message* or an *Extended Flash With*
15 *Information Message* in assured mode requiring confirmation of delivery with a
16 *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-
17 programmed feature code which indicates Answer Holding:
- 18 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
19 *Information Message*.
- 20 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
21 perform the following: if this Call Control instance is identified by NULL, the
22 mobile station shall send either a *Flash With Information Message* or an *Extended*
23 *Flash With Information Message* (with either the CON_REF_INCL field of the
24 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field
25 set to the connection reference of the service option connection corresponding
26 to this call); otherwise, the mobile station shall send an *Extended Flash With*
27 *Information Message*, with the CON_REF_INCL field of the message set to '1' and
28 the CON_REF field of the message set to the connection reference of the service
29 option connection corresponding to this call.
- 30 After receiving confirmation of delivery of the *Flash With Information Message* or the
31 *Extended Flash With Information Message*, the mobile station shall send a *Connect*
32 *Order* in assured mode:

- If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall perform the following: If this Call Control instance is identified by NULL, the mobile station shall either set the CON_REF_INCL field of the message to '0' or set the CON_REF_INCL field to '1' and set the CON_REF field to the connection reference of the service option connection corresponding to this call; otherwise, the mobile station shall set the CON_REF_INCL field of the message to '1' and the CON_REF field of the message to the connection reference of the service option connection corresponding to this call.

The Call Control instance shall enter the *Conversation Substate*.

- If the Call Control determines that the user directs it to originate an emergency call, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode with a Global Emergency Call Information Record (see 2.7.4.30), as follows:
 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With Information Message*.
 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall perform the following: if this Call Control instance is identified by NULL, the mobile station shall send either a *Flash With Information Message* or an *Extended Flash With Information Message* (with either the CON_REF_INCL field of the message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field set to the connection reference of the service option connection corresponding to this call); otherwise, the mobile station shall send an *Extended Flash With Information Message*, with the CON_REF_INCL field of the message set to '1' and the CON_REF field of the message set to the connection reference of the service option connection corresponding to this call.
- If the Call Control instance receives a message from layer 3 which is included in the following list and every message field value is within its permissible range, the Call Control instance shall process the message as described below and in accordance with the message's action time (see 2.6.4.1.5).
 1. *Alert With Information Message*: The Call Control instance shall reset the substate timer for T_{53m} seconds. If this message does not contain a Signal information record, the mobile station should use standard alert as defined in 3.7.5.5.
 2. *Extended Alert With Information Message*: The Call Control instance shall reset the substate timer for T_{53m} seconds. If this message does not contain a Signal information record, the mobile station should use standard alert as defined in 3.7.5.5.

- 1 3. *Maintenance Order*: The mobile station shall reset the substate timer for T_{53m}
2 seconds.

3 2.6.10.2 Conversation Substate

4 While in the *Conversation Substate*, the Call Control instance shall perform the following:

- 5 • If the Call Control instance receives a “release indication” from the layer 3, the
6 Call Control instance shall enter the *Call Release Substate*.
- 7 • The mobile station shall send an *Origination Continuation Message* in assured mode,
8 within T_{54m} seconds after the Call Control instance entering *the Conversation*
9 *Substate* if any of the following conditions occur:
 - 10 – The mobile station originated the call, and did not send all the dialed digits in
11 the *Origination Message*.
 - 12 – There is more than one calling party number associated with the mobile
13 station.
 - 14 – A calling party subaddress is used in the call.
 - 15 – A called party subaddress is used in the call.

16 If more than one calling party number is associated with the mobile station, the
17 mobile station shall include the calling party number being used in the calling
18 party number information record in the *Origination Continuation Message*. If only
19 one calling party number is associated with the mobile station, the mobile station
20 shall not include the calling party number information record in the *Origination*
21 *Continuation Message*. If a calling party subaddress is used, the mobile station shall
22 include the calling party subaddress information record in the *Origination*
23 *Continuation Message*; otherwise, the mobile station shall omit the calling party
24 subaddress information record. If a called party subaddress is used, the mobile
25 station shall include the called party subaddress information record in the
26 *Origination Continuation Message*; otherwise, the mobile station shall omit the
27 calling party subaddress information record.

- 28 • If the Call Control instance is directed by the user to issue a flash, the mobile
29 station shall build a *Flash With Information Message* or an *Extended Flash With*
30 *Information Message* with the collected digits or characters contained in a *Keypad*
31 *Facility* information record, if needed, and shall send the message in assured mode,
32 as follows:
 - 33 – If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
34 *Information Message*.

- 1 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall

2 perform the following: if this Call Control instance is identified by NULL, the

3 mobile station shall send either a *Flash With Information Message* or an *Extended*

4 *Flash With Information Message* (with either the CON_REF_INCL field of the

5 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field

6 set to the connection reference of the service option connection corresponding

7 to this call); otherwise, the mobile station shall send an *Extended Flash With*

8 *Information Message*, with the CON_REF_INCL field of the message set to '1' and

9 the CON_REF field of the message set to the connection reference of the service

10 option connection corresponding to this call.
- 11 • If the Call Control instance is directed by the user to forward the incoming call, the

12 mobile station shall send a *Flash With Information Message* or an *Extended Flash With*

13 *Information Message* in assured mode with a *Keypad Facility* information record (see

14 2.7.4.2) with the CHARi field set to a pre-programmed feature code which indicates

15 User Selective Call Forwarding with a pre-registered number, as follows:

 - 16 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*

17 *Information Message*.
 - 18 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall

19 perform the following: if this Call Control instance is identified by NULL, the

20 mobile station shall send either a *Flash With Information Message* or an *Extended*

21 *Flash With Information Message* (with either the CON_REF_INCL field of the

22 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field

23 set to the connection reference of the service option connection corresponding

24 to this call); otherwise, the mobile station shall send an *Extended Flash With*

25 *Information Message*, with the CON_REF_INCL field of the message set to '1' and

26 the CON_REF field of the message set to the connection reference of the service

27 option connection corresponding to this call.
- 28 • If the Call Control instance is directed by the user to forward the incoming call to a

29 number stored in the mobile station, the mobile station shall send a *Flash With*

30 *Information Message* or an *Extended Flash With Information Message* in assured mode

31 with a *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to

32 the following:

 - 33 - a pre-programmed feature code which indicates User Selective Call

34 Forwarding to a number stored in the mobile station as the first digits in

35 the field and
 - 36 - the forwarding to number immediately following the pre-programmed

37 feature code.

38 The mobile station shall send the message as follows:

- 1 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
2 *Information Message*.
- 3 - If P_REV_IN_USE_s is equal to or greater than seven and if this Call Control
4 instance is identified by NULL, the mobile station shall send either a *Flash With*
5 *Information Message* or an *Extended Flash With Information Message* (with either
6 the CON_REF_INCL field of the message set to '0' or the CON_REF_INCL field set
7 to '1' and the CON_REF field set to the connection reference of the service
8 option connection corresponding to this call). Otherwise, the mobile station
9 shall send an *Extended Flash With Information Message*, with the CON_REF_INCL
10 field of the message set to '1' and the CON_REF field of the message set to the
11 connection reference of the service option connection corresponding to this call.
- 12 • If the Call Control instance is directed by the user to forward the incoming call to
13 network-based voice mail, the mobile station shall send a *Flash With Information*
14 *Message* or an *Extended Flash With Information Message* in assured mode with a
15 *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-
16 programmed feature code which indicates User Selective Call Forwarding to voice
17 mail, as follows:
 - 18 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
19 *Information Message*.
 - 20 - If P_REV_IN_USE_s is equal to or greater than seven and if this Call Control
21 instance is identified by NULL, the mobile station shall send either a *Flash With*
22 *Information Message* or an *Extended Flash With Information Message* (with either
23 the CON_REF_INCL field of the message set to '0' or the CON_REF_INCL field set
24 to '1' and the CON_REF field set to the connection reference of the service
25 option connection corresponding to this call). Otherwise, the mobile station
26 shall send an *Extended Flash With Information Message*, with the CON_REF_INCL
27 field of the message set to '1' and the CON_REF field of the message set to the
28 connection reference of the service option connection corresponding to this call.
- 29 • If the Call Control instance is directed by the user to activate answer holding, the
30 mobile station shall send a *Flash With Information Message* or an *Extended Flash With*
31 *Information Message* in assured mode requiring confirmation of delivery with a
32 *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-
33 programmed feature code which indicates Answer Holding, as follows:
 - 34 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
35 *Information Message*.

- 1 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall

2 perform the following: if this Call Control instance is identified by NULL, the

3 mobile station shall send either a *Flash With Information Message* or an *Extended*

4 *Flash With Information Message* (with either the CON_REF_INCL field of the

5 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field

6 set to the connection reference of the service option connection corresponding

7 to this call); otherwise, the mobile station shall send an *Extended Flash With*

8 *Information Message*, with the CON_REF_INCL field of the message set to '1' and

9 the CON_REF field of the message set to the connection reference of the service

10 option connection corresponding to this call.

- 11 • If answer holding is activated and the Call Control instance is directed by the user

12 to deactivate answer holding, the mobile station shall send a *Flash With Information*

13 *Message* or an *Extended Flash With Information Message* in assured mode with a

14 *Flash With Information Message* in assured mode with a *Keypad Facility* information

15 record (see 2.7.4.2) with the CHAR_i field set to a pre-programmed feature code

16 which indicates Answer Holding, as follows:

- 17 - If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*

18 *Information Message*.

- 19 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall

20 perform the following: if this Call Control instance is identified by NULL, the

21 mobile station shall send either a *Flash With Information Message* or an *Extended*

22 *Flash With Information Message* (with either the CON_REF_INCL field of the

23 message set to '0' or the CON_REF_INCL field set to '1' and the CON_REF field

24 set to the connection reference of the service option connection corresponding

25 to this call); otherwise, the mobile station shall send an *Extended Flash With*

26 *Information Message*, with the CON_REF_INCL field of the message set to '1' and

27 the CON_REF field of the message set to the connection reference of the service

28 option connection corresponding to this call.

- 29 • If the Call Control instance is directed by the user to send burst DTMF digits, the

30 mobile station shall build the *Send Burst DTMF Message* with the dialed digits and

31 shall send the message in assured mode requiring confirmation of delivery.

- 32 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall

33 perform the following: If this Call Control instance is identified by NULL, the

34 mobile station shall set the CON_REF_INCL field of the message to '0';

35 otherwise, the mobile station shall set the CON_REF_INCL field of the message

36 to '1' and the CON_REF field of the message to the connection reference of the

37 service option connection corresponding to this call.

1 The mobile station sending multiple *Send Burst DTMF Messages* shall preserve
 2 relative ordering of these messages (see 1.6 of [4]). The mobile station should
 3 attempt to preserve the user timing as much as possible, using recommended
 4 values of DTMF_ON_LENGTH (see Table 2.7.2.3.2.7-1) and DTMF_OFF_LENGTH (see
 5 Table 2.7.2.3.2.7-2).

6 • If the Call Control instance is directed by the user to send a continuous DTMF digit,
 7 the mobile station shall build the *Continuous DTMF Tone Order* with the dialed digit
 8 and shall send the order in assured mode requiring confirmation of delivery, as
 9 follows:

10 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
 11 perform the following: If this Call Control instance is identified by NULL, the
 12 mobile station shall either set the CON_REF_INCL field of the message to '0' or
 13 set the CON_REF_INCL field to '1' and set the CON_REF field to the connection
 14 reference of the service option connection corresponding to this call; otherwise,
 15 the mobile station shall set the CON_REF_INCL field of the message to '1' and
 16 the CON_REF field of the message to the connection reference of the service
 17 option connection corresponding to this call.

18 When the Call Control instance is directed by the user to cease sending the
 19 continuous DTMF digit, the mobile station shall send the *Continuous DTMF Tone*
 20 *Order* (ORDQ = '11111111') in assured mode requiring confirmation of delivery, as
 21 follows:

22 - If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
 23 perform the following: If this Call Control instance is identified by NULL, the
 24 mobile station shall either set the CON_REF_INCL field of the message to '0' or
 25 set the CON_REF_INCL field to '1' and set the CON_REF field to the connection
 26 reference of the service option connection corresponding to this call; otherwise,
 27 the mobile station shall set the CON_REF_INCL field of the message to '1' and
 28 the CON_REF field of the message to the connection reference of the service
 29 option connection corresponding to this call.

30 The mobile station sending multiple *Continuous DTMF Tone Orders* shall preserve
 31 relative ordering of these messages (see [2]). The mobile station shall send the
 32 *Continuous DTMF Tone Order* with the ORDQ set to '11111111' indicating the
 33 completion of the current continuous DTMF digit before sending the *Continuous*
 34 *DTMF Tone Order* for another digit or the *Send Burst DTMF Message*.

35 • If the Call Control instance is directed by the user to disconnect the call, the Call
 36 Control instance shall send a 'call release request' to the layer 3 and shall enter
 37 the *Call Release Substate*.

- 1 • If the Call Control instance receives an indication that this packet data service
2 instance has been inactivated, the Call Control instance shall send a “call inactive
3 indication” to the layer 3 and shall enter the *Call Release Substate*.

- 4 • If the Call Control instance determines that the user directs it to originate an
5 emergency call, the mobile station shall send a *Flash With Information Message* or
6 an *Extended Flash With Information Message* in assured mode with a Global
7 Emergency Call Information Record (see 2.7.4.30), as follows:
 - 8 – If P_REV_IN_USE_s is less than seven, the mobile station shall send a *Flash With*
9 *Information Message*.

 - 10 – If P_REV_IN_USE_s is equal to or greater than seven, the mobile station shall
11 perform the following: if this Call Control instance is identified by NULL, the
12 mobile station shall send either a *Flash With Information Message* or an *Extended*
13 *Flash With Information Message* (with either the CON_REF_INCL field of the
14 message set to ‘0’ or the CON_REF_INCL field set to ‘1’ and the CON_REF field
15 set to the connection reference of the service option connection corresponding
16 to this call); otherwise, the mobile station shall send an *Extended Flash With*
17 *Information Message*, with the CON_REF_INCL field of the message set to ‘1’ and
18 the CON_REF field of the message set to the connection reference of the service
19 option connection corresponding to this call.

- 20 • If the Call Control instance receives a message from the layer 3 which is included
21 in the following list and every message field value is within its permissible range,
22 the Call Control instance shall process the message as described below and in
23 accordance with the message’s action time (see 2.6.4.1.5).
 - 24 1. *Alert With Information Message*: If the message contains a Signal information
25 record with the SIGNAL_TYPE field set to ‘01’ or ‘10’, or if the message does not
26 contain a Signal information record, the Call Control instance shall enter the
27 *Waiting For Mobile Station Answer Substate*. The mobile station should alert the
28 user in accordance with the Signal information record. If this message does
29 not contain a Signal information record, the mobile station should use standard
30 alert as defined in 3.7.5.5.

 - 31 2. *Extended Alert With Information Message*: If the message contains a Signal
32 information record with the SIGNAL_TYPE field set to ‘01’ or ‘10’, or if the
33 message does not contain a Signal information record, the Call Control
34 instance shall enter the *Waiting For Mobile Station Answer Substate*. The mobile
35 station should alert the user in accordance with the Signal information record.
36 If this message does not contain a Signal information record, the mobile station
37 should use standard alert as defined in 3.7.5.5.

 - 38 3. *Flash With Information Message*

4. *Extended Flash With Information Message*

5. *Maintenance Order*: The Call Control instance shall enter the *Waiting for Mobile Station Answer Substate*.

6. *Send Burst DTMF Message*:

2.6.10.3 Call Release Substate

In this substate, the Call Control instance waits for the call to be released.

While in the *Call Release Substate*, the Call Control instance shall perform the following:

- If the Call Control instance receives a message from the layer 3 which is included in the following list and every message field value is within its permissible range, the Call Control instance shall process the message as described below and in accordance with the message's action time (see 2.6.4.1.5).

1. *Alert With Information Message*: The Call Control instance shall send an "enter traffic channel substate indication" to the layer 3 and shall enter the *Waiting for Mobile Station Answer Substate*. If this message does not contain a Signal information record, the mobile station should use standard alert as defined in 3.7.5.5.

2. *Extended Alert With Information Message*: The Call Control instance shall send a "enter traffic channel substate indication" to layer 3 and shall enter the *Waiting for Mobile Station Answer Substate*. If this message does not contain a Signal information record, the mobile station should use standard alert as defined in 3.7.5.5.

2.6.11 SYNC_ID Computation

The SYNC_ID shall be calculated on all bits within the service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record).

The generator polynomials for computation of the SYNC_ID shall be as follows:

$$g(x) = x^{16} + x^{15} + x^{14} + x^{11} + x^6 + x^5 + x^2 + x + 1$$

The SYNC_ID shall be computed according to the following procedure as shown in Figures 2.6.11-1:

- Initially, all shift register elements shall be set to logical one and the switches shall be set in the up position.
- The register shall be clocked a number of times equal to the number bits in the service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration

information record) with those bits as input. The Service Configuration information record bits shall be input first (starting with the first field of the record) followed by the Non-negotiable Service Configuration information record bits (starting at the first field of the record).

- The switches shall be set in the down position so that the output is a modulo-2 addition with a '0' and the successive shift register inputs are '0'.
- The register shall be clocked an additional 16 times.
- These additional bits shall be the SYNC_ID.
- The first bit calculated shall be the most significant bit of SYNC_ID.

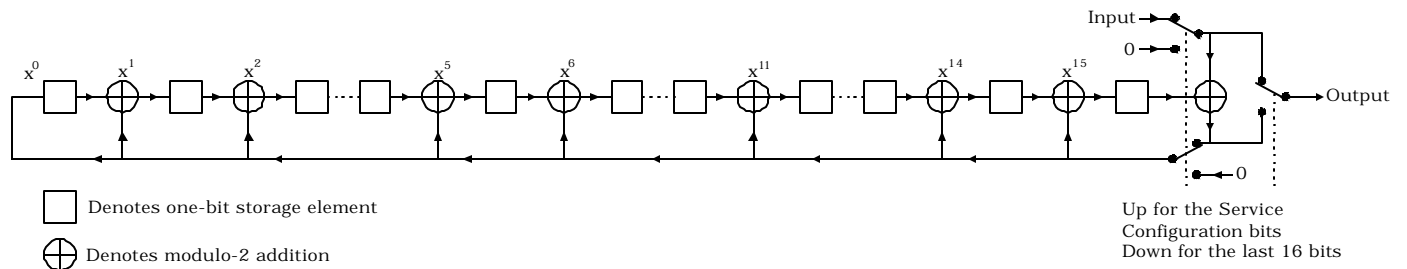


Figure 2.6.11-1. SYNC_ID Calculation

1 **2.7 PDU Formats for Mobile Stations**

2 This section describes the formats of the PDUs corresponding to the messages sent by the
3 mobile station.

4 Some bits in the PDUs are marked as RESERVED. These bits allow extension of the PDUs
5 for future features and capabilities. The mobile station sets all reserved bits to '0'.

6

2.7.1 r-csch

This section describes the messages and their PDU formats sent by the mobile station on the r-csch.

2.7.1.1 Reserved

2.7.1.2 Reserved

2.7.1.3 PDU Formats on r-csch

The messages sent on the r-csch are summarized in Table 2.7.1.3-1.

Table 2.7.1.3-1. Messages on r-csch

Message Name	MSG_TAG	Section Number
<i>Registration Message</i>	RGM	2.7.1.3.2.1
<i>Order Message</i>	ORDM	2.7.1.3.2.2
<i>Data Burst Message</i>	DBM	2.7.1.3.2.3
<i>Origination Message</i>	ORM	2.7.1.3.2.4
<i>Page Response Message</i>	PRM	2.7.1.3.2.5
<i>Authentication Challenge Response Message</i>	AUCRM	2.7.1.3.2.6
<i>Status Response Message</i>	STRPM	2.7.1.3.2.7
<i>TMSI Assignment Completion Message</i>	TACM	2.7.1.3.2.8
<i>PACA Cancel Message</i>	PACNM	2.7.1.3.2.9
<i>Extended Status Response Message</i>	ESTRPM	2.7.1.3.2.10
<i>Device Information Message</i>	DIM	2.7.1.3.2.13
<i>Security Mode Request Message</i>	SMRM	2.7.1.3.2.14

2.7.1.3.1 Reserved

2.7.1.3.2 PDU Contents

The following sections specify the contents of the PDU for each message that may be sent on the r-csch.

2.7.1.3.2.1 Registration Message

MSG_TAG: RGM

Field	Length (bits)
REG_TYPE	4
SLOT_CYCLE_INDEX	3
MOB_P_REV	8
SCM	8
MOB_TERM	1
RETURN_CAUSE	4
QPCH_SUPPORTED	0 or 1
ENHANCED_RC	0 or 1
UZID_INCL	0 or 1
UZID	0 or 16
GEO_LOC_INCL	0 or 1
GEO_LOC_TYPE	0 or 3
OTD_SUPPORTED	0 or 1
STS_SUPPORTED	0 or 1
3X_CCH_SUPPORTED	0 or 1
WLL_INCL	0 or 1
WLL_DEVICE_TYPE	0 or 3
HOOK_STATUS	0 or 4
ENC_INFO_INCL	1
SIG_ENCRYPT_SUP	0 or 8
SIG_ENCRYPT_REQ	0 or 1
KEY_SEQ_NEW	0 or 4
ENC_SEQ_H	0 or 24
ENC_SEQ_H_SIG	0 or 8
UI_ENCRYPT_SUP	0 or 8

REG_TYPE – Registration type.

This field indicates which type of event generated the registration attempt.

The mobile station shall set this field to the REG_TYPE value shown in Table 2.7.1.3.2.1-1 corresponding to the event that caused this registration to occur (see 2.6.5.1).

Table 2.7.1.3.2.1-1. Registration Type (REG_TYPE) Codes

REG_TYPE (binary)	Type of Registration
0000	Timer-based (see 2.6.5.1.3)
0001	Power-up (see 2.6.5.1.1)
0010	Zone-based (see 2.6.5.1.5)
0011	Power-down (see 2.6.5.1.2)
0100	Parameter-change (see 2.6.5.1.6)
0101	Ordered (see 2.6.5.1.7)
0110	Distance-based (see 2.6.5.1.4)
0111	User Zone-based (see 2.6.5.1.10)
All other REG_TYPE values are reserved.	

SLOT_CYCLE_INDEX – Slot cycle index.

If the mobile station is configured for slotted mode operation, the mobile station shall set this field to the preferred slot cycle index, SLOT_CYCLE_INDEX_p (see 2.6.2.1.1). Otherwise, the mobile station shall set this field to '000'.

MOB_P_REV – Protocol revision of the mobile station.

The mobile station shall set this field to '00000111'.

SCM – Station class mark.

The mobile station shall set this field to its station class mark. See 2.3.3.

MOB_TERM – Mobile terminated calls accepted indicator.

If the mobile station is configured to accept mobile terminated calls while operating with the current roaming status (see 2.6.5.3), the mobile station shall set this bit to '1'. Otherwise, the mobile station shall set this bit to '0'.

RETURN_CAUSE – Reason of the mobile station registration or access.

The mobile station shall set this field to the RETURN_CAUSE value shown in Table 2.7.1.3.2.1-2 corresponding to the service redirection failure condition (see 2.6.1.1).

Table 2.7.1.3.2.1-2. RETURN_CAUSE Codes

RETURN_CAUSE (binary)	Redirect Failure Condition
0000	Normal access.
0001	Service redirection failed as a result of system not found.
0010	Service redirection failed as a result of protocol mismatch.
0011	Service redirection failed as a result of registration rejection.
0100	Service redirection failed as a result of wrong SID.
0101	Service redirection failed as a result of wrong NID.
All other RETURN_CAUSE values are reserved.	

QPCH_SUPPORTED – Quick Paging Channel supported indicator.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports the Quick Paging Channel, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

ENHANCED_RC – Enhanced radio configuration supported indicator.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports any radio configuration in the Radio Configuration Class 2 (see 1.1.1), the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

UZID_INCL – User Zone Identifier included indicator.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

1		If the message is to contain the User Zone Identifier, the mobile
2		station shall set this field to '1'; otherwise, the mobile station
3		shall set this field to '0'.
4	UZID	– User Zone Identifier.
5		If the UZID_INCL is included in the message and is set to '1', the
6		mobile station shall include this field and set it to UZID _S ;
7		otherwise, the mobile station shall omit this field.
8	GEO_LOC_INCL	– Geo-location included indicator.
9		If P_REV_IN_USE _S is less than seven, the mobile station shall
10		omit this field; otherwise, the mobile station shall include this
11		field and set it as follows.
12		If the message is to contain the GEO_LOC_TYPE field, the mobile
13		station shall set this field to '1'; otherwise, the mobile station
14		shall set this field to '0'.
15	GEO_LOC_TYPE	– Geo-Location Type.
16		If GEO_LOC_INCL is included in the message and is set to '1', the
17		mobile station shall include this field and shall set it to the value
18		shown in Table 2.7.1.3.2.4-7; otherwise, the mobile station shall
19		omit this field.
20	OTD_SUPPORTED	– Orthogonal Transmit Diversity supported.
21		If P_REV_IN_USE _S is less than seven, the mobile station shall
22		omit this field; otherwise, the mobile station shall include
23		this field and set it as follows.
24		The mobile station shall set this field to '1' if Orthogonal
25		Transmit Diversity is supported; otherwise, the mobile
26		station shall set this field to '0'.
27	STS_SUPPORTED	– Space Time Spreading Transmit Diversity supported.
28		If P_REV_IN_USE _S is less than seven, the mobile station shall
29		omit this field; otherwise, the mobile station shall include
30		this field and set it as follows.
31		The mobile station shall set this field to '1', if Space Time
32		Spreading Transmit Diversity is supported; otherwise, the
33		mobile station shall set this field to '0'.
34	3X_CCH_SUPPORTED	– 3X Common Channels supported.

If P_REV_IN_USE_S is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

The mobile station shall set this field to '1' if the mobile station supports the Spreading Rate 3 common channels (3X BCCH, 3X F-CCCH, and 3X R-EACH); otherwise, the mobile station shall set this field to '0'.

WLL_INCL – WLL information included indicator.

If P_REV_IN_USE_S is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station is a Wireless Local Loop device, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

WLL_DEVICE_TYPE – WLL device type indicator.

If WLL_INCL is not included, or if WLL_INCL is included and is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field as follows.

The mobile station shall set this field to the WLL_DEVICE_TYPE value shown in Table 2.7.1.3.2.1-3 corresponding to the mobile station device type.

Table 2.7.1.3.2.1-3. WLL Device Types

WLL_DEVICE_TYPE (binary)	Description
000	Wireless Local Loop terminal with no mobility
001	Wireless Local Loop terminal with limited mobility
010	Wireless Local Loop terminal with full mobility
011 - 111	Reserved

HOOK_STATUS – WLL terminal hook status.

If WLL_INCL is not included, or if WLL_INCL is included and is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the value shown in Table 2.7.1.3.2.1-4 corresponding to the hook state.

Table 2.7.1.3.2.1-4. Hook Status Values

HOOK_STATUS (binary)	Description
0000	Subscriber terminal is on-hook
0001	Subscriber terminal is off-hook
0010	Subscriber terminal is stuck off-hook
0011 – 1111	Reserved

ENC_INFO_INCL – Encryption fields included.

The mobile station shall set this field to '1' if the encryption related fields are included; otherwise the mobile station shall set this field to '0'. The mobile station shall set this field to '1' if it is unable to determine the base station support for encryption. The mobile station shall set this field to '0' if the base station does not support encryption or the mobile station does not support any of the encryption modes supported by the base station.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The mobile station shall include this field only if ENC_INFO_INCL is equal to '1'. If included, this field indicates which signaling encryption algorithms are supported by the mobile station.

This field consists of the subfields shown in Table 2.7.1.3.2.1-5.

Table 2.7.1.3.2.1-5. Encoding of the SIG_ENCRYPT_SUP Field

Subfield	Length (bits)	Subfield Description
CMEA	1	Support of Cellular Message Encryption Algorithm
ECMEA	1	Support of Enhanced Cellular Message Encryption Algorithm
NEW_ALGORITHM_1	1	Support of new Algorithm 1
RESERVED	5	

The mobile station shall set CMEA subfield to '1'.

The mobile station shall set each other subfield to '1' if the corresponding signaling algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

SIG_ENCRYPT_REQ – Signaling Message encryption request indicator.

The mobile station shall include this field if ENC_INFO_INCL is equal to '1'. If included the mobile station shall set this field to '1' to request signaling encryption to be turned on for signaling messages sent on f-dsch, r-dsch, f-csch, and r-csch.

KEY_SEQ_NEW – The key sequence number corresponding to the new encryption key generated by the mobile station.

The mobile station shall include this field only if ENC_INFO_INCL is equal to '1' and STORE_KEY_S is equal to '1'. If included, the mobile station shall set this field to KEY_SEQ_NEW_{S-P}, the sequence number associated with the new encryption key generated by the mobile station.

ENC_SEQ_H – The 24 MSB of the EXT_ENC_SEQ

The mobile station shall include this field only if ENC_INFO_INCL is equal to '1' and the new Algorithm 1 is supported by the mobile station. If included, the mobile station shall set this field to the 24 most significant bits of the EXT_ENC_SEQ to be used as the initial value of crypto sync for both forward and reverse link encryptions; otherwise the mobile station shall omit this field.

ENC_SEQ_H_SIG – The signature of ENC_SEQ_H

1 If the ENC_SEQ_H field is included in the message, the mobile
2 station shall set this field to the digital signature of the
3 ENC_SEQ_H computed as described in 2.3.12.4.5; otherwise, the
4 mobile station shall omit this field.

5 UI_ENCRYPT_SUP - User information Encryption supported indicator.

6 The mobile station shall include this field only
7 ENC_INFO_INCL is equal to '1'. If included, the mobile station
8 shall set this field to indicate the supported user information
9 encryption algorithms.

10 This field consists of the subfields shown in Table 2.7.1.3.2.4-
11 9.

12 The mobile station shall set each subfield to '1' if the
13 corresponding user information encryption algorithm is
14 supported by the mobile station; otherwise, the mobile station
15 shall set the subfield to '0'.
16

1 2.7.1.3.2.2 Order Message

2 MSG_TAG: ORDM

3

Field	Length (bits)
ORDER	6
ADD_RECORD_LEN	3
Order-specific fields (if used)	$8 \times \text{ADD_RECORD_LEN}$

4

5 ORDER – Order code.

6 The mobile station shall set this field to the ORDER code
7 (see 2.7.3) for this type of *Order Message*.

8 ADD_RECORD_LEN – Additional record length.

9 The mobile station shall set this field to the number of octets
10 in the order-specific fields included in this message.

11 order-specific fields – Order-specific fields.

12 The mobile station shall include order-specific fields as
13 specified in 2.7.3.

14

2.7.1.3.2.3 Data Burst Message

MSG_TAG: DBM

Field	Length (bits)
MSG_NUMBER	8
BURST_TYPE	6
NUM_MSGS	8
NUM_FIELDS	8
NUM_FIELDS occurrences of the following field:	
CHAR _i	8

- MSG_NUMBER – Message number within the data burst stream.
- The mobile station shall set this field to the number of this message within the data burst stream.
- BURST_TYPE – Data burst type.
- The mobile station shall set the value of this field for the type of this data burst as defined in [30]. If the mobile station sets this field equal to '111110', it shall set the first two CHAR_i fields of this message equal to EXTENDED_BURST_TYPE_INTERNATIONAL as described in the definition of CHAR_i below. If the mobile station sets this field equal to '111111', it shall set the first two CHAR_i fields of this message equal to the EXTENDED_BURST_TYPE as described in the definition of CHAR_i below.
- NUM_MSGS – Number of messages in the data burst stream.
- The mobile station shall set this field to the number of messages within this data burst stream.
- NUM_FIELDS – Number of characters in this message.
- The mobile station shall set this field to the number of CHAR_i fields included in this message.
- CHAR_i – Character.
- The mobile station shall include NUM_FIELDS occurrences of this field. The mobile station shall set these fields to the corresponding octet of the data burst stream.

If the BURST_TYPE field of this message is equal to '111110', the first two CHARi octets shall represent a 16 bit EXTENDED_BURST_TYPE_INTERNATIONAL field, which is encoded as shown below. The first ten bits of this field contain a binary mapping of the Mobile Country Code (MCC). Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the EXTENDED_BURST_TYPE_INTERNATIONAL field shall specify the COUNTRY_BURST_TYPE. The mobile station shall set the value of the COUNTRY_BURST_TYPE according to the type of this data burst as defined in standards governed by the country where this data burst type is to be used.

Field	Length (bits)
Mobile Country Code	10
COUNTRY_BURST_TYPE	6
Remaining CHARi fields	$8 \times (\text{NUM_FIELDS} - 2)$

If the BURST_TYPE field of this message is equal to '111111', the first two CHARi octets shall represent a single, 16 bit, EXTENDED_BURST_TYPE field, as shown below. The mobile station shall set the value of the EXTENDED_BURST_TYPE according to the type of this data burst as defined in [30].

Field	Length (bits)
EXTENDED_BURST_TYPE (first two CHARi fields)	16
Remaining CHARi fields	$8 \times (\text{NUM_FIELDS} - 2)$

1 2.7.1.3.2.4 Origination Message

2 MSG_TAG: ORM

3

Field	Length (bits)
MOB_TERM	1
SLOT_CYCLE_INDEX	3
MOB_P_REV	8
SCM	8
REQUEST_MODE	3
SPECIAL_SERVICE	1
SERVICE_OPTION	0 or 16
PM	1
DIGIT_MODE	1
NUMBER_TYPE	0 or 3
NUMBER_PLAN	0 or 4
MORE_FIELDS	1
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHAR _i	4 or 8
-------------------	--------

NAR_AN_CAP	1
PACA_REORIG	1
RETURN_CAUSE	4
MORE_RECORDS	1
ENCRYPTION_SUPPORTED	0 or 4
PACA_SUPPORTED	1
NUM_ALT_SO	3

NUM_ALT_SO occurrences of the following field:

ALT_SO	16
--------	----

(continues on next page)

4

1

Field	Length (bits)
DRS	0 or 1
UZID_INCL	0 or 1
UZID	0 or 16
CH_IND	0 or 2
SR_ID	0 or 3
OTD_SUPPORTED	0 or 1
QPCH_SUPPORTED	0 or 1
ENHANCED_RC	0 or 1
FOR_RC_PREF	0 or 5
REV_RC_PREF	0 or 5
FCH_SUPPORTED	0 or 1
FCH Capability Type -specific fields	0 or variable
DCCH_SUPPORTED	0 or 1
DCCH Capability Type -specific fields	0 or variable
GEO_LOC_INCL	0 or 1
GEO_LOC_TYPE	0 or 3
REV_FCH_GATING_REQ	0 or 1
ORIG_REASON	0 or 1
ORIG_COUNT	0 or 2
STS_SUPPORTED	0 or 1
3X_CCH_SUPPORTED	0 or 1
WLL_INCL	0 or 1
WLL_DEVICE_TYPE	0 or 3
GLOBAL_EMERGENCY_CALL	0 or 1
QOS_PARMs_INCL	0 or 1
QOS_PARMs_LEN	0 or 5

(continues on next page)

2

3

Field	Length (bits)
QOS_PARMS	0 or variable
QOS_RESERVED	0 - 7
ENC_INFO_INCL	1
SIG_ENCRYPT_SUP	0 or 8
SIG_ENCRYPT_REQ	0 or 1
KEY_SEQ_NEW	0 or 4
ENC_SEC_H	0 or 24
ENC_SEQ_H_SIG	0 or 8
UI_ENCRYPT_REQ	0 or 1
UI_ENCRYPT_SUP	0 or 8
SYNC_ID_INCL	1
SYNC_ID	0 or 16
PREV_SID_INCL	0 or 1
PREV_SID	0 or 15
PREV_NID_INCL	0 or 1
PREV_NID	0 or 16
PREV_PZID_INCL	0 or 1
PREV_PZID	0 or 8

If P_REV_IN_USE_s is equal to or greater than 7, the mobile station shall include the following fields:

SO_BITMAP_IND	0 or 2
SO_GROUP_NUM	0 or 5
SO_BITMAP	0 or 4 × SO_BITMAP_IND

MOB_TERM – Mobile terminated calls accepted indicator.

If the mobile station is configured to accept mobile terminated calls while operating with the current roaming status (see 2.6.5.3), the mobile station shall set this bit to '1'; otherwise, the mobile station shall set this bit to '0'.

- 1 SLOT_CYCLE_INDEX – Slot cycle index.
- 2 If the mobile station is configured for slotted mode operation,
- 3 the mobile station shall set this field to the preferred slot
- 4 cycle index, $SLOT_CYCLE_INDEX_p$ (see 2.6.2.1.1); otherwise,
- 5 the mobile station shall set this field to '000'.
- 6 MOB_P_REV – Protocol revision of the mobile station.
- 7 The mobile station shall set this field to '00000111'.
- 8 SCM – Station class mark.
- 9 The mobile station shall set this field to the station class
- 10 mark of the mobile station. See 2.3.3.
- 11 REQUEST_MODE – Requested mode code.
- 12 The mobile station shall set this field to the value shown in
- 13 Table 2.7.1.3.2.4-1 corresponding to its current configuration.
- 14

Table 2.7.1.3.2.4-1. REQUEST_MODE Codes

Value (binary)	Requested Mode
000	Reserved
001	CDMA only
010	Wide analog only
011	Either wide analog or CDMA only
100	Narrow analog only
101	Either narrow analog or CDMA only
110	Either narrow analog or wide analog only
111	Narrow analog or wide analog or CDMA

- 16
- 17 SPECIAL_SERVICE – Special service option indicator.
- 18 To request a special service option, the mobile station shall
- 19 set this field to '1'. To request the default service option
- 20 (Service Option 1), the mobile station shall set this field to '0'.
- 21 SERVICE_OPTION – Requested service option for this origination.
- 22 If the SPECIAL_SERVICE field is set to '1', the mobile station
- 23 shall set this field to the value specified in [30], corresponding
- 24 to the requested service option. If the SPECIAL_SERVICE field
- 25 is set to '0', the mobile station shall omit this field.
- 26 PM – Privacy mode indicator.

To request voice privacy, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

DIGIT_MODE – Digit mode indicator.

This field indicates whether the dialed digits are 4-bit DTMF codes or 8-bit ASCII codes using a specified numbering plan.

To originate the call using the binary representation of DTMF digits, the mobile station shall set this field to '0'. To originate the call using ASCII characters, the mobile station shall set this field to '1'.

NUMBER_TYPE – Type of number.

If the DIGIT_MODE field is set to '1', the mobile station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the number as defined in [7], Section 4.5.9. If the DIGIT_MODE field is set to '0', the mobile station shall omit this field.

Table 2.7.1.3.2.4-2. Number Types

Description	NUMBER_TYPE (binary)
Unknown	000
International number	001
National number	010
Network-specific number	011
Subscriber number	100
Reserved	101
Abbreviated number	110
Reserved for extension	111

NUMBER_PLAN – Numbering plan.

If the DIGIT_MODE field is set to '1', the mobile station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the requested numbering plan as defined in [7], Section 4.5.9. If the DIGIT_MODE field is set to '0', the mobile station shall omit this field.

Table 2.7.1.3.2.4-3. Numbering Plan Identification

Description	NUMBER_PLAN (binary)
Unknown	0000
ISDN/Telephony numbering plan ([17] and [16])	0001
Data numbering plan ([20])	0011
Telex numbering plan ([19])	0100
Private numbering plan	1001
Reserved for extension	1111
All other NUMBER_PLAN codes are reserved.	

MORE_FIELDS – More dialed digits indicator.

This field indicates whether additional dialed digits will be sent in a later *Origination Continuation Message*.

If all dialed digits will fit into this message, the mobile station shall set this field to '0'. If not, the mobile station shall set this field to '1'.

NUM_FIELDS – Number of dialed digits in this message.

The mobile station shall set this field to the number of dialed digits included in this message.

CHARi – A dialed digit or character.

The mobile station shall include NUM_FIELDS occurrences of this field. If the DIGIT_MODE field is set to '0', the mobile station shall set each occurrence of this field to the code value shown in Table 2.7.1.3.2.4-4 corresponding to the dialed digit. If the DIGIT_MODE field is set to '1', the mobile station shall set each occurrence of this field to the ASCII representation corresponding to the dialed digit, as specified in [9], with the most significant bit set to '0'.

Table 2.7.1.3.2.4-4. Representation of DTMF Digits

Digit	Code (binary)	Digit	Code (binary)
1	0001	7	0111
2	0010	8	1000
3	0011	9	1001
4	0100	0	1010
5	0101	*	1011
6	0110	#	1100
All other codes are reserved.			

NAR_AN_CAP – Narrow analog capability.

If the mobile station is capable of narrow analog operation, the mobile station shall set this bit to '1'; otherwise, the mobile station shall set this bit to '0'.

PACA_REORIG – PACA re-origination.

If this is a user directed origination, the mobile station shall set this field to '0'. If this is a PACA re-origination, the mobile station shall set this field to '1'.

RETURN_CAUSE – Reason for the mobile station registration or access.

The mobile station shall set this field to the RETURN_CAUSE value shown in Table 2.7.1.3.2.1-2 corresponding to the service redirection failure condition (see 2.6.1.1).

MORE_RECORDS – More records indicator.

This field indicates whether information records will be sent in a later *Origination Continuation Message*. If information records will be sent, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

ENCRYPTION- – Encryption algorithms supported by the mobile station.

_SUPPORTED

If P_REV_IN_USE is greater than or equal to 7 or AUTH_MODE is equal to '00', the mobile station shall omit the ENCRYPTION_SUPPORTED field. If P_REV_IN_USE is less than 7 and AUTH_MODE is not equal to '00', the mobile station shall set this field as specified in Table 2.7.1.3.2.4-5.

Table 2.7.1.3.2.4-5. Encryption Algorithms Supported

Description	ENCRYPTION_SUPPORTED (binary)
Basic encryption supported	0000
Basic and Enhanced encryption supported	0001
Reserved	0010 - 1111

PACA_SUPPORTED – CDMA PACA support indication.

This field identifies the mobile station's support for PACA in CDMA mode. The mobile station shall set this field to '1'.

NUM_ALT_SO – Number of alternative service options.

If $P_REV_IN_USE_S$ is less than seven, the mobile station shall set this field to the number of alternative service options it supports other than the one specified in the **SERVICE_OPTION** field. The mobile station shall set this field to a value less than or equal to $MAX_NUM_ALT_SO_S$.

If $P_REV_IN_USE_S$ is equal to or greater than seven, the mobile station shall set this field to the number of alternate service options, which either have no service option group number assigned or do not belong to the same service option group whose bitmap is being included. The alternate service option numbers are other than the one specified in the **SERVICE_OPTION** field. The mobile station shall set this field to a value less than or equal to $MAX_NUM_ALT_SO_S$.

ALT_SO – Alternative service option.

If $P_REV_IN_USE_S$ is less than 7, the mobile station shall include **NUM_ALT_SO** occurrences of this field. The mobile station shall set this field to the value specified in [30], corresponding to the alternative service option supported by the mobile station.

If P_REV_IN_USE_S is equal to or greater than seven, the mobile station shall include NUM_ALT_SO occurrences of in this field. The mobile station shall set this field to the service option number defined in TSB58 corresponding to the alternate service options which either have no service option group number assigned or do not belong to the same service option group whose bitmap is included in this message.

DRS – Data Ready to Send.

If P_REV_IN_USE_S is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If there is data to send, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

UZID_INCL – User Zone Identifier included indicator.

If P_REV_IN_USE_S is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the message is to contain the User Zone Identifier, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

UZID – User Zone Identifier.

If the UZID_INCL field is included in the message and is set to '1', the mobile station shall include this field and set it to UZID_S; otherwise, the mobile station shall omit this field.

CH_IND – Channel indicator.

If P_REV_IN_USE_S is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it, as shown in Table 2.7.1.3.2.4-6, to request physical resources.

Table 2.7.1.3.2.4-6. Channel Indicator

CH_IND (binary)	Channel(s) Requested
00	Reserved
01	Fundamental Channel
10	Dedicated Control Channel
11	Fundamental Channel and Dedicated Control Channel

SR_ID – Service reference identifier.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

If the service instance provides a service reference identifier, the mobile station shall set this field to the service reference identifier specified by the service instance. If the service instance does not provide a service reference identifier, the mobile station shall set this field to the smallest unused service reference identifier value between 1 and 6 (inclusive).

OTD_SUPPORTED – Orthogonal Transmit Diversity supported indicator.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports orthogonal transmit diversity, it shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

QPCH_SUPPORTED – Quick Paging Channel supported indicator.

If P_REV_IN_USE is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports the Quick Paging Channel, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

ENHANCED_RC – Enhanced radio configuration supported indicator.

1			If P_REV_IN_USE _S is less than six, the mobile station shall omit
2			this field; otherwise, the mobile station shall include this field
3			and set it as follows.
4			If the mobile station supports any radio configuration in the
5			Radio Configuration Class 2 (see 1.1.1), the mobile station shall
6			set this field to '1'; otherwise, the mobile station shall set this
7			field to '0'.
8	FOR_RC_PREF	–	Forward Radio Configuration preference.
9			If P_REV_IN_USE _S is less than six, the mobile station shall
10			omit this field; otherwise, the mobile station shall include
11			this field and set this field as follows.
12			The mobile station shall set this field to its preferred Radio
13			Configuration for the Forward Traffic Channel.
14	REV_RC_PREF	–	Reverse FCH Radio Configuration Preference.
15			If P_REV_IN_USE _S is less than six, the mobile station shall
16			omit this field; otherwise, the mobile station shall include
17			this field and set it as follows.
18			The mobile station shall set this field to its preferred Radio
19			Configuration for the Reverse Traffic Channel.
20	FCH_SUPPORTED	–	Fundamental Channel supported indicator.
21			If P_REV_IN_USE _S is less than six, the mobile station shall
22			omit this field; otherwise, the mobile station shall include
23			this field and set it as follows.
24			The mobile station shall set this field to '1' if the mobile
25			station supports Fundamental Channel; otherwise, the
26			mobile station shall set this field to '0'.
27	FCH Capability		
28	Type-specific fields	–	Fundamental Channel capability information.
29			If the FCH_SUPPORTED field is set to '1', the mobile station
30			shall include this field and set it as defined in 2.7.4.27.1;
31			otherwise, the mobile station shall omit this field.
32	DCCH_SUPPORTED	–	Dedicated Control Channel supported indicator.
33			If P_REV_IN_USE _S is less than six, the mobile station shall
34			omit this field; otherwise the mobile station shall include this
35			field and set it as follows.

The mobile station shall set this field to '1' if the mobile station supports Dedicated Control Channel; otherwise, the mobile station shall set this field to '0'.

DCCH Capability

Type specific fields – Dedicated Control Channel capability information.

If the DCCH_SUPPORTED field is set to '1', the mobile station shall include this field and set it as defined in 2.7.4.27.2; otherwise, the mobile station shall omit this field.

GEO_LOC_INCL – Geo-location included indicator.

If P_REV_IN_USE_s is less than seven, the mobile station shall omit this field; otherwise, if GLOBAL_EMERGENCY_CALL is included in this message and is set to '1', the mobile station shall include this field and set it as follows.

If the message is to contain the GEO_LOC_TYPE field, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

GEO_LOC_TYPE – Geo-Location Type.

If GEO_LOC_INCL is included in the message and is set to '1', the mobile station shall include this field and shall set it to the value shown in Table 2.7.1.3.2.4-7; otherwise, the mobile station shall omit this field.

Table 2.7.1.3.2.4-7. Geo-location Types

GEO_LOC_ TYPE (binary)	Type of Geo-location
000	No mobile station assisted geo-location capabilities
001	IS-801 capable (Advanced Forward Link Triangulation only (AFLT))
010	IS-801 capable (Advanced Forward Link Triangulation and Global Positioning Systems)
011	Global Positioning Systems only
All other GEO_LOC_TYPE values are reserved.	

REV_FCH-

_GATING_REQ – Reverse Fundamental gating mode request indicator.

If MOB_P_REV_IN_USE is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

If the mobile station requests to turn on the reverse Fundamental Traffic Channel gating mode in Radio Configurations 3, 4, 5, and 6, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

ORIG_REASON - Re-Origination reason indicator.

If P_REV_IN_USE_s is less than or equal to six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

The mobile station shall set this field to '1' if the mobile station initiates a silent-retry, i.e. an autonomous access re-attempt to re-originate this call without user interaction, after the mobile station received an access attempt failure from the ARQ Sublayer for a user initiated origination; otherwise, the mobile station shall set this field to '0'.

ORIG_COUNT - Re-Origination count.

If P_REV_IN_USE_s is less than or equal to six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the ORIG_REASON is '1', the mobile station shall set this field to the number of consecutive silent-retry, i.e. an autonomous access re-attempt that were made to re-originate the call, without user interaction, that were due to the mobile receiving an access attempt failure from the ARQ Sublayer.

If the ORIG_REASON is '0', the mobile station shall set this field according to table 2.7.1.3.2.4-8 depending on the number of autonomous re-connection attempts for the desired service (specified by SERVICE_OPTION) that have failed since the last successful connection of that service. The count shall only include attempts since the last power-up.

Table 2.7.1.3.2.4-8. ORIG_COUNT field for ORIG_REASON = '0'

Number of autonomous re-origination attempts for the desired service that have failed since the last successful connection of that service	ORIG_COUNT
0	'00'
1, 2, 3 or 4	'01'
5, 6, 7 or 8	'10'
9 or more	'11'

STS_SUPPORTED – STS supported indicator.

If P_REV_IN_USE_S is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

The mobile station shall set this field to '1' if the mobile station supports Space Time Spreading Transmit Diversity; otherwise, the mobile station shall set this field to '0'.

3X_CCH_SUPPORTED – 3X Common Channels supported.

If P_REV_IN_USE_S is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

The mobile station shall set this field to '1' if the mobile station supports the Spreading Rate 3 common channels (3X BCCH, 3X F-CCCH, and 3X R-EACH); otherwise, the mobile station shall set this field to '0'.

WLL_INCL – WLL information included indicator.

If P_REV_IN_USE_S is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station is a Wireless Local Loop device, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

WLL_DEVICE_TYPE – WLL device type indicator.

If WLL_INCL is not included, or if WLL_INCL is included and is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field as follows.

The mobile station shall set this field to the WLL_DEVICE_TYPE value shown in Table 2.7.1.3.2.1-3 corresponding to the mobile station device type.

GLOBAL-

- _EMERGENCY_CALL** - Global Emergency Call indicator.
- If P_REV_IN_USE_s is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and shall set it as follows:
- The mobile station shall set this field to '1' if the mobile station recognizes that this is an emergency call; otherwise, the mobile station shall set this field to '0'.
- QOS_PARMS_INCL** - Presence indicator for the QoS parameters.
- If P_REV_IN_USE_s is less than seven, the mobile station shall omit this field; otherwise the mobile station shall include this field and set it as follows.
- The mobile station shall set this field to '1', if QoS parameters are included in the message; otherwise the mobile station shall set this field to '0'. The mobile station shall not set this field to '1', if MOB_QOS_s is set to '0' or if the inclusion of the QoS parameters would prevent the inclusion of all the dialed digits in the message.
- QOS_PARMS_LEN** - Length of the block of QoS parameters.
- If QOS_PARMS_INCL is set to '1', the mobile station shall set this field to the combined length in octets, of the QOS_PARMS field and the immediately following QOS_RESERVED field; otherwise, the mobile station shall omit this field.
- QOS_PARMS** - QoS parameters block.
- If QOS_PARMS_INCL is set to '1', the mobile station shall include this field and set it to the set of QoS parameter values as defined in accordance with the requirements for the requested service option and/or for the user, per subscription.
- QOS_RESERVED** - QoS reserved bits.
- If QOS_PARMS_INCL is set to '1', the mobile station shall include the minimum number of bits of '0', such that the combined length of the QOS_PARMS field and of this field is an integer number of octets; otherwise, the mobile station shall omit this field.

1	ENC_INFO_INCL	-	Encryption fields included.
2			The mobile station shall set this field to '1' if the encryption
3			related fields are included; otherwise the mobile station shall
4			set this field to '0'. The mobile station shall set this field to '1'
5			if it is unable to determine the base station support for
6			encryption. The mobile station shall set this field to '0' if the
7			base station does not support encryption or the mobile station
8			does not support any of the encryption modes supported by the
9			base station.
10	SIG_ENCRYPT_REQ	-	Signaling Message encryption request indicator.
11			The mobile station shall include this field if ENC_INFO_INCL
12			is equal to '1'. If included the mobile station shall set this
13			field to '1' to request signaling encryption to be turned on for
14			signaling messages sent on f-dsch, r-dsch, f-csch, and r-csch.
15	SIG_ENCRYPT_SUP	-	Signaling Encryption supported indicator.
16			The mobile station shall include this field only if
17			ENC_INFO_INCL is equal to '1'. If included, this field
18			indicates which signaling encryption algorithms are
19			supported by the mobile station.
20			This field consists of the subfields shown in Table 2.7.1.3.2.1-
21			4.
22	KEY_SEQ_NEW	-	The key sequence number corresponding to the new encryption
23			key generated by the mobile station.
24			The mobile station shall include this field only if ENC_INFO_INCL
25			is equal to '1' and STORE_KEY _S is equal to '1'. If included, the
26			mobile station shall set this field to KEY_SEQ_NEW _{S-p} , the
27			sequence number associated with the new encryption key
28			generated by the mobile station.
29	ENC_SEQ_H	-	The 24 MSB of the EXT_ENC_SEQ
30			The mobile station shall include this field only ENC_INFO_INCL
31			is equal to '1' and the new Algorithm 1 is supported by the mobile
32			station. If this field is included, the mobile station shall set this
33			field to the 24 most significant bits of the EXT_ENC_SEQ to be
34			used as the initial value of crypto sync for both forward and
35			reverse link encryptions; otherwise the mobile station shall omit
36			this field.
37	ENC_SEQ_H_SIG	-	The signature of ENC_SEQ_H

1 If the ENC_SEQ_H field is included in the message, the mobile
2 station shall set this field to the digital signature of the
3 ENC_SEQ_H computed using the session encryption key as
4 described in (TBD); otherwise, the mobile station shall omit this
5 field.

6 UI_ENCRYPT_REQ - Request for user information encryption on the traffic
7 channel indicator.

8 The mobile station shall include this field only if
9 ENC_INFO_INCL is equal to '1'. If this field is included, the
10 mobile station shall set this field to '1' to request user
11 information encryption. Otherwise, the mobile station shall
12 set this field to '0'.

13 UI_ENCRYPT_SUP - User information Encryption supported indicator.

14 The mobile station shall include this field only
15 ENC_INFO_INCL is equal to '1'. If this field is included, the
16 mobile station shall set this field to indicate the supported
17 user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-9.

Table 2.7.1.3.2.4-9. Encoding of the UI_ENCRYPT_SUP Field

Subfield	Length (bits)	Subfield Description
ORYX	1	Support for ORYX encryption algorithm
RESERVED	7	

The mobile station shall set each subfield to '1' if the corresponding user information encryption algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

SYNC_ID_INCL - SCR synchronization identifier included indicator.

The mobile station shall set this field to '1' if the SYNC_ID field is included in this message.

SYNC_ID - SCR synchronization identifier.

If the SYNC_ID_INCL field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it to the 16-bit CRC computed over the entire stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record) as specified in 2.6.11.

PREV_SID_INCL - Previous System Identification (SID) included indicator.

If P_REV_IN_USE is less than seven, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

The mobile station shall set this field to '1' if the mobile station determines that the SID has been changed after a packet data dormant handoff and the PREV_SID field is included in this message; otherwise, the mobile station shall set this field to '0'.

PREV_SID - Previous System Identification.

If PREV_SID_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

1			If the mobile station determines SID has been changed after
2			a packet data dormant handoff, the mobile station shall set
3			this field to the previous SID.
4	PREV_NID_INCL	-	Previous Network Identification (NID) included indicator.
5			If P_REV_IN_USE is less than seven, the mobile station shall
6			omit this field; otherwise, the mobile station shall include
7			this field and set it as follows:
8			The mobile station shall set this field to '1' if the mobile
9			station determines that NID has been changed after a packet
10			data dormant handoff and the PREV_NID field is included in
11			this message; otherwise, the mobile station shall set this
12			field to '0'.
13	PREV_NID	-	Previous Network Identification.
14			If PREV_NID_INCL is set to '0', the mobile station shall omit
15			this field; otherwise, the mobile station shall include this
16			field and set it as follows:
17			If the mobile station determines NID has been changed after
18			a packet data dormant handoff, the mobile station shall set
19			this field to the previous NID.
20	PREV_PZID_INCL	-	Previous Packet Zone ID (PZID) included indicator.
21			If P_REV_IN_USE is less than seven, the mobile station shall
22			omit this field; otherwise, the mobile station shall include
23			this field and set it as follows:
24			The mobile station shall set this field to '1' if the mobile
25			station determines that the Packet Zone ID has been
26			changed after a packet data dormant handoff and the
27			PREV_PZID field is included in this message; otherwise, the
28			mobile station shall omit this field.
29	PREV_PZID	-	Previous Packet Zone ID.
30			If PREV_PZID_INCL is set to '0', the mobile station shall omit
31			this field; otherwise, the mobile station shall include this
32			field and set it as follows:
33			If the mobile station determines PZID has been changed after
34			a packet data dormant handoff, the mobile station shall set
35			this field to the previous PZID.
36	SO_BITMAP_IND	-	Service option bitmap indicator.
37			If P_REV_IN_USE _s is less than 7, the mobile station shall omit
38			this field; otherwise, the mobile station shall set this field as
39			defined in Table 2.7.1.3.2.4-10.

Table 2.7.1.3.2.4-10. Encoding of the SO_BITMAP_IND Field

SO_BITMAP_IND	Size of bitmap (in bits) included
00	0 bit (i.e., No bitmap included)
01	4 bits
10	8 bits
11	Reserved

SO_GROUP_NUM - Service option group number.

If SO_BITMAP_IND is included and not set to '00', the mobile station shall include this field and set this field to service option group number defined in TSB58, of the bitmap to be included in this message; otherwise, the mobile station shall omit this field.

SO_BITMAP - Service option bitmap.

If the field SO_BITMAP_IND is included and is not set to '00', the mobile station shall include the bitmap of the service option group (SO_GROUP_NUM); otherwise, the mobile station shall omit this field.

When the service option bitmap is included, if there are more than $(4 \times \text{SO_BITMAP_IND})$ service options defined in TSB58 for the service option group [SO_GROUP_NUM], the mobile station shall include the bitmap containing the least significant bits $(4 \times \text{SO_BITMAP_IND})$ for the service option group.

The mobile station shall set a bit in this bitmap to '1', if the mobile station is capable of supporting the service option for which the bit represents.

1 2.7.1.3.2.5 Page Response Message

2 MSG_TAG: PRM

3

Field	Length (bits)
MOB_TERM	1
SLOT_CYCLE_INDEX	3
MOB_P_REV	8
SCM	8
REQUEST_MODE	3
SERVICE_OPTION	16
PM	1
NAR_AN_CAP	1
ENCRYPTION_SUPPORTED	0 or 4
NUM_ALT_SO	3

NUM_ALT_SO occurrences of the following field:

ALT_SO	16
--------	----

(continues on next page)

4

5

1

Field	Length (bits)
UZID_INCL	0 or 1
UZID	0 or 16
CH_IND	0 or 2
OTD_SUPPORTED	0 or 1
QPCH_SUPPORTED	0 or 1
ENHANCED_RC	0 or 1
FOR_RC_PREF	0 or 5
REV_RC_PREF	0 or 5
FCH_SUPPORTED	0 or 1
FCH Capability Type-specific fields	0 or variable
DCCH_SUPPORTED	0 or 1
DCCH Capability Type-specific fields	0 or variable
REV_FCH_GATING_REQ	0 or 1
STS_SUPPORTED	0 or 1
3X_CCH_SUPPORTED	0 or 1
WLL_INCL	0 or 1
WLL_DEVICE_TYPE	0 or 3
HOOK_STATUS	0 or 4
ENC_INFO_INCL	1
SIG_ENCRYPT_SUP	0 or 8
SIG_ENCRYPT_REQ	0 or 1
KEY_SEQ_NEW	0 or 4
ENC_SEQ_H	0 or 24
ENC_SEQ_H_SIG	0 or 8
UI_ENCRYPT_REQ	1
UI_ENCRYPT_SUP	8

(continues on next page)

2

3

1

Field	Length (bits)
SYNC_ID_INCL	1
SYNC_ID	0 or 16

If P_REV_IN_USE_s is equal to or greater than 7, the mobile station shall include the following fields:

SO_BITMAP_IND	0 or 2
SO_GROUP_NUM	0 or 5
SO_BITMAP	0 or 4 × SO_BITMAP_IND

2

3

MOB_TERM – Mobile terminated calls accepted indicator.

4

5

6

7

If the mobile station is configured to accept mobile terminated calls while operating with the current roaming status (see 2.6.5.3), the mobile station shall set this bit to '1'. Otherwise, the mobile station shall set this bit to '0'.

8

SLOT_CYCLE_INDEX – Slot cycle index.

9

10

11

12

If the mobile station is configured for slotted mode operation, the mobile station shall set this field to the preferred slot cycle index, SLOT_CYCLE_INDEX_p (see 2.6.2.1.1). Otherwise, the mobile station shall set this field to '000'.

13

MOB_P_REV – Protocol revision of the mobile station.

14

The mobile station shall set this field to '00000111'.

15

SCM – Station class mark.

16

17

The mobile station shall set this field to the station class mark of the mobile station. See 2.3.3.

18

19

20

REQUEST_MODE – Requested mode code. The mobile station shall set this field to the value shown in Table 2.7.1.3.2.4-1 corresponding to its current configuration.

21

SERVICE_OPTION – Service option.

22

23

24

If the mobile station accepts the service option specified by the mobile-station-addressed page, it shall set this field as follows:

25

26

27

If the page record to which the mobile station is responding contained a SERVICE_OPTION field, the mobile station shall set this field to the service option number specified

1		in the SERVICE OPTION field of the page record to which
2		the mobile station is responding.
3		If the page record to which the mobile station is responding
4		did not contain a SERVICE OPTION field, the mobile
5		station shall set this field to the default option number
6		'0000000000000001'.
7		If the mobile station does not accept the service option
8		specified by the mobile-station-addressed page to which the
9		mobile station is responding and the mobile station has an
10		alternative service option to request, the mobile station shall
11		set this field to the service option code specified in [30]
12		corresponding to the alternative service option.
13		If the mobile station does not accept the service option
14		specified by the mobile-station-addressed page to which the
15		mobile station is responding and the mobile station does not
16		have an alternative service option to request, the mobile
17		station shall set this field to '0000000000000000' to reject the
18		service option specified by the page record of the <i>General Page</i>
19		<i>Message</i> to which the mobile station is responding.
20	PM	– Privacy mode indicator.
21		To request voice privacy, the mobile station shall set this
22		field to '1'; otherwise, the mobile station shall set this field to
23		'0'.
24	NAR_AN_CAP	– Narrow analog capability.
25		If the mobile station is capable of narrow analog operation,
26		the mobile station shall set this bit to '1'; otherwise, the
27		mobile station shall set this bit to '0'.
28	ENCRYPTION-	– Encryption algorithms supported by the mobile station.
29	_SUPPORTED	
30		If P_REV_IN_USE is greater than or equal to 7 or AUTH_MODE
31		is equal to '00', the mobile station shall omit this field. If
32		P_REV_IN_USE is less than 7 and AUTH_MODE is not equal to
33		'00', then the mobile station shall set this field as specified in
		table 2.7.1.3.2.4-5.
34	NUM_ALT_SO	– Number of alternative service options.
35		If P_REV_IN_USE _s is less than seven, the mobile station shall
36		set this field to the number of alternative service options it
37		supports other than the one specified in the
38		SERVICE_OPTION field. The mobile station shall set this field
39		to a value less than or equal to MAX_NUM_ALT_SO _s .

If P_REV_IN_USE_S is equal to or greater than seven, the mobile station shall set this field to the number of alternate service options, which either have no service option group number assigned or do not belong to the same service option group whose bitmap is being included. The alternate service option numbers are other than the one specified in the SERVICE_OPTION field. The mobile station shall set this field to a value less than or equal to MAX_NUM_ALT_SO_S.

ALT_SO – Alternative service option.

The mobile station shall include NUM_ALT_SO occurrences of this field. The mobile station shall set this field to the value specified in [30], corresponding to the alternative service option supported by the mobile station.

If P_REV_IN_USE_S is equal to or greater than seven, the mobile station shall include NUM_ALT_SO occurrences of in this field. The mobile station shall set this field to the service option number defined in TSB58 corresponding to the alternate service options which either have no service option group number assigned or do not belong to the same service option group whose bitmap is included in this message.

UZID_INCL – User Zone Identifier included indicator.

If P_REV_IN_USE_S is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the message is to contain the User Zone Identifier, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

UZID – User Zone Identifier.

If the UZID_INCL field is included in the message and is set to '1', the mobile station shall include this field and set it to UZID_S; otherwise, the mobile station shall omit this field.

CH_IND – Channel Indicator.

If P_REV_IN_USE_S is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it, as shown in Table 2.7.1.3.2.5-1, to request physical resources.

Table 2.7.1.3.2.5-1. Channel indicator

CH_IND (binary)	Channel(s) Requested
00	Reserved
01	Fundamental Channel
10	Dedicated Control Channel
11	Fundamental Channel and Dedicated Control Channel

OTD_SUPPORTED

– Orthogonal transmit diversity supported indicator

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports orthogonal transmit diversity, it shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

QPCH_SUPPORTED

– Quick Paging Channel supported indicator.

If P_REV_IN_USE is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports the Quick Paging Channel, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

ENHANCED_RC

– Enhanced radio configuration supported indicator.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

If the mobile station supports any radio configuration in the Radio Configuration Class 2 (see 1.1.1), the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

FOR_RC_PREF

– Forward Radio Configuration preference.

If P_REV_IN_USE_s is less than six, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows.

The mobile station shall set this field to its preferred Radio Configuration for the Forward Traffic Channel.

1	REV_RC_PREF	-	Reverse Radio Configuration preference.
2			If P_REV_IN_USE _S is less than six, the mobile station shall
3			omit this field; otherwise, the mobile station shall include
4			this field and set it as follows.
5			The mobile station shall set this field to its preferred Radio
6			Configuration for the Reverse Traffic Channel.
7	FCH_SUPPORTED	-	Fundamental Channel supported indicator.
8			If P_REV_IN_USE _S is less than six, the mobile station shall
9			omit this field; otherwise, the mobile station shall include
10			this field and set it as follows.
11			The mobile station shall set this field to '1' if the mobile
12			station supports Fundamental Channel; otherwise, the
13			mobile station shall set this field to '0'.
14	FCH Capability Type -		
15	specific fields	-	Fundamental Channel capability information.
16			If the FCH_SUPPORTED field is set to '1', the mobile station
17			shall include this field and set it as described in 2.7.4.27.1;
18			otherwise, the mobile station shall omit this field.
19	DCCH_SUPPORTED	-	Dedicated Control Channel supported indicator.
20			If P_REV_IN_USE _S is less than six, the mobile station shall
21			omit this field; otherwise, the mobile station shall include
22			this field and set it as follows.
23			The mobile station shall set this field to '1' if the mobile
24			station supports Dedicated Control Channel; otherwise, the
25			mobile station shall set this field to '0'.
26	DCCH Capability Type -		
27	specific fields	-	Dedicated Control Channel capability information.
28			If DCCH_SUPPORTED is set to '1', the mobile station shall
29			include this field and set it as defined in 2.7.4.27.2;
30			otherwise, the mobile station shall omit this field.
31	REV_FCH-		
32	_GATING_REQ	-	Reverse eighth gating mode request indicator.
33			If MOB_P_REV_IN_USE is less than seven, the mobile station
34			shall omit this field; otherwise, the mobile station shall
35			include this field and set it as follows:

1			If the mobile station requests to turn on the reverse
2			Fundamental Traffic Channel gating mode in Radio
3			Configurations 3, 4, 5, and 6, the mobile station shall set this
4			field to '1'; otherwise, the mobile station shall set this field to
5			'0'.
6	STS_SUPPORTED	-	STS supported indicator.
7			If P_REV_IN_USE _S is less than seven, the mobile station shall
8			omit this field; otherwise, the mobile station shall include
9			this field and set it as follows.
10			The mobile station shall set this field to '1' if the mobile
11			station supports Space Time Spreading Transmit Diversity;
12			otherwise, the mobile station shall set this field to '0'.
13	3X_CCH_SUPPORTED-	3X	Common Channels supported.
14			If P_REV_IN_USE _S is less than seven, the mobile station shall
15			omit this field; otherwise, the mobile station shall include
16			this field and set it as follows.
17			The mobile station shall set this field to '1' if the mobile
18			station supports the Spreading Rate 3 common channels (3X
19			BCCH, 3X F-CCCH, and 3X R-EACH); otherwise, the mobile
20			station shall set this field to '0'.
21	WLL_INCL	-	WLL information included indicator.
22			If P_REV_IN_USE _S is less than seven, the mobile station shall
23			omit this field; otherwise, the mobile station shall include this
24			field and set it as follows.
25			If the mobile station is a Wireless Local Loop device, the
26			mobile station shall set this field to '1'; otherwise, the mobile
27			station shall set this field to '0'.
28	WLL_DEVICE_TYPE	-	WLL device type indicator.
29			If WLL_INCL is not included, or if WLL_INCL is included and is
30			set to '0', the mobile station shall omit this field; otherwise,
31			the mobile station shall set this field as follows.
32			The mobile station shall set this field to the
33			WLL_DEVICE_TYPE value shown in Table 2.7.1.3.2.1-3
34			corresponding to the mobile station device type.
35	HOOK_STATUS	-	WLL terminal hook status.
36			If WLL_INCL is not included, or if WLL_INCL is included and is
37			set to '0', the mobile station shall omit this field; otherwise,
38			the mobile station shall set this field to the value shown in
39			Table 2.7.1.3.2.1-4 corresponding to the hook state.

1	ENC_INFO_INCL	-	Encryption fields included.
2			The mobile station shall set this field to '1' in the encryption
3			related fields are included; otherwise the mobile station shall
4			set this field to '0'. The mobile station shall set this field to '1'
5			if it is unable to determine the base station support for
6			encryption. The mobile station shall set this field to '0' if the
7			base station does not support encryption or the mobile station
8			does not support any of the encryption modes supported by the
9			base station.
10	SIG_ENCRYPT_SUP	-	Signaling Encryption supported indicator.
11			The mobile station shall include this field only
12			ENC_INFO_INCL is equal to '1'. If this field is included, this
13			field indicates which signaling encryption algorithms are
14			supported by the mobile station.
15			This field consists of the subfields shown in Table 2.7.1.3.2.1-
16			4.
17	SIG_ENCRYPT_REQ	-	Signaling Message encryption request indicator.
18			The mobile station shall include this field if ENC_INFO_INCL
19			is equal to '1'. If included the mobile station shall set this
20			field to '1' to request signaling encryption to be turned on for
21			signaling messages sent on f-dsch, r-dsch, f-csch, and r-csch.
22	KEY_SEQ_NEW	-	The key sequence number corresponding to the new encryption
23			key generated by the mobile station.
24			The mobile station shall include this field only if ENC_INFO_INCL
25			is equal to '1' and STORE_KEY _S is equal to '1'. If this field is
26			included, the mobile station shall set this field to
27			KEY_SEQ_NEW _{S-p} , the sequence number associated with the new
28			encryption key generated by the mobile station.
29	ENC_SEQ_H	-	The 24 MSB of the EXT_ENC_SEQ
30			The mobile station shall include this field only if ENC_INFO_INCL
31			is equal to '1' and the new Algorithm 1 is supported by the mobile
32			station. If this field is included, the mobile station shall set this
33			field to the 24 most significant bits of the EXT_ENC_SEQ to be
34			used as the initial value of crypto sync for both forward and
35			reverse link encryptions; otherwise the mobile station shall omit
36			this field.
37	ENC_SEQ_H_SIG	-	The signature of ENC_SEQ_H

1			If the ENC_SEQ_H field is included in the message, the mobile
2			station shall set this field to the digital signature of the
3			ENC_SEQ_H computed using the session encryption key as
4			described in (TBD); otherwise, the mobile station shall omit this
5			field.
6	UI_ENCRYPT_REQ	-	Request for user information encryption on the traffic
7			channel indicator.
8			The mobile station shall include this field only if
9			ENC_INFO_INCL is equal to '1'. If this field is included, the
10			mobile station shall set this field to '1' to request user
11			information encryption. Otherwise, the mobile station shall
12			set this field to '0'.
13	UI_ENCRYPT_SUP	-	User information Encryption supported indicator.
14			The mobile station shall include this field only if
15			ENC_INFO_INCL is equal to '1'. If this field is included, the
16			mobile station shall set this field to indicate the supported
17			user information encryption algorithms.
18			This field consists of the subfields shown in Table 2.7.1.3.2.4-
19			9.
20			The mobile station shall set each subfield to '1' if the
21			corresponding user information encryption algorithm is
22			supported by the mobile station; otherwise, the mobile station
23			shall set the subfield to '0'.
24	SYNC_ID_INCL	-	SCR synchronization identifier included indicator.
25			The mobile station shall set this field to '1' if the SYNC_ID
26			field is included in this message.
27	SYNC_ID	-	SCR synchronization identifier.
28			If the SYNC_ID_INCL field is set to '0', the mobile station shall
29			omit this field; otherwise, the mobile station shall include
30			this field and set it to the 16-bit CRC computed over the
31			entire stored service configuration (that is, both the Service
32			Configuration information record and the Non-negotiable
33			Service Configuration information record) as specified in
34			2.6.11.
35	SO_BITMAP_IND	-	SO bitmap indicator.
36			If P_REV_IN_USE _S is less than 7, the mobile station shall omit
37			this field; otherwise, the mobile station shall include this
38			field and set this field as defined in Table 2.7.1.3.2.4-10.
39	SO_GROUP_NUM	-	The service option group number.

1 If SO_BITMAP_IND is included and not set to '00', the mobile
2 station shall include this field and set this field to service
3 option group number of the bitmap to be included in this
4 message; otherwise, the mobile station shall omit this field.

5 SO_BITMAP - Service option bitmap.

6 If the field SO_BITMAP_IND field is included and is not set to
7 '00', the mobile station shall include the bitmap of the service
8 option group (SO_GROUP_NUM); otherwise, the mobile station
9 shall omit this field.

10 When the service option bitmap is included, if there are more
11 than $(4 \times \text{SO_BITMAP_IND})$ service options defined for the
12 service option group, the mobile station shall include the
13 bitmap containing the least significant bits $(4 \times$
14 $\text{SO_BITMAP_IND})$ of the service option group.

15 The mobile station shall set a bit in this bitmap to '1', if the
16 mobile station is capable of supporting the service option for
17 which the bit represents.

1 2.7.1.3.2.6 Authentication Challenge Response Message

2 MSG_TAG: AUCRM

3

Field	Length (bits)
AUTHU	18

4 AUTHU – Authentication challenge response.

5 The mobile station shall set this field as specified in
6 2.3.12.1.4.

7

2.7.1.3.2.7 Status Response Message

MSG_TAG: STRPM

Field	Length (bits)
QUAL_INFO_TYPE	8
QUAL_INFO_LEN	3
Type -specific fields	$8 \times \text{QUAL_INFO_LEN}$

One or more occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	$8 \times \text{RECORD_LEN}$

QUAL_INFO_TYPE – Qualification information type.

The mobile station shall set this field to the QUAL_INFO_TYPE field in the corresponding *Status Request Message*.

QUAL_INFO_LEN – Qualification information length.

The mobile station shall set this field to the QUAL_INFO_LEN field in the corresponding *Status Request Message*.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields to the qualification information in the corresponding *Status Request Message*.

The mobile station shall include all the records requested in the corresponding *Status Request Message*. The mobile station shall include one occurrence of the following fields for each information record to be included:

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type value shown in Table 3.7.2.3.2.15-2 corresponding to the type of this information record.

RECORD_LEN – Information record length.

The mobile station shall set this field to the number of octets included in the type -specific fields of this information record.

1 Type-specific fields – Type-specific fields.

2 The mobile station shall set these fields to the information as
3 specified in 2.7.4 for the specific type of records. The mobile
4 station shall only specify the information corresponding to the
5 included qualification information.
6

- 1 2.7.1.3.2.8 TMSI Assignment Completion Message
- 2 MSG_TAG: TACM
- 3 There are no Layer 3 fields associated with this message.
- 4

- 1 2.7.1.3.2.9 PACA Cancel Message
- 2 MSG_TAG: PACNM
- 3 There are no Layer 3 fields associated with this message.
- 4

2.7.1.3.2.10 Extended Status Response Message

MSG_TAG: ESTRPM

Field	Length (bits)
QUAL_INFO_TYPE	8
QUAL_INFO_LEN	3
Type-specific fields	$8 \times \text{QUAL_INFO_LEN}$
NUM_INFO_RECORDS	4

NUM_INFO_RECORDS occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

- QUAL_INFO_TYPE – Qualification information type.
- The mobile station shall set this field to the QUAL_INFO_TYPE field in the corresponding *Status Request Message*.
- QUAL_INFO_LEN – Qualification information length.
- The mobile station shall set this field to the QUAL_INFO_LEN field in the corresponding *Status Request Message*.
- Type-specific fields – Type-specific fields.
- The mobile station shall set these fields to the qualification information in the corresponding *Status Request Message*.
- NUM_INFO_RECORDS – Number of information records included.
- The mobile station shall set this field to the number of information records which are included. The mobile station shall include all the records requested in the corresponding *Status Request Message*.

The mobile station shall include one occurrence of the following fields for each information record which is included:

- RECORD_TYPE – Information record type.
- The mobile station shall set this field to the record type value shown in Table 3.7.2.3.2.15-2 corresponding to the type of this information record.
- RECORD_LEN – Information record length.

Type-specific fields

The mobile station shall set these fields to the information as specified in 2.7.4 for the specific type of records. The mobile station shall only specify the information corresponding to the included qualification information.

2.7.1.3.2.11 Device Information Message

MSG_TAG: DIM

Field	Length (bits)
WLL_DEVICE_TYPE	3
NUM_INFO_RECORDS	5

NUM_INFO_RECORDS occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

WLL_DEVICE_TYPE – WLL device type indicator.

The mobile station shall set this field to the WLL_DEVICE_TYPE value shown in Table 2.7.1.3.2.1-3 corresponding to the mobile station device type.

NUM_INFO_RECORDS – Number of information records included.

The mobile station shall set this field to the number of information records which are included.

The mobile station shall include one occurrence of the following fields for each information record which is included:

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type code shown in Table 2.7.4-1 corresponding to the type of this information record.

RECORD_LEN – Information record length.

The mobile station shall set this field to the number of octets in the type -specific fields of this record.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields as specified in 2.7.4 for this type of information record.

2.7.1.3.2.12 Security Mode Request Message

MSG_TAG: SMRM

Order-Specific Field	Length (bits)
UI_ENC_INCL	1
UI_ENCRYPT_SUP	0 or 8
NUM_RECS	0 or 3

NUM_RECS + 1 occurrences of the following two field record

CON_REF	0 or 8
UI_ENCRYPT_REQ	0 or 1

SIG_ENC_INCL	1
SIG_ENCRYPT_SUP	0 or 8
SIG_ENCRYPT_REQ	0 or 1
RESERVED	0 - 7 (as needed)

UI_ENC_INCL – User information encryption fields included.

The mobile station shall set this field to '1' if the user information encryption related fields are included in this message. Otherwise, the mobile station shall set this field to '0'.

The mobile station shall set this field to '1'.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included the mobile station shall set this field to indicate the supported user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-9.

The mobile station shall set each subfield to '1' if the corresponding user information encryption algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

NUM_REC – Number of user information encryption records.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included the mobile station shall set this field to number of user information encryption records included in this message minus 1.

The mobile station shall include NUM_REC + 1 occurrences of the following two field record:

CON_REF – Connection reference corresponding to the service instance requesting for encryption.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included, the mobile station shall set this field to the connection reference of the service option connection corresponding to this user information encryption request record.

UI_ENCRYPT_REQ – Request for user information encryption on the traffic channel indicator.

The mobile station shall set this field to '1' to request user information encryption for the user information corresponding to the service option connection identified by CON_REF; otherwise, the mobile station shall set this field to '0'.

SIG_ENC_INCL – Signaling encryption fields included.

The mobile station shall set this field to '1' if the following two fields related to signaling encryption fields are included in this message. Otherwise, the mobile station shall set this field to '0'.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The mobile station shall include this field if SIG_ENC_INCL is equal to '1'. If included the mobile shall set this field to indicate the supported signaling encryption algorithms supported by the mobile station.

1			This field consists of the subfields shown in Table 2.7.1.3.2.1-
2			4.
3	SIG_ENCRYPT_REQ	-	Signaling Message encryption request indicator.
4			The mobile station shall include this field if SIG_ENC_INCL is
5			equal to '1'. If included the mobile station shall set this field
6			to '1' to request signaling encryption to be turned on for
7			signaling messages sent on f-dsch, r-dsch, f-csch, and r-csch.
8	RESERVED	-	Reserved bits.
9			The mobile station shall add reserved bits as needed in order
10			to make the length of the entire message equal to an integer
11			number of octets. The mobile station shall set these bits
12			to '0'.
13			

- 1 2.7.2 r-dsch
- 2 During Traffic Channel operation, the mobile station sends signaling messages to the base
- 3 station using the r-dsch.
- 4 2.7.2.1 Reserved
- 5 2.7.2.2 Reserved
- 6 2.7.2.3 PDU Formats for Messages on r-dsch
- 7 The messages sent on the r-dsch are summarized in Table 2.7.2.3-1.

Table 2.7.2.3-1. Messages on r-dsch

Message Name	MSG_TAG	Section Number
<i>Order Message</i>	ORDM	2.7.2.3.2.1
<i>Authentication Challenge Response Message</i>	AUCRM	2.7.2.3.2.2
<i>Flash With Information Message</i>	FWIM	2.7.2.3.2.3
<i>Data Burst Message</i>	DBM	2.7.2.3.2.4
<i>Pilot Strength Measurement Message</i>	PSMM	2.7.2.3.2.5
<i>Power Measurement Report Message</i>	PMRM	2.7.2.3.2.6
<i>Send Burst DTMF Message</i>	BDTMFM	2.7.2.3.2.7
<i>Status Message</i>	STM	2.7.2.3.2.8
<i>Origination Continuation Message</i>	ORCM	2.7.2.3.2.9
<i>Handoff Completion Message</i>	HOCM	2.7.2.3.2.10
<i>Parameters Response Message</i>	PRSM	2.7.2.3.2.11
<i>Service Request Message</i>	SRQM	2.7.2.3.2.12
<i>Service Response Message</i>	SRPM	2.7.2.3.2.13
<i>Service Connect Completion Message</i>	SCCM	2.7.2.3.2.14
<i>Service Option Control Message</i>	SOCM	2.7.2.3.2.15
<i>Status Response Message</i>	STRPM	2.7.2.3.2.16
<i>TMSI Assignment Completion Message</i>	TACM	2.7.2.3.2.17
<i>Supplemental Channel Request Message</i>	SCRM	2.7.2.3.2.18
<i>Candidate Frequency Search Response Message</i>	CFSRSM	2.7.2.3.2.19
<i>Candidate Frequency Search Report Message</i>	CFSRPM	2.7.2.3.2.20
<i>Periodic Pilot Strength Measurement Message</i>	PPSMM	2.7.2.3.2.21
<i>Outer Loop Report Message</i>	OLRM	2.7.2.3.2.22
<i>Resource Request Message</i>	RRM	2.7.2.3.2.23
<i>Resource Request Mini Message</i>	RRMM	2.7.2.3.2.24
<i>Extended Release Response Message</i>	ERRM	2.7.2.3.2.25
<i>Extended Release Response Mini Message</i>	ERRMM	2.7.2.3.2.26
<i>Pilot Strength Measurement Mini Message</i>	PSMMM	2.7.2.3.2.27
<i>Supplemental Channel Request Mini Message</i>	SCRMM	2.7.2.3.2.28
<i>Resource Release Request Message</i>	RRRM	2.7.2.3.2.29
<i>Resource Release Request Mini Message</i>	RRRMM	2.7.2.3.2.30

<i>User Zone Update Request Message</i>	UZURM	2.7.2.3.2.31
<i>Enhanced Origination Message</i>	EOM	2.7.2.3.2.32
<i>Extended Flash With Information Message</i>	EFWIM	2.7.2.3.2.33
<i>Extended Pilot Strength Measurement Message</i>	EPSMM	2.7.2.3.2.34
<i>Extended Handoff Completion Message</i>	EHOCM	2.7.2.3.2.35
<i>Security Mode Request Message</i>	SMRM	2.7.2.3.2.36
<i>Call Cancel Message</i>	CLCM	2.7.2.3.2.37
<i>Device Information Message</i>	DIM	2.7.1.3.2.38

1

2

- 1 2.7.2.3.1 Reserved
- 2 2.7.2.3.2 Message Body Contents
- 3

2.7.2.3.2.1 Order Message

MSG_TAG: ORDM

Field	Length (bits)
ORDER	6
ADD_RECORD_LEN	3
Order-specific fields (if used)	$8 \times \text{ADD_RECORD_LEN}$
CON_REF_INCL	0 or 1
CON_REF	0 or 8

ORDER – Order code.

The mobile station shall set this field to the ORDER code.
See 2.7.3.

ADD_RECORD_LEN – Additional record length.

The mobile station shall set this field to the number of octets
in the order-specific fields included in this message.

Order-specific fields – Order-specific fields.

The mobile station shall include order-specific fields as
specified in 2.7.3.

CON_REF_INCL – Connection reference included indicator.

If the order carried by this message is not a Call Control order
(2.6.10), the mobile station shall omit this field; otherwise,
the mobile station shall include this field and set it as follows:

The mobile station shall set this field to '1' if the connection
reference field is included in this message; otherwise, it
shall set this field to '0'.

CON_REF – Connection reference.

If the CON_REF_INCL field is set to '0', the mobile station
shall omit this field; otherwise, the mobile station shall
include this field and shall set it to the value of the
connection reference assigned to the service option
connection of the call, to which this message corresponds.

1 2.7.2.3.2.2 Authentication Challenge Response Message

2 MSG_TAG: AUCRM

3

Field	Length (bits)
AUTHU	18

4

5 AUTHU - Authentication challenge response.

6 The mobile station shall set this field as specified in
7 2.3.12.1.4.

8

2.7.2.3.2.3 Flash With Information Message

MSG_TAG: FWIM

Field	Length (bits)
Zero or more occurrences of the following record:	
RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	$8 \times \text{RECORD_LEN}$

The mobile station shall include one occurrence of the following record for each information record to be included:

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type code shown in Table 2.7.4-1 corresponding to the type of this information record.

RECORD_LEN – Information record length.

The mobile station shall set this field to the number of octets in the type -specific fields of this record.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields as specified in 2.7.4 for this type of information record.

2.7.2.3.2.4 Data Burst Message

MSG_TAG: DBM

Field	Length (bits)
MSG_NUMBER	8
BURST_TYPE	6
NUM_MSGS	8
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHARi	8
-------	---

- MSG_NUMBER – Message number within the data burst stream.
- The mobile station shall set this field to the number of this message within the data burst stream.
- BURST_TYPE – Data burst type.
- The mobile station shall set the value of this field for the type of this data burst as defined in [30]. If the mobile station sets this field equal to '111110', it shall set the first two CHARi fields of this message equal to EXTENDED_BURST_TYPE_INTERNATIONAL as described in the definition of CHARi below. If the mobile station sets this field equal to '111111', it shall set the first two CHARi fields of this message equal to the EXTENDED BURST TYPE as described in the definition of CHARi below.
- NUM_MSGS – Number of messages in the data burst stream.
- The mobile station shall set this field to the number of messages within this data burst stream.
- NUM_FIELDS – Number of characters in this message.
- The mobile station shall set this field to the number of CHARi fields included in this message.
- CHARi – Character.
- The mobile station shall include NUM_FIELDS occurrences of this field. The mobile station shall set these fields to the corresponding octet of the data burst stream.

If the BURST_TYPE field of this message is equal to '111110', the first two CHAR_i octets shall represent a 16 bit EXTENDED_BURST_TYPE_INTERNATIONAL field, which is encoded as shown below. The first ten bits of this field contain a binary mapping of the Mobile Country Code (MCC) associated with the national standards organization administering the use of the remaining octets of the message. Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the EXTENDED_BURST_TYPE_INTERNATIONAL field shall specify the COUNTRY_BURST_TYPE. The mobile station shall set the value of the COUNTRY_BURST_TYPE according to the type of this data burst as defined in standards governed by the country where this data burst type is to be used.

Field	Length (bits)
Mobile Country Code	10
COUNTRY_BURST_TYPE	6
Remaining CHAR _i fields	8 × (NUM_FIELDS - 2)

If the BURST TYPE field of this message is equal to '111111', the first two CHAR_i octets shall represent a single, 16 bit, EXTENDED BURST TYPE field, as shown below. The mobile station shall set the value of the EXTENDED BURST TYPE according to the type of this data burst as defined in [30].

Field	Length (bits)
EXTENDED_BURST_TYPE (first two CHAR _i fields)	16
Remaining CHAR _i fields	8 × (NUM_FIELDS - 2)

2.7.2.3.2.5 Pilot Strength Measurement Message

MSG_TAG: PSMM

Field	Length (bits)
REF_PN	9
PILOT_STRENGTH	6
KEEP	1

Zero or more occurrences of the following record:

PILOT_PN_PHASE	15
PILOT_STRENGTH	6
KEEP	1

REF_PN – Time reference PN sequence offset.

The mobile station shall set this field to the PN sequence offset of the pilot used by the mobile station to derive its time reference, relative to the zero offset pilot PN sequence in units of 64 PN chips.

PILOT_STRENGTH – Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \log_{10} PS \rfloor,$$

where PS is the strength of the pilot used by the mobile station to derive its time reference (see 6.1.5.1), measured as specified in 2.6.6.2.2. If this value ($\lfloor -2 \times 10 \log_{10} PS \rfloor$) is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

KEEP – Keep pilot indicator.

If the handoff drop timer (see 2.6.6.2.3) corresponding to the pilot used by the mobile station to derive its time reference (see 2.1.5 of [2]) has expired, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

If P_REV_IN_USE_s is less than or equal to three, the mobile station shall include one occurrence of the three-field record given below for each pilot in the Active Set and for

each Candidate Set pilot reported (the number of Candidate Set pilots reported shall not exceed 5), other than the pilot identified by the REF_PN field. If P_REV_IN_USE_s is greater than three and SOFT_SLOPE_s is equal to '000000', the mobile station shall include one occurrence of the three-field record given below for each pilot in the Active Set and for each pilot in the Candidate Set, other than the pilot identified by the REF_PN field. If P_REV_IN_USE_s is greater than three and SOFT_SLOPE_s is not equal to '000000', the mobile station shall include one occurrence of the three-field record given below for each pilot in the Active Set, for each pilot in the Candidate Set whose strength exceeds T_ADD, and shall also include one occurrence of the three-field record given below for each pilot in the Candidate Set whose strength satisfies the following inequality:

$$10 \times \log_{10} PS > \frac{\text{SOFT_SLOPE}_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{\text{ADD_INTERCEPT}_s}{2}$$

where the summation is performed over all pilots currently in the Active Set. The mobile station shall not include these fields for the pilot identified by the REF_PN field.

The mobile station shall order any occurrences of the three-field record given below which correspond to pilots in the Active Set such that they occur before any occurrences of the three-field record given below which correspond to pilots in the Candidate Set.

PILOT_PN_PHASE – Pilot measured phase.

The mobile station shall set this field to the phase of the pilot PN sequence relative to the zero offset pilot PN sequence of this pilot, in units of one PN chip, as specified in 2.6.6.2.4.

PILOT_STRENGTH – Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \log_{10} PS \rfloor,$$

where PS is the strength of this pilot, measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10 \log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

KEEP – Keep pilot indicator.

If the handoff drop timer (see 2.6.6.2.3) corresponding to this pilot has expired, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

2.7.2.3.2.6 Power Measurement Report Message

MSG_TAG: PMRM

Field	Length (bits)
ERRORS_DETECTED	5
PWR_MEAS_FRAMES	10
LAST_HDM_SEQ	2
NUM_PILOTS	4

NUM_PILOTS occurrences of the following field:

PILOT_STRENGTH	6
----------------	---

DCCH_PWR_MEAS_INCL	1
DCCH_PWR_MEAS_FRAMES	0 or 10
DCCH_ERRORS_DETECTED	0 or 5
SCH_PWR_MEAS_INCL	1
SCH_ID	0 or 1
SCH_PWR_MEAS_FRAMES	0 or 16
SCH_ERRORS_DETECTED	0 or 10

ERRORS_DETECTED – Number of detected bad frames.

When the Forward Fundamental Channel is assigned, the mobile station shall set this field to the number of bad frames detected (BAD_FRAMES_S , see 2.6.4.1.1] on the Forward Fundamental Channel.

If $P_REV_IN_USE_S$ is greater than or equal to six and only the Forward Dedicated Control Channel is assigned, the mobile station shall set this field to the number of bad frames detected on the Forward Dedicated Control Channel ($DCCH_BAD_FRAMES_S$, see 2.6.4.1.1].

If the number of bad frames received on this channel within the measurement period is less than or equal to 31, the mobile station shall set this field to that number. If that number exceeds 31, the mobile station shall set this field to '11111'.

- 1 PWR_MEAS_FRAMES – Number of power measurement frames.
- 2 When the Forward Fundamental Channel is assigned, the
- 3 mobile station shall set this field to the number of frames
- 4 received on the Forward Fundamental Channel within the
- 5 measurement period (TOT_FRAMES_S, see 2.6.4.1.1).
- 6 If P_REV_IN_USE is greater than or equal to six and only the
- 7 Dedicated Control Channel is assigned, the mobile station
- 8 shall set this field to the number of frames received on the
- 9 Dedicated Control Channel (DCCH_TOT_FRAMES_S, see
- 10 2.6.4.1.1).
- 11 LAST_HDM_SEQ – *Extended Handoff Direction Message* or a *General Handoff*
- 12 *Direction Message*, or *Universal Handoff Direction Message*
- 13 sequence number.
- 14 If an *Extended Handoff Direction Message*, a *General Handoff*
- 15 *Direction Message*, or *Universal Handoff Direction Message* has
- 16 been received during this call, the mobile station shall set
- 17 this field to the value of the HDM_SEQ field from the *Extended*
- 18 *Handoff Direction Message*, the *General Handoff Direction*
- 19 *Message* or the *Universal Handoff Direction Message* that
- 20 determined the current Active Set. If no *Extended Handoff*
- 21 *Direction Message*, *General Handoff Direction Message*, or
- 22 *Universal Handoff Direction Message* has been received during
- 23 this call, the mobile station shall set this field to '11'.
- 24 NUM_PILOTS – Number of pilots reported.
- 25 The mobile station shall set this field to the number of pilots
- 26 in the current Active Set.
- 27 PILOT_STRENGTH – Pilot strength.
- 28 The mobile station shall include one occurrence of this field
- 29 for each pilot in the Active Set. If the Active Set contains
- 30 more than one pilot, the mobile station shall include the pilot
- 31 strengths in the same order as in the *Extended Channel*
- 32 *Assignment Message*, *Extended Handoff Direction Message*,
- 33 *General Handoff Direction Message* or the *Universal Handoff*
- 34 *Direction Message* that determined the current Active Set.
- 35 The mobile station shall set each occurrence of this field to
- 36
$$\lfloor -2 \times 10 \log_{10} \text{PS} \rfloor,$$

1		where PS is the strength of the pilot, measured as specified
2		in 2.6.6.2.2. If this value ($-2 \times 10 \log_{10} PS$) is less than 0,
3		the mobile station shall set this field to '000000'. If this value
4		is greater than '111111', the mobile station shall set this field
5		to '111111'.
6	DCCH_PWR_MEAS_INCL -	Forward Dedicated Control Channel power measurement
7		included.
8		If both Forward Fundamental Channel and Forward Dedicated
9		Control Channel are assigned, the mobile station shall set
10		this field equal to '1'; otherwise, the mobile shall set this field
11		to '0'.
12	DCCH_PWR-	
13	_MEAS_FRAMES -	Number of received Dedicated Control Channel frames.
14		If DCCH_PWR_MEAS_INCL is set to '0', the mobile station
15		shall omit this field; otherwise, the mobile station shall set
16		this field to the number of frames received on the Dedicated
17		Control Channel within the measurement period
18		(DCCH_TOT_FRAMES _s , see 2.6.4.1.1).
19	DCCH_ERRORS-	
20	_DETECTED -	Number of detected bad Dedicated Control Channel frames.
21		If DCCH_PWR_MEAS_INCL is set to '0', the mobile station
22		shall omit this field; otherwise, the mobile station shall set
23		this field to the number of bad frames (DCCH_BAD_FRAMES _s)
24		detected on the Forward Dedicated Control Channel.
25		If DCCH_BAD_FRAMES _s exceeds 31, the mobile station shall
26		set this field to '11111'; otherwise, the mobile station shall
27		set this field to DCCH_BAD_FRAMES _s [see 2.6.4.1.1).
28	SCH_PWR_MEAS_INCL -	Supplemental Channel power measurement included
29		indicator.
30		If FOR_SCH_FER_REP _s is set to '1' and this message is to
31		report the frame counts at the end of the burst on an
32		assigned Supplemental Channel, the mobile station shall set
33		this field to '1'; otherwise, the mobile station shall set this
34		field to
35	SCH_ID -	Forward Supplemental Channel identifier.
36		If the SCH_PWR_MEAS_INCL is set to '0', the mobile station
37		shall omit this field; otherwise, the mobile shall set this field
38		to the Identifier of the Forward Supplemental Channel of
39		which the frame counts are being reported in this message.

1	SCH_PWR-	
2	_MEAS_FRAMES	- Number of received Supplemental Channel frames.
3		If SCH_PWR_MEAS_INCL is set to '0', the mobile station shall
4		omit this field; otherwise, the mobile station shall set this
5		field to the total number of frames (SCH_TOT_FRAMES _S)
6		received during the burst duration on the Supplemental
7		Channel specified by SCH_ID. If this measurement is greater
8		than or equal to $2^{16} - 1$, the mobile station shall set this field
9		to '1111111111111111'.
10	SCH_ERRORS-	
11	_DETECTED	- Number of detected bad Supplemental Channel frames.
12		If SCH_PWR_MEAS_INCL is set to '0', the mobile station shall
13		omit this field; otherwise, the mobile station shall set this
14		field to the number of bad frame detected on the Forward
15		Supplemental Channel of the SCH_ID for the duration of the
16		forward burst on this channel.
17		If the number of bad frames (SCH_BAD_FRAMES _S) detected on
18		the SCH_ID Supplemental Channel during the burst is
19		greater than 1023, the mobile station shall set this field to
20		'111111111'.
21		

2.7.2.3.2.7 Send Burst DTMF Message

MSG_TAG: BDTMF

Field	Length (bits)
NUM_DIGITS	8
DTMF_ON_LENGTH	3
DTMF_OFF_LENGTH	3

NUM_DIGITS occurrences of the following field:

DIGIT _i	4
--------------------	---

CON_REF_INCL	1
CON_REF	0 or 8

NUM_DIGITS – Number of DTMF digits.

The mobile station shall set this field to the number of DTMF digits included in this message.

DTMF_ON_LENGTH – DTMF pulse width code.

The mobile station shall set this field to the DTMF_ON_LENGTH value shown in Table 2.7.2.3.2.7-1 corresponding to the requested width of DTMF pulses to be generated by the base station.

Table 2.7.2.3.2.7-1. Recommended DTMF Pulse Width

DTMF_ON_LENGTH Field (binary)	Recommended Pulse Width
000	95 ms
001	150 ms
010	200 ms
011	250 ms
100	300 ms
101	350 ms
All other DTMF_ON_LENGTH codes are reserved.	

DTMF_OFF_LENGTH – DTMF inter-digit interval code.

The mobile station shall set this field to the DTMF_OFF_LENGTH value shown in Table 2.7.2.3.2.7-2 corresponding to the requested minimum interval between DTMF pulses to be generated by the base station.

Table 2.7.2.3.2.7-2. Recommended Minimum Inter-digit Interval

DTMF_OFF_LENGTH Field (binary)	Recommended Minimum Inter-digit Interval
000	60 ms
001	100 ms
010	150 ms
011	200 ms
All other DTMF_OFF_LENGTH codes are reserved.	

DIGIT_i – DTMF digit.

The mobile station shall include one occurrence of this field for each DTMF digit to be generated by the base station. The mobile station shall set each occurrence of this field to the code value shown in Table 2.7.1.3.2.4-4 corresponding to the dialed digit.

CON_REF_INCL – Connection reference included indicator.

The mobile station shall set this field to '1' if the connection reference field is included in this message; otherwise, it shall set this field to '0'.

CON_REF – Connection reference.

If the CON_REF_INCL field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and shall set it to the value of the connection reference assigned to the service option connection of the call, to which this message corresponds.

2.7.2.3.2.8 Status Message

MSG_TAG: STM

Field	Length (bits)
RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	$8 \times \text{RECORD_LEN}$

- RECORD_TYPE – Information record type.
- The mobile station shall set this field to the record type value shown in Table 2.7.4-1 corresponding to the type of this information record.
- RECORD_LEN – Information record length.
- The mobile station shall set this field to the number of octets included in the type -specific fields of this information record.
- Type -specific fields – Type -specific fields.
- The mobile station shall set these fields as specified in 2.7.4 for this type of record.

2.7.2.3.2.9 Origination Continuation Message

MSG_TAG: ORCM

Field	Length (bits)
DIGIT_MODE	1
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHAR _i	4 or 8
-------------------	--------

Zero or more occurrences of the following record:

RECORD TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

DIGIT_MODE – Digit mode indicator.

The mobile station shall set this field to the DIGIT_MODE value from the *Origination Message* for which this message is a continuation.

NUM_FIELDS – Number of dialed digits in this message.

The mobile station shall set this field to the number of dialed digits included in this message.

CHAR_i – A dialed digit or character.

The mobile station shall include NUM_FIELDS occurrences of this field. The mobile station shall include occurrences of this field for all dialed digits after those sent in the *Origination Message* of which this message is a continuation. If the DIGIT_MODE field is set to '0', the mobile station shall set each occurrence of this field to the code value shown in Table 2.7.1.3.2.4-4 corresponding to the dialed digit. If the DIGIT_MODE field is set to '1', the mobile station shall set each occurrence of this field to the ASCII representation corresponding to the dialed digit, as specified in [9], with the most significant bit set to '0'.

If the MORE_RECORDS field in the last *Origination Message*, of which this message is a continuation, is set to '1', the mobile station shall include one or more occurrences of the following three-field record; otherwise, the mobile station shall not include the following record.

1	RECORD_TYPE	–	Information record type.
2			The mobile station shall set this field to the record type value
3			shown in Table 2.7.4-1.
4	RECORD_LEN	–	Information record length.
5			The mobile station shall set this field to the number of octets
6			in the type-specific fields included in this record.
7	Type-specific fields	–	Type-specific fields.
8			The mobile station shall include type-specific fields as
9			specified in 2.7.4.
10			

2.7.2.3.2.10 Handoff Completion Message

MSG_TAG: HOCM

Field	Length (bits)
LAST_HDM_SEQ	2

One or more occurrences of the following field:

PILOT_PN	9
----------	---

LAST_HDM_SEQ – *Extended Handoff Direction Message, General Handoff Direction Message, or Universal Handoff Direction Message* sequence number.

The mobile station shall set this field to the value of the HDM_SEQ field from the *Extended Handoff Direction Message, General Handoff Direction Message, or the Universal Handoff Direction Message* that determined the current Active Set.

PILOT_PN – Pilot PN sequence offset.

The mobile station shall include one occurrence of this field for each pilot in the current Active Set. The mobile station shall set this field to the pilot PN sequence offset, relative to the zero offset pilot PN sequence in units of 64 PN chips, for this pilot. If the Active Set contains more than one pilot, the mobile station shall include the pilot offsets in the same order as in the *Extended Handoff Direction Message, the General Handoff Direction Message, or the Universal Handoff Direction Message* that determined the current Active Set.

2.7.2.3.2.11 Parameters Response Message

MSG_TAG: PRSM

Field	Length (bits)
One or more occurrences of the following record:	
PARAMETER_ID	16
PARAMETER_LEN	10
PARAMETER	0 or PARAMETER_LEN + 1

The mobile station shall include one occurrence of the following three-field record for each occurrence of the PARAMETER_ID field in the Forward Traffic Channel *Retrieve Parameters Message* to which this message is a response. See Annex E.

PARAMETER_ID – Parameter identification.

The mobile station shall set this field to the value of the PARAMETER_ID field for this parameter from the *Retrieve Parameters Message* to which this message is a response.

PARAMETER_LEN – Parameter length.

The mobile station shall set this field to the length shown in Table E-1 corresponding to this PARAMETER_ID.

If the mobile station is unable to return the value of this parameter, or if the parameter identification is unknown, the mobile station shall set this field to '11111111'.

PARAMETER – Parameter value.

The mobile station shall set this field equal to the value of the parameter shown in Table E-1 corresponding to the PARAMETER_ID field of the record.

If the mobile station is unable to return the value of this parameter, or if the parameter identification is unknown, the mobile station shall omit this field.

2.7.2.3.2.12 Service Request Message

MSG_TAG: SRQM

Field	Length (bits)
SERV_REQ_SEQ	3
REQ_PURPOSE	4

Zero or one occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

SERV_REQ_SEQ – Service request sequence number.

The mobile station shall set this field to the service request sequence number pertaining to this request message as specified in 2.6.4.1.2.1.1.

REQ_PURPOSE – Request purpose.

The mobile station shall set this field to the appropriate REQ_PURPOSE code from Table 2.7.2.3.2.12-1 to indicate the purpose of the message.

Table 2.7.2.3.2.12-1. REQ_PURPOSE Codes

REQ_PURPOSE (binary)	Meaning
0000	Indicates that the purpose of the message is to accept a proposed service configuration.
0001	Indicates that the purpose of the message is to reject a proposed service configuration.
0010	Indicates that the purpose of the message is to propose a service configuration.
All other REQ_PURPOSE codes are reserved.	

1 If the REQ_PURPOSE code is set to '0010', the mobile station shall include one occurrence
 2 of the following three-field record to specify the proposed service configuration; otherwise,
 3 the mobile station shall not include the following record:

4 RECORD_TYPE – Information record type.
 5 The mobile station shall set this field to the record type value
 6 shown in Table 2.7.4-1 corresponding to the Service
 7 Configuration information record.

8 RECORD_LEN – Information record length.
 9 The mobile station shall set this field to the number of octets
 10 included in the type-specific fields of the Service
 11 Configuration information record.

12 Type-specific fields – Type-specific fields.
 13 The mobile station shall set these fields as specified in
 14 3.7.5.7 for the Service Configuration information record.
 15

2.7.2.3.2.13 Service Response Message

MSG_TAG: SRPM

Field	Length (bits)
SERV_REQ_SEQ	3
RESP_PURPOSE	4

Zero or one occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

SERV_REQ_SEQ – Service request sequence number.

The mobile station shall set this field to the value of the SERV_REQ_SEQ field of the *Service Request Message* to which it is responding.

RESP_PURPOSE – Response purpose.

The mobile station shall set this field to the appropriate RESP_PURPOSE code from Table 2.7.2.3.2.13-1 to indicate the purpose of the message.

Table 2.7.2.3.2.13-1. RESP_PURPOSE Codes

RESP_PURPOSE (binary)	Meaning
0000	Indicates that the purpose of the message is to accept a proposed service configuration.
0001	Indicates that the purpose of the message is to reject a proposed service configuration.
0010	Indicates that the purpose of the message is to propose a service configuration.
All other RESP_PURPOSE codes are reserved.	

1 If the RESP_PURPOSE field is set to '0010', the mobile station shall include one occurrence
2 of the following record to specify the proposed service configuration; otherwise, the mobile
3 station shall not include the following record:

4 RECORD_TYPE – Information record type.

5 The mobile station shall set this field to the record type value
6 shown in Table 2.7.4-1 corresponding to the Service
7 Configuration information record.

8 RECORD_LEN – Information record length.

9 The mobile station shall set this field to the number of octets
10 included in the type-specific fields of the Service
11 Configuration information record.

12 Type-specific fields – Type-specific fields.

13 The mobile station shall set these fields as specified in
14 3.7.5.7 for the Service Configuration information record.
15

2.7.2.3.2.14 Service Connect Completion Message

MSG_TAG: SCCM

Field	Length (bits)
RESERVED	1
SERV_CON_SEQ	3

RESERVED

Reserved bit.

The mobile station shall set this field to '0'.

SERV_CON_SEQ

– Service connect sequence number.

The mobile station shall set this field to the value of the SERV_CON_SEQ field of the *Service Connect Message* to which it is responding.

2.7.2.3.2.15 Service Option Control Message

MSG_TAG: SOCM

Field	Length (bits)
CON_REF	8
SERVICE_OPTION	16
RESERVED	7
CTL_REC_LEN	8
Type -specific fields	$8 \times \text{CTL_REC_LEN}$

CON_REF – Service option connection reference.

The mobile station shall set this field to the reference for the target service option (see 2.6.4.1.2).

SERVICE_OPTION – Service option.

The mobile station shall set this field to the service option in use with the service option connection.

RESERVED – Reserved bits.

The mobile station shall set this field to '0000000'.

CTL_REC_LEN – Control record length.

The mobile station shall set this field to the number of octets included in the type-specific fields of this service option control record.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields as specified by the requirements for the service option.

2.7.2.3.2.16 Status Response Message

MSG_TAG: STRPM

Field	Length (bits)
QUAL_INFO_TYPE	8
QUAL_INFO_LEN	3
Type -specific fields.	$8 \times \text{QUAL_INFO_LEN}$

One or more occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	$8 \times \text{RECORD_LEN}$

QUAL_INFO_TYPE – Qualification information type.

The mobile station shall set this field to the QUAL_INFO_TYPE field in the corresponding *Status Request Message*.

QUAL_INFO_LEN – Qualification information length.

The mobile station shall set this field to the QUAL_INFO_LEN field in the corresponding *Status Request Message*.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields to the qualification information in the corresponding *Status Request Message*.

The mobile station shall include all the records requested in the corresponding *Status Request Message*. The mobile station shall include one occurrence of the following fields for each information record that is included:

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type value shown in Table 3.7.2.3.2.15-2 corresponding to the type of this information record.

RECORD_LEN – Information record length.

The mobile station shall set this field to the number of octets included in the type -specific fields of this information record.

- 1 Type-specific fields – Type-specific fields.
- 2 The mobile station shall set these fields as specified in 2.7.4
- 3 for this type of record, according to the mobile station's
- 4 capabilities under the qualification information included in
- 5 this message.
- 6

- 1 2.7.2.3.2.17 TMSI Assignment Completion Message
- 2 MSG_TAG: TACM
- 3 There are no Layer 3 fields associated with this message.
- 4

1 2.7.2.3.2.18 Supplemental Channel Request Message

2 MSG_TAG: SCRM

3

Field	Length (bits)
SIZE_OF_REQ_BLOB	4
REQ_BLOB	$8 \times \text{SIZE_OF_REQ_BLOB}$
USE_SCRM_SEQ_NUM	1
SCRM_SEQ_NUM	0 or 4
REF_PN	0 or 9
PILOT_STRENGTH	0 or 6
NUM_ACT_PN	0 or 3

If NUM_ACT_PN is included, the mobile station shall include NUM_ACT_PN occurrences of the following record:

ACT_PN_PHASE	15
ACT_PILOT_STRENGTH	6

NUM_NGHBR_PN	0 or 3
--------------	--------

If NUM_NGHBR_PN is included, the mobile station shall include NUM_NGHBR_PN occurrences of the following record:

NGHBR_PN_PHASE	15
NGHBR_PILOT_STRENGTH	6

REF_PILOT_REC_INCL	0 or 1
REF_PILOT_REC_TYPE	0 or 3

(continues on next page)

4

1

Field	Length (bits)
REF_RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × RECORD_LEN

If NUM_ACT_PN is included, the mobile station shall include NUM_ACT_PN occurrences of the following record:

PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × RECORD_LEN

If NUM_NGHR_PN is included, the mobile station shall include NUM_NGHR_PN occurrences of the following record:

PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × RECORD_LEN

2

3 SIZE_OF_REQ_BLOB – Size of the request information block of bytes (REQ_BLOB).

4 The mobile station shall set this field to the number of bytes
5 in the Reverse Supplemental Code Channel or the Reverse
6 Supplemental Channel request block of bytes (REQ_BLOB).

7 REQ_BLOB – Reverse Supplemental Code Channel request block of bytes.

8 The mobile station shall include information in this field
9 containing the parameters that specify the characteristics of
10 the Reverse Supplemental Code Channels or the Reverse
11 Supplemental Channel request. The mobile station shall set
12 this field in accordance with the connected Service Option.

13 USE_SCRM_SEQ_NUM – Use *Supplemental Channel Request Message* sequence number
14 indicator.

15 The mobile station shall set this field to '1' if the *Supplemental*
16 *Channel Request Message* sequence number is included in
17 this message; otherwise, the mobile station shall set this
18 field to '0'.

19 SCRM_SEQ_NUM – *Supplemental Channel Request Message* sequence number.

- 1 If USE_SCRM_SEQ_NUM is set to '1', the mobile station shall
 2 set this field to the *Supplemental Channel Request Message*
 3 sequence number that the base station is to include in a
 4 *Supplemental Channel Assignment Message* which is in
 5 response to this message; otherwise, the mobile station shall
 6 omit this field.
- 7 REF_PN – Time reference PN sequence offset.
- 8 If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall
 9 omit this field; otherwise, the mobile station shall set this
 10 field to the PN sequence offset of the pilot used by the mobile
 11 station to derive its time reference, relative to the zero offset
 12 pilot PN sequence in units of 64 PN chips.
- 13 PILOT_STRENGTH – Reference pilot strength.
- 14 If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall
 15 omit this field; otherwise, the mobile station shall set this
 16 field to
- 17
$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$
- 18 where PS is the strength of the pilot used by the mobile
 19 station to derive its time reference (see 2.1.5 of [2]),
 20 measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10$
 21 $\log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field
 22 to '000000'. If this value is greater than '111111', the mobile
 23 station shall set this field to '111111'.
- 24 NUM_ACT_PN – Number of reported pilots in the Active Set.
- 25 If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall
 26 omit this field; otherwise, the mobile station shall set this
 27 field to the number of reported pilots in the Active Set other
 28 than the pilot identified by the REF_PN field.
- 29 If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall not include any occurrence
 30 of the following record; otherwise, the mobile station shall include one occurrence of the
 31 following two-field record for each pilot in the Active Set other than the pilot identified by
 32 the REF_PN field:
- 33 ACT_PN_PHASE – Active pilot measured phase.
- 34 The mobile station shall set this field to the phase of this pilot
 35 PN sequence relative to the zero offset pilot PN sequence, in
 36 units of one PN chip, as specified in 2.6.6.2.4.
- 37 ACT_PILOT_STRENGTH – Active pilot strength.
- 38 The mobile station shall set this field to
- 39
$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$

where PS is the strength of this pilot, measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10 \log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field to '000000'. If this value is greater than 63, the mobile station shall set this field to '111111'.

NUM_NGHBR_PN – Number of reported neighbor pilots in the Candidate Set and the Neighbor Set.

If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall omit this field; otherwise, the mobile station shall set this field as follows:

The mobile station shall set this field to the number of reported pilots which are not in the Active Set and have measurable strength that exceeds $(T_{ADD_S} - T_{MULCHAN_S})$. $(NUM_ACT_PN + NUM_NGHBR_PN)$ shall not exceed 8. If there are more than $(8 - NUM_ACT_PN)$ pilots not in the Active Set with strength exceeding $(T_{ADD_S} - T_{MULCHAN_S})$, the mobile station shall set NUM_NGHBR_PN to $(8 - NUM_ACT_PN)$ and report the NUM_NGHBR_PN strongest pilots not in the Active Set.

If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall not include any occurrence of the following record; otherwise, the mobile station shall include one occurrence of the following two-field record for each of the NUM_NGHBR_PN reported pilots.

NGHBR_PN_PHASE – Neighbor pilot measured phase.

The mobile station shall set this field to the phase of this pilot PN sequence relative to the zero offset pilot PN sequence, in units of one PN chip, as specified in 2.6.6.2.4.

NGHBR_PILOT-

_STRENGTH – Neighbor pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$

where PS is the strength of this pilot, measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10 \log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field to '000000'. If this value is greater than 63, the mobile station shall set this field to '111111'.

REF_PILOT_REC_INCL – Additional pilot information included indicator.

If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall omit this field; otherwise, the mobile station shall set include this field and set it as follows:

The mobile station shall set this field to '1' if additional reference pilot information listed in the REF_PILOT_REC_TYPE and REF_RECORD_LEN fields are included. The mobile station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

REF_PILOT_REC_TYPE – Reference pilot record type.

If REF_PILOT_REC_INCL is included and set to '0', the mobile station shall omit this field. If REF_PILOT_REC_INCL is included and set to '1', the mobile station shall set this field to the REF_PILOT_REC_TYPE value shown in Table 2.7.2.3.2.33-1 corresponding to the type of Pilot Record specified by this record.

REF_RECORD_LEN – Pilot record length for the reference pilot.

If REF_PILOT_REC_INCL is included and set to '0', the mobile station shall omit this field. If REF_PILOT_REC_INCL is included and set to '1', the mobile station shall set this field to the number of octets in the type-specific fields of this pilot record.

Type-specific fields – Pilot record type-specific fields for the reference pilot.

If REF_PILOT_REC_INCL is included and set to '0', the mobile station shall omit this field. If REF_PILOT_REC_INCL is included and set to '1', the mobile station shall include type-specific fields based on the REF_PILOT_REC_TYPE of this pilot record.

If REF_PILOT_REC_TYPE is equal to '000', the mobile station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
PILOT_WALSH	(WALSH_LENGTH + 6)
RESERVED	0 to 7 (as needed)

QOF – Quasi-orthogonal function index.

1		The mobile station shall set this field to the index of the
2		Quasi-orthogonal function of the corresponding Auxiliary
3		Pilot.
4	WALSH_LENGTH	– Length of the Walsh code for the reference pilot.
5		The mobile station shall set this field to the WALSH_LENGTH
6		value shown in Table 2.7.2.3.2.33-2 corresponding to the
7		length of the Walsh code for the pilot that is used as the
8		Auxiliary Pilot.
9	PILOT_WALSH	– Walsh code for the Auxiliary Pilot used by the mobile station
10		to derive its time reference.
11		The mobile station shall set this field to the Walsh code
12		corresponding to the Auxiliary Pilot.
13	RESERVED	– Reserved bits.
14		The base station shall set all the bits of this field to '0' to
15		make the entire record octet-aligned.
16	If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall not include any occurrence	
17	of the following record; otherwise, the mobile station shall include one occurrence of the	
18	following record for each pilot in the Active Set other than the pilot identified by the	
19	REF_PN field:	
20	PILOT_REC_INCL	– Additional pilot information included indicator.
21		The mobile station shall set this field to '1' if additional pilot
22		information listed in the PILOT_REC_TYPE and RECORD_LEN
23		fields are included. The mobile station shall set this field to
24		'0' if the corresponding pilot is the common pilot and there is
25		no additional pilot information included.
26	PILOT_REC_TYPE	– Reference pilot record type.
27		If PILOT_REC_INCL is set to '0', the mobile station shall omit
28		this field; otherwise, the mobile station shall set this field to
29		the PILOT_REC_TYPE value shown in Table 3.7.2.3.2.33-1
30		corresponding to the type of Pilot Record specified by this
31		record.
32	RECORD_LEN	– Pilot record length.
33		If PILOT_REC_INCL is set to '0', the mobile station shall omit
34		this field; otherwise, the mobile station shall set this field to
35		the number of octets in the type-specific fields of this pilot
36		record.
37	Type-specific fields	– Pilot record type-specific fields.

1 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 2 this field; otherwise, the mobile station shall include type-
 3 specific fields based on the PILOT_REC_TYPE of this pilot
 4 record as described in 3.7.6.1.

5

6 If SIZE_OF_REQ_BLOB is set to '0000', the mobile station shall not include any occurrence
 7 of the following record; otherwise, the mobile station shall include one occurrence of the
 8 following record for each of the NUM_NGHBOR_PN reported pilots.

9 PILOT_REC_INCL – Additional pilot information included indicator.

10 The mobile station shall set this field to '1' if additional pilot
 11 information listed in the PILOT_REC_TYPE and RECORD_LEN
 12 fields are included. The mobile station shall set this field to
 13 '0' if the corresponding pilot is the common pilot and there is
 14 no additional pilot information included.

15 PILOT_REC_TYPE – Reference pilot record type.

16 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 17 this field; otherwise, the mobile station shall set this field to
 18 the PILOT_REC_TYPE value shown in Table 3.7.2.3.2.33-1
 19 corresponding to the type of Pilot Record specified by this
 20 record.

21 RECORD_LEN – Pilot record length.

22 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 23 this field; otherwise, the mobile station shall set this field to
 24 the number of octets in the type-specific fields of this pilot
 25 record.

26 Type-specific fields – Pilot record type-specific fields.

27 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 28 this field; otherwise, the mobile station shall include type-
 29 specific fields based on the PILOT_REC_TYPE of this pilot
 30 record as described in 3.7.6.1.

31

32

2.7.2.3.2.19 Candidate Frequency Search Response Message

MSG_TAG: CFSRSM

Field	Length (bits)
LAST_CFSRM_SEQ	2
TOTAL_OFF_TIME_FWD	6
MAX_OFF_TIME_FWD	6
TOTAL_OFF_TIME_REV	6
MAX_OFF_TIME_REV	6
PCG_OFF_TIMES	1
ALIGN_TIMING_USED	1
NUM_VISITS	0 or 5
INTER_VISIT_TIME	0 or 6

LAST_CFSRM_SEQ – *Candidate Frequency Search Request Message* sequence number.

The mobile station shall set this field to the value of the CFSRM_SEQ field from the *Candidate Frequency Search Request Message* to which this message is a response.

TOTAL_OFF_TIME_FWD – Total time that the mobile station is off the Forward Traffic Channel.

The mobile station shall set this field to the mobile station's estimate of the total number of frames or power control groups for which the mobile station will need to suspend its current Forward Traffic Channel processing in order to tune to the Candidate Frequency, to perform the requested search, and to re-tune to the Serving Frequency. If the mobile station requires multiple visits to the Candidate Frequency to complete the requested search, the mobile station shall set this field to the total number of frames (if PCG_OFF_TIME is set to '0') or power control groups (if PCG_OFF_TIME is set to '1') for all visits to the Candidate Frequency in a search period.

MAX_OFF_TIME_FWD – Maximum time the mobile station is away from the Forward Traffic Channel.

1			The mobile station shall set this field to the mobile station's
2			estimate of the maximum number of frames (if
3			PCG_OFF_TIME is set to '0') or power control groups (if
4			PCG_OFF_TIME is set to '1') for which the mobile station will
5			need to suspend its current Forward Traffic Channel
6			processing during a visit to the Candidate Frequency, to
7			perform a part of the requested search, and to re-tune to the
8			Serving Frequency.
9	TOTAL_OFF_TIME_REV	-	Total time that the mobile station is away from the Reverse
10			Traffic Channel.
11			The mobile station shall set this field to the mobile station's
12			estimate of the total number of frames or power control
13			groups for which the mobile station will need to suspend its
14			current Reverse Traffic Channel processing in order to tune
15			to the Candidate Frequency, to perform the requested search,
16			and to re-tune to the Serving Frequency. If the mobile
17			station requires multiple visits to the Candidate Frequency to
18			complete the requested search, the mobile station shall set
19			this field to the total number of frames or power control
20			groups for all visits to the Candidate Frequency in a search
21			period.
22	MAX_OFF_TIME_REV	-	Maximum time the mobile station is away from the Reverse
23			Traffic Channel.
24			The mobile station shall set this field to the mobile station's
25			estimate of the maximum number of frames or power control
26			groups for which the mobile station will need to suspend its
27			current Forward Traffic Channel processing during a visit to
28			the Candidate Frequency, to perform a part of the requested
29			search, and to re-tune to the Serving Frequency.
30	PCG_OFF_TIMES	-	Indicator if off times are expressed in units of power control
31			groups.
32			If P_REV_IN_USE _s is less than six, the mobile station shall
33			set this field to '0'; otherwise, the mobile station shall set this
34			field as follows:
35			The mobile station shall set this field to '1' if it expresses
36			TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD,
37			TOTAL_OFF_TIME_REV, and MAX_OFF_TIME_REV in units of
38			power control groups; otherwise, the mobile station shall set
39			this field to '0' so that TOTAL_OFF_TIME_FWD,
40			MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_REV, and
41			MAX_OFF_TIME_REV are expressed in units of frames.

1 ALIGN_TIMING_USED – Alignment timing used indicator.

2 The mobile station shall set this field to '1' if it will align the
3 times of its visits away from the Serving Frequency, as
4 requested by the base station; otherwise, the mobile station
5 shall set this field to '0'.

6 NUM_VISITS – Number of visits per search period.

7 If the ALIGN_TIMING_USED field is set to '0', the mobile
8 station shall omit this field; otherwise, the mobile station
9 shall include this field and set it to the number of visits per
10 search period minus one.

11 INTER_VISIT_TIME – Inter-visit time.

12 If the mobile station includes the NUM_VISITS field and sets
13 it to a value other than 0, the mobile station shall include
14 this field and set it as described below; otherwise, the mobile
15 station shall omit this field.

16 The mobile station shall set INTER_VISIT_TIME to

$$17 \quad \min (63, \lceil inter_visit_time / search_time_resolution \rceil)$$

18 where

19 *search_time_resolution* is equal to 0.02 if the mobile
20 station sets PCG_OFF_TIMES to '0'; otherwise,
21 *search_time_resolution* is equal to 0.00125,

22 and

23 *inter_visit_time* is the mobile station's estimate of the
24 time, in seconds, between the beginning of consecutive
25 visits away from the Serving Frequency.
26

2.7.2.3.2.20 Candidate Frequency Search Report Message

MSG_TAG: CFSRPM

Field	Length (bits)
LAST_SRCH_MSG	1
LAST_SRCH_MSG_SEQ	2
SEARCH_MODE	4
MODE_SPECIFIC_LEN	8
Mode-specific fields	8 × MODE_SPECIFIC_LEN

LAST_SRCH_MSG – Indicator for the type of message that started the search being reported.

If this message is being sent to report the results of a single search or a periodic search started by a *Candidate Frequency Search Control Message* or by a *Candidate Frequency Search Request Message*, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

LAST_SRCH_MSG_SEQ – Sequence number received in the message that started the search being reported.

If this message is being sent in response to a *Candidate Frequency Search Control Message*, the mobile station shall set this field to the value of the CFSCM_SEQ field from the *Candidate Frequency Search Control Message*.

If this message is being sent in response to a *Candidate Frequency Search Request Message*, the mobile station shall set this field to the value of the CFSRM_SEQ field from the *Candidate Frequency Search Request Message*.

If this message is being sent in response to a *General Handoff Direction Message* or a *Universal Handoff Direction Message*, the mobile station shall set this field to the value of the HDM_SEQ field from the *General Handoff Direction Message* or the *Universal Handoff Direction Message*.

SEARCH_MODE – Search mode.

The mobile station shall set this field to the SEARCH_MODE value shown in Table 3.7.3.3.2.27-2 corresponding to the type of search specified by the *Candidate Frequency Search Request Message* that specified the search parameters.

MODE_SPECIFIC_LEN – Length of mode-specific fields included in this message.

Mode-specific fields – Search mode-specific fields.

The mobile station shall include mode-specific fields based on the SEARCH_MODE of this message.

If SEARCH_MODE is equal to '0000', the mobile station shall include the following fields:

Field	Length (bits)
BAND_CLASS	5
CDMA_FREQ	11
SF_TOTAL_RX_PWR	5
CF_TOTAL_RX_PWR	5
NUM_PILOTS	6

NUM_PILOTS occurrences of the following record:

PILOT_PN_PHASE	15
PILOT_STRENGTH	6
RESERVED_1	3

NUM_PILOTS occurrences of the following record:

PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or $8 \times \text{RECORD_LEN}$

BAND_CLASS – Band class.

If this message is being sent to report an unsuccessful hard handoff attempt, the mobile station shall set this field to the CDMA band class corresponding to the CDMA Frequency Assignment for the Target Frequency, as specified in [30]. If this message is being sent to report measurements on a Candidate Frequency, the mobile station shall set this field to the CDMA band class corresponding to the CDMA Frequency Assignment for the Candidate Frequency, as specified in [30].

CDMA_FREQ – Frequency assignment.

1			If this message is being sent to report an unsuccessful hard
2			handoff attempt, the mobile station shall set this field to the
3			CDMA Channel number, in the specified CDMA band class,
4			corresponding to the CDMA Frequency Assignment for the
5			Target Frequency, as specified in 3.1.1.1 of [2]. If this
6			message is being sent to report measurements on a
7			Candidate Frequency, the mobile station shall set this field to
8			the CDMA Channel number, in the specified CDMA band
9			class, corresponding to the CDMA Frequency Assignment for
10			the Candidate Frequency, as specified in 3.1.1.1 of [2].
11	SF_TOTAL_RX_PWR	-	Total received power on the Serving Frequency.
12			The mobile station shall set this field to
13			$\min(31, \lceil (total_received_power + 110) / 2 \rceil)$
14			where <i>total_received_power</i> is the mean input power received
15			by the mobile station on the Serving Frequency, in dBm/1.23
16			MHz.
17	CF_TOTAL_RX_PWR	-	Indicates the total received power on the Target Frequency or
18			the Candidate Frequency.
19			If this message is being sent to report an unsuccessful hard
20			handoff attempt, the mobile station shall include the total
21			received power on the Target Frequency; if this message is
22			being sent to report measurements on a Candidate
23			Frequency, the mobile station shall include the total received
24			power on the Candidate Frequency.
25			The mobile station shall set this field to
26			$\min(31, \lceil (total_received_power + 110) / 2 \rceil)$
27			where <i>total_received_power</i> is the mean input power received
28			by the mobile station on the Target Frequency or the
29			Candidate Frequency, in dBm/1.23 MHz.
30	NUM_PILOTS	-	Number of pilots.
31			The mobile station shall set this field to the number of pilots
32			included in this message. The mobile station shall set this
33			field to a value from 0 to N_{8m} , inclusive.
34			

The mobile station shall include NUM_PILOTS occurrences of the following three-field record:

PILOT_PN_PHASE – Pilot measured phase.

The mobile station shall set this field to the phase of the pilot PN sequence relative to the zero offset pilot PN sequence of this pilot, in units of one PN chip, as specified in 2.6.6.2.4.

PILOT_STRENGTH – Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$

where PS is the strength of this pilot, measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10 \log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field to '000000'. If this value is greater than 63, the mobile station shall set this field to '111111'.

RESERVED_1 – Reserved bits.

The mobile station shall set this field to '000'.

The mobile station shall include NUM_PILOTS occurrences of the following record in the same order as the pilots listed above.

PILOT_REC_INCL – Additional pilot information included indicator.

The mobile station shall set this field to '1' if additional pilot information listed in the PILOT_REC_TYPE and RECORD_LEN fields are included. The mobile station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

PILOT_REC_TYPE – Reference Pilot record type

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the PILOT_REC_TYPE value shown in Table 2.7.2.3.2.33-1 corresponding to the type of Pilot Record specified by this record.

RECORD_LEN – Pilot record length.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of octets in the type-specific fields of this pilot record.

Type-specific fields – Pilot record type-specific fields.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include type-specific fields based on the PILOT_REC_TYPE of this pilot record as described in 3.7.6.1.

If SEARCH_MODE is equal to '0001', the mobile station shall include the following fields:

Field	Length (bits)
BAND_CLASS	5
SF_TOTAL_RX_PWR	5
NUM_ANALOG_FREQS	3
RESERVED_2	5

NUM_ANALOG_FREQS occurrences of the following record:

ANALOG_FREQ	11
SIGNAL_STRENGTH	6

RESERVED_3	0 - 7 (as needed)
------------	-------------------

BAND_CLASS – Band class.

The mobile station shall set this field to the CDMA band class corresponding to the analog frequencies that are being reported in this message, as specified in [30].

SF_TOTAL_RX_PWR – Indicates the total received power on the Serving Frequency.

The mobile station shall set this field to

$$\min(31, \lceil (total_received_power + 110) / 2 \rceil)$$

where *total_received_power* is the mean input power received by the mobile station on the Serving Frequency, in dBm/1.23 MHz.

NUM_ANALOG_FREQS – Number of analog frequencies.

The base station shall set this field to the number of analog frequencies included in this message.

RESERVED_2 – Reserved bits.

The mobile station shall set this field to '00000'.

The message will include NUM_ANALOG_FREQS occurrences of the following three-field record, one for each neighbor on the candidate frequency.

1	ANALOG_FREQ	-	Analog frequency channel number.
2			The base station shall set this field analog frequency channel
3			number to search.
4	SIGNAL_STRENGTH	-	Signal strength.
5			The mobile station shall set this field to
6			$\lfloor -0.5 \times SS \rfloor$,
7			where SS is the strength of this signal, measured in dBm as
8			specified in 2.6.6.2.10.3. If this value $\lfloor -0.5 \times SS \rfloor$ is less
9			than 0, the mobile station shall set this field to '000000'. If
10			this value is greater than 63, the mobile station shall set this
11			field to '111111'.
12			
13	RESERVED_3	-	The mobile station shall add reserved bits as needed in order
14			to make the length of the entire message equal to an integer
15			number of octets. The mobile station shall set each of these
16			bits to '0'.
17			

1 2.7.2.3.2.21 Periodic Pilot Strength Measurement Message

2 MSG_TAG: PPSMM

3

Field	Length (bits)
REF_PN	9
PILOT_STRENGTH	6
KEEP	1
SF_RX_PWR	5
NUM_PILOT	4

NUM_PILOT occurrences of the following record:

PILOT_PN_PHASE	15
PILOT_STRENGTH	6
KEEP	1

NUM_PILOTS occurrences of the following record:

PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or $8 \times \text{RECORD_LEN}$

SETPT_INCL	1
FCH_INCL	0 or 1
FPC_FCH_CURR_SETPT	0 or 8
DCCH_INCL	0 or 1
FPC_DCCH_CURR_SETPT	0 or 8
NUM_SUP	0 or 2

If NUM_SUP is included, include NUM_SUP occurrences of the following fields:

SCH_ID	1
FPC_SCH_CURR_SETPT	8

4

5 REF_PN - Time reference PN sequence offset.

The mobile station shall set this field to the PN sequence offset of the pilot used by the mobile station to derive its time reference, relative to the zero offset pilot PN sequence in units of 64 PN chips.

PILOT_STRENGTH - Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$

where PS is the strength of the pilot used by the mobile station to derive its time reference (see [2]), measured as specified in 2.6.6.2.2. If this value is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

KEEP - Keep pilot indicator.

If the handoff drop timer (see 2.6.6.2.3) corresponding to the pilot used by the mobile station to derive its time reference (see [2]) has expired, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

SF_RX_PWR - The received power spectral density of the Serving Frequency.

The base station shall set this field to

$$\lceil (10 \times \log_{10}(\text{spec_density}) + 120) / 2 \rceil$$

where *spec_density* is the mobile station received power spectral density of the Serving Frequency, in mW/1.23MHz, averaged over the last N_{12m} frames (see 2.6.6.2.5.1).

If this value is less than 0, the mobile station shall set this field to '00000'.

NUM_PILOT - Number of Pilots.

The mobile station shall set this field to the number of other reported pilots of the Active Set and the Candidate Set.

The mobile station shall include NUM_PILOT occurrences of the following three-field record, one for each pilot in the Active Set and one for each pilot in the Candidate Set, other than the pilot identified by the REF_PN field.

PILOT_PN_PHASE - Pilot measured phase.

- 1 The mobile station shall set this field to the phase of the pilot
 2 PN sequence relative to the zero offset pilot PN sequence of
 3 this pilot, in units of one PN chip, as specified in 2.6.6.2.4.
- 4 **PILOT_STRENGTH** - Pilot strength.
- 5 The mobile station shall set this field to
 6
$$\lfloor -2 \times 10 \times \log_{10} PS \rfloor,$$
- 7 where PS is the strength of this pilot, measured as specified
 8 in 2.6.6.2.2. If this value is less than 0, the mobile station
 9 shall set this field to '000000'. If this value is greater than
 10 '111111', the mobile station shall set this field to '111111'.
- 11 **KEEP** - Keep pilot indicator.
- 12 If the handoff drop timer (see 2.6.6.2.3) corresponding to this
 13 pilot has expired, the mobile station shall set this field to '0';
 14 otherwise, the mobile station shall set this field to '1'.
- 15 The mobile station shall include NUM_PILOTS occurrences of the following record in the
 16 same order as the pilots listed above.
- 17 **PILOT_REC_INCL** - Additional pilot information included indicator.
- 18 The mobile station shall set this field to '1' if additional pilot
 19 information listed in the PILOT_REC_TYPE and RECORD_LEN
 20 fields are included. The mobile station shall set this field to
 21 '0' if the corresponding pilot is the common pilot and there is
 22 no additional pilot information included.
- 23 **PILOT_REC_TYPE** - Reference Pilot record type
- 24 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 25 this field; otherwise, the mobile station shall set this field to
 26 the PILOT_REC_TYPE value shown in Table 2.7.2.3.2.33-1
 27 corresponding to the type of Pilot Record specified by this
 28 record.
- 29 **RECORD_LEN** - Pilot record length.
- 30 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 31 this field; otherwise, the mobile station shall set this field to
 32 the number of octets in the type-specific fields of this pilot
 33 record.
- 34 **Type-specific fields** - Pilot record type-specific fields.
- 35 If PILOT_REC_INCL is set to '0', the mobile station shall omit
 36 this field; otherwise, the mobile station shall include type-
 37 specific fields based on the PILOT_REC_TYPE of this pilot
 38 record as described in 3.7.6.1.

1	SETPT_INCL	-	Setpoint information included indicator.
2			The mobile station shall set this field to '1' if setpoint
3			information is included in this message; otherwise, the
4			mobile station shall set this field to '0'.
5	FCH_INCL	-	Fundamental Channel included indicator.
6			If SETPT_INCL is equal to '1', the mobile station shall include
7			this field and set it as follows; otherwise, the mobile station
8			shall omit this field.
9			The mobile station shall set this field to '1' if FPC_PRI_CHAN _S
10			is equal to '0'; otherwise, the mobile station shall set this
11			field to '0'.
12	FPC_FCH-		
13	_CURR_SETPT	-	The outer loop E_b/N_t setpoint of the Fundamental Channel.
14			If SETPT_INCL is equal to '1' and if FCH_INCL is set to '1', the
15			mobile station shall set this field to the value of the E_b/N_t
16			setpoint, in units of 0.125 dB, currently in use in the
17			Fundamental Channel power control outer loop estimation;
18			otherwise, the mobile station shall omit this field.
19	DCCH_INCL	-	Dedicated Control Channel included indicator.
20			If SETPT_INCL is equal to '1', the mobile station shall include
21			this field and set it as follows; otherwise, the mobile station
22			shall omit this field.
23			The mobile station shall set this field to '1' if FPC_PRI_CHAN _S
24			is equal to '1'; otherwise, the mobile station shall set this
25			field to '0'.
26	FPC_DCCH-		
27	_CURR_SETPT	-	The outer loop E_b/N_t setpoint of the Forward Dedicated
28			Channel.
29			If SETPT_INCL is equal to '1', and if DCCH_INCL is set to '1',
30			the mobile station shall set this field to the value of the E_b/N_t
31			setpoint, in units of 0.125 dB, currently in use in the
32			Dedicated Channel power control outer loop estimation;
33			otherwise, the mobile station shall omit this field.
34	NUM_SUP	-	The number of Supplemental Channels.
35			If SETPT_INCL is equal to '1', the mobile station shall include
36			this field and set it as follows; otherwise, the mobile station
37			shall omit this field.

1 The mobile station shall set this field to the total number of
2 the Supplemental Channels reported by this message.

3 The mobile station shall include NUM_SUP occurrences of the following two fields:

4 SCH_ID - The Supplemental Channel index.

5 The mobile station shall set this field to the Supplemental
6 Channel index to indicate the Forward Supplemental
7 Channel that is to be reported.

8 FPC_SCH-

9 _CURR_SETPT - The supplemental channel outer loop E_b/N_t setpoint.

10 The mobile station shall set this field to the value of the
11 power control outer loop E_b/N_t setpoint, in units of 0.125 dB,
12 currently in use in the Channel specified by SCH_ID.

13

14

2.7.2.3.2.22 Outer Loop Report Message

MSG_TAG: OLRM

Field	Length (bits)
FCH_INCL	1
FPC_FCH_CURR_SETPT	0 or 8
DCCH_INCL	1
FPC_DCCH_CURR_SETPT	0 or 8
NUM_SUP	2

Include NUM_SUP occurrences of the following fields:

SCH_ID	1
FPC_SCH_CURR_SETPT	8

FCH_INCL – Fundamental Channel included indicator.

The mobile station shall set this field to '1' if CURR_FCH_SETPT is included; otherwise the mobile station shall set this field to '0'.

FPC_FCH-
_CURR_SETPT – The outer loop E_b/N_t setpoint of the Fundamental Channel.

If FCH_INCL is set to '1', the mobile station shall set this field to the value of the E_b/N_t setpoint, in units of 0.125 dB, currently in use in the Fundamental Channel power control outer loop estimation; otherwise, the mobile station shall omit this field.

DCCH_INCL – Dedicated Control Channel included indicator.

The mobile station shall set this field to '1' if the CURR_DCCH_SETPT field is included; otherwise the mobile station shall set this field to '0'.

- 1 FPC_DCCH-
- 2 _CURR_SETPT - The outer loop E_b/N_t setpoint of the Forward Dedicated
- 3 Channel.
- 4 If DCCH_INCL is set to '1', the mobile station shall set this
- 5 field to the value of the E_b/N_t setpoint, in units of 0.125 dB,
- 6 currently in use in the Dedicated Channel power control
- 7 outer loop estimation; otherwise, the mobile station shall
- 8 omit this field.
- 9 NUM_SUP - The number of Supplemental Channels.
- 10 The mobile station shall set this field to the total number of
- 11 the Supplemental Channels reported by this message.
- 12 The mobile station shall in NUM_SUP occurrences of the following two fields:
- 13 SCH_ID - The Supplemental Channel index.
- 14 The mobile station shall set this field to the Supplemental
- 15 Channel index to indicate the Forward Supplemental
- 16 Channel that to be reported
- 17 FPC_SCH-
- 18 _CURR_SETPT - The supplemental outer loop E_b/N_t setpoint.
- 19 The mobile station shall set this field to the value of the
- 20 power control outer loop E_b/N_t setpoint, in units of 0.125 dB,
- 21 currently in use in the Channel specified by SCH_ID.
- 22
- 23

- 1 2.7.2.3.2.23 Resource Request Message
- 2 MSG_TAG: RRM
- 3 There are no Layer 3 fields associated with this message.
- 4

- 1 2.7.2.3.2.24 Resource Request Mini Message
- 2 MSG_TAG: RRMM
- 3 There are no Layer 3 fields associated with this message.
- 4

- 1 2.7.2.3.2.25 Extended Release Response Message
- 2 MSG_TAG: ERRM
- 3 There are no Layer 3 fields associated with this message.
- 4

- 1 2.7.2.3.2.26 Extended Release Response Mini Message
- 2 MSG_TAG: ERRMM
- 3 There are no Layer 3 fields associated with this message.
- 4

2.7.2.3.2.27 Pilot Strength Measurement Mini Message

MSG_TAG: PSMMM

Field	Length (bits)
PSMM_POS	3
PILOT_STRENGTH	6
RANK	3

PSMM_POS – *Pilot Strength Measurement Message* position.

The mobile station shall set this field to an index corresponding to the position, within the last sent *Pilot Strength Measurement Message* (see 2.7.2.3.2.5) or *Extended Pilot Strength Measurement Message* (see 2.7.2.3.2.33), of the Active-Set pilot whose strength is being reported. The mobile station shall use a value of 0 to report the pilot represented by the REF_PN field in the last sent *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message*. The mobile station shall use a value of n, where n is an integer greater than 0, to report the pilot represented by the n^{th} occurrence of the PILOT_PN_PHASE field in the last sent *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message*.

PILOT_STRENGTH – Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \times \log_{10} \text{PS} \rfloor,$$

where PS is the strength of this Active-Set pilot, measured as specified in [2]. If this value is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

RANK – Rank order.

The mobile station shall set this field to the rank order of the pilot whose strength is being reported, relative to all other pilots in the current Active Set. The mobile station shall use a value of 0 to report the strongest pilot in the current Active Set.

1 2.7.2.3.2.28 Supplemental Channel Request Mini Message

2 MSG_TAG: SCRMM

3

Field	Length (bits)
REQ_BLOB	16

4

5 REQ_BLOB – Reverse Supplemental Channel request block of bytes.

6 The mobile station shall include information in this field
7 containing the parameters that specify the characteristics of
8 the Reverse Supplemental Channels request. The mobile
9 station shall set this field in accordance with the connected
10 Service Options.

11

2.7.2.3.2.29 Resource Release Request Message

MSG_TAG: RRRM

Order-Specific Field	Length (bits)
GATING_DISCONNECT_IND	1
CON_REF	0 or 8
PURGE_SERVICE	0 or 1

GATING-

_DISCONNECT_IND - Reverse pilot gating or service disconnect indicator.

If the mobile station requests that reverse pilot gating operation to be performed, the mobile station shall set this field to '1'; otherwise (if the mobile station requests that the service option connection specified by CON_REF to be released), the mobile station shall set this field to '0'.

CON_REF - Connection reference.

If the GATING_DISCONNECT_IND field is set to '1', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

The mobile station shall set this field to the connection reference corresponding to the service option connection that is requested to be released.

PURGE_SERVICE - Purge service instance indicator.

If the GATING_DISCONNECT_IND field is set to '1', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

If the packet data service instance identified by CON_REF has been inactivated, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

2.7.2.3.2.30 Resource Release Request Mini Message

MSG_TAG: RRRMM

Order-Specific Field	Length (bits)
GATING_DISCONNECT_IND	1
CON_REF	0 or 8
PURGE_SERVICE	0 or 1

GATING-

_DISCONNECT_IND - Reverse pilot gating or service disconnect indicator.

If the mobile station requests that reverse pilot gating operation to be performed, the mobile station shall set this field to '1'; otherwise (if the mobile station requests that the service option connection specified by CON_REF to be released), the mobile station shall set this field to '0'.

CON_REF - Connection reference.

The mobile station shall include this field only if GATING_DISCONNECT_IND field is set to '0'. If included, the mobile station shall set this field to the connection reference corresponding to the service option connection that has triggered reverse pilot gating operation or disconnecting the service option connection.

PURGE_SERVICE - Purge service instance indicator.

If the GATING_DISCONNECT_IND field is set to '1', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

If the packet data service instance identified by CON_REF has been inactivated, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

1 2.7.2.3.2.31 User Zone Update Request Message

2 MSG_TAG: UZURM

3

Field	Length (bits)
UZID	16

4

5 UZID - User Zone identifiers.

6 The mobile station shall set this field to the UZID_S.

7

8

1 2.7.2.3.2.32 Enhanced Origination Message

2 MSG_TAG: EOM

Field	Length (bits)
TAG	4
CH_IND	3
SR_ID	3
GLOBAL_EMERGENCY_CALL	1
SERVICE_OPTION	16
MORE_SO_INFO_INCL	1
NUM_ALT_SO	0 or 3

NUM_ALT_SO occurrences of the following field:

ALT_SO	16
--------	----

SO_BITMAP_IND	0 or 2
SO_GROUP_NUM	0 or 5
SO_BITMAP	0 or 4 x SO_BITMAP_IND
DRS	1
PREV_SID_INCL	1
PREV_SID	0 or 15
PREV_NID_INCL	1
PREV_NID	0 or 16
PREV_PZID_INCL	1
PREV_PZID	0 or 8
DIALED_DIGS_INCL	1

(continues on next page)

Field	Length (bits)
DIGIT_MODE	0 or 1
NUMBER_TYPE	0 or 3
NUMBER_PLAN	0 or 4
NUM_FIELDS	0 or 8

NUM_FIELDS occurrences of the following field:

CHAR _i	4 or 8
-------------------	--------

NUM_RECS	5
----------	---

NUM_RECS occurrences of the following three-field records:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

1

2

TAG – Transaction identifier.

3

The mobile station shall set this field to the identifier for this transaction.

4

5

CH_IND – Channel indicator.

6

The mobile station shall set this field as shown in Table 2.7.2.3.2.32-1, to request physical resources.

7

Table 2.7.2.3.2.32-1. Channel Indicator

CH_IND (binary)	Channel(s) Requested
000	No additional channels requested.
001	Fundamental Channel.
010	Dedicated Control Channel.
011	Reserved.
100	Continuous Reverse Pilot Channel.
101	Fundamental Channel and Continuous Reverse Pilot Channel.
110	Reserved.
111	Reserved.

SR_ID – Service reference identifier.

If the service instance provides a service reference identifier, the mobile station shall set this field to the service reference identifier specified by the service instance. If the service instance does not provide a service reference identifier, the mobile station shall set this field to the smallest unused service reference identifier value between 1 and 6 (inclusive).

GLOBAL-

_EMERGENCY_CALL – Global emergency call indicator.

The mobile station shall set this field to '1', if the mobile station recognizes that this is an emergency call; otherwise, the mobile station shall set this field to '0'.

SERVICE_OPTION – Requested service option for this origination.

The mobile station shall set this field to the value specified in [30], corresponding to the requested service option.

MORE_SO_INFO_INCL – More service option information included.

If MAX_NUM_ALT_SO_S is equal to '000', the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field as follows:

If any alternate service option number or/and service option bitmap is to be included in this message, the mobile station shall set this field to '1', otherwise, the mobile station shall set this field to '0'. In other words, MORE_SO_INFO_INCL is set to '1', if NUM_ALT_SO is included and not set to '000' or/and SO_BITMAP_IND is included and not set to '00'.

NUM_ALT_SO – Number of alternative service options.

If MORE_SO_INFO_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of supported alternative service options which either have no service option group number assigned or do not belong to the same service option group whose bitmap is include in the message.

The mobile station shall include NUM_ALT_SO occurrences of the following field:

ALT_SO – Alternative service option.

The mobile station shall set this field to the value specified in [30], corresponding to the alternative service option supported by the mobile station. These alternate service options are either have not service option group number assigned or do not belong to the same service option group whose bitmap is included in this message.

SO_BITMAP_IND – SO bitmap indicator.

If MORE_SO_INFO_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as defined in Table 2.7.1.3.2.4-10.

SO_GROUP_NUM – Service option group number.

If the field SO_BITMAP_IND is included and not set to '00', the mobile station shall include this field and set this field to the service option group number of which the bitmap is to be included; otherwise, the mobile station shall omit this field.

SO_BITMAP – Service option bitmap.

1		If the field SO_BITMAP_IND is included and not set to '00', the
2		mobile station shall include the bitmap of size $4 \times$
3		SO_BITMAP_IND bits of the service option group number
4		(SO_GROUP_NUM); otherwise, the mobile station shall omit
5		this field;
6		When the service option bitmap is included, if there are more
7		than $(4 \times \text{SO_BITMAP_IND})$ service options defined for the
8		service option group, the mobile station shall include the
9		bitmap containing the least significant bits $(4 \times$
10		SO_BITMAP_IND) of the service option group.
11		A bit in this bitmap is set to '1', if the mobile station is
12		capable of supporting the SO for which this bit represents.
13	DRS	- Data ready to send indicator.
14		The mobile station shall set this field to '1' if it is requesting
15		a packet data service option and it has data to send;
16		otherwise, the mobile station shall set this field to '0'.
17	PREV_SID_INCL	- Previous System Identification (SID) included indicator.
18		The mobile station shall set this field to '1' if the mobile
19		station determines that the SID has been changed after a
20		packet data dormant handoff and the PREV_SID field is
21		included in this message; otherwise, the mobile station shall
22		set this field to '0'.
23	PREV_SID	- Previous System Identification.
24		If PREV_SID_INCL is set to '0', the mobile station shall omit
25		this field; otherwise, the mobile station shall include this
26		field and set it as follows:
27		If the mobile station determines SID has been changed after
28		a packet data dormant handoff, the mobile station shall set
29		this field to the previous SID.
30	PREV_NID_INCL	- Previous Network Identification (NID) included indicator.
31		The mobile station shall set this field to '1' if the mobile
32		station determines that NID has been changed after a packet
33		data dormant handoff and the PREV_NID field is included in
34		this message; otherwise, the mobile station shall set this
35		field to '0'.
36	PREV_NID	- Previous Network Identification.
37		If PREV_NID_INCL is set to '0', the mobile station shall omit
38		this field; otherwise, the mobile station shall include this
39		field and set it as follows:

If the mobile station determines NID has been changed after a packet data dormant handoff, the mobile station shall set this field to the previous NID.

PREV_PZID_INCL - Previous Packet Zone ID (PZID) included indicator.

The mobile station shall set this field to '1' if the mobile station determines that the Packet Zone ID has been changed after a packet data dormant handoff and the PREV_PZID field is included in this message; otherwise, the mobile station shall omit this field.

PREV_PZID - Previous Packet Zone ID.

If PREV_PZID_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

If the mobile station determines PZID has been changed after a packet data dormant handoff, the mobile station shall set this field to the previous PZID.

DIALED_DIGS_INCL – Dialed digits included indicator.

The mobile station shall set this field to '1' if the dialed digits related fields are included in this message; otherwise, the mobile station shall set this field to '0'.

DIGIT_MODE – Digit mode indicator.

If the DIALED_DIGS_INCL field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and shall set it as follows:

This field indicates whether the dialed digits are 4-bit DTMF codes or 8-bit ASCII codes using a specified numbering plan.

To originate the call using the binary representation of DTMF digits, the mobile station shall set this field to '0'. To originate the call using ASCII characters, the mobile station shall set this field to '1'.

NUMBER_TYPE – Type of number.

If the DIALED_DIGS_INCL field is set to '0' or if the DIGIT_MODE field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and shall set it as follows:

1 The mobile station shall set this field to the NUMBER_TYPE
2 value shown in Table 2.7.1.3.2.4-2 corresponding to the type
3 of the number as defined in [7], Section 4.5.9.

4 NUMBER_PLAN – Numbering plan.

5 If the DIALED_DIGS_INCL field is set to '0' or if the
6 DIGIT_MODE field is set to '0', the mobile station shall omit
7 this field; otherwise, the mobile station shall include this
8 field and shall set it as follows:

9 The mobile station shall set this field to the NUMBER_PLAN
10 value shown in Table 2.7.1.3.2.4-3 corresponding to the
11 requested numbering plan as defined in [7], Section 4.5.9.

12 NUM_FIELDS – Number of dialed digits in this message.

13 If the DIALED_DIGS_INCL field is set to '0', the mobile station
14 shall omit this field; otherwise, the mobile station shall
15 include this field and shall set it as follows:

16 The mobile station shall set this field to the number of dialed
17 digits included in this message.

18 The mobile station shall include NUM_FIELDS occurrences of the following field:

19 CHARi – A dialed digit or character.

20 If the DIGIT_MODE field is set to '0', the mobile station shall
21 set each occurrence of this field to the code value shown in
22 Table 2.7.1.3.2.4-4 corresponding to the dialed digit. If the
23 DIGIT_MODE field is set to '1', the mobile station shall set
24 each occurrence of this field to the ASCII representation
25 corresponding to the dialed digit, as specified in [9], with the
26 most significant bit set to '0'.

27 NUM_RECS – Number of records.

28 The mobile station shall set this field to the number of
29 information records included with this message.

30
31 The mobile station shall include NUM_RECS occurrences of the following three-field
32 record.

33 RECORD_TYPE – Information record type.

1 The mobile station shall set this field to the record type value
2 shown in Table 2.7.4-1.

3 RECORD_LEN – Information record length.

4 The mobile station shall set this field to the number of octets
5 in the type-specific fields included in this record.

6 Type-specific fields – Type-specific fields.

7 The mobile station shall include type-specific fields as
8 specified in 2.7.4.

9

2.7.2.3.2.33 Extended Flash With Information Message

MSG_TAG: EFWIM

Field	Length (bits)
CON_REF_INCL	1
CON_REF	0 or 8
NUM_REC	4

NUM_REC occurrences of the following three-field record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

CON_REF_INCL – Connection reference included indicator.

The mobile station shall set this field to '1' if the connection reference field is included in this message; otherwise, it shall set this field to '0'.

CON_REF – Connection reference.

If the CON_REF_INCL field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and shall set it to the value of the connection reference assigned to the service option connection of the call, to which this message corresponds.

NUM_REC – Number of records.

The mobile station shall set this field to the number of information records included with this message.

The mobile station shall include NUM_REC occurrence of the following three-field record:

1	RECORD_TYPE	–	Information record type.
2			The mobile station shall set this field to the record type code
3			shown in Table 2.7.4-1 corresponding to the type of this
4			information record.
5	RECORD_LEN	–	Information record length.
6			The mobile station shall set this field to the number of octets
7			in the type -specific fields of this record.
8	Type -specific fields	–	Type -specific fields.
9			The mobile station shall set these fields as specified in 2.7.4
10			for this type of information record.
11			

2.7.2.3.2.34 Extended Pilot Strength Measurement Message

MSG_TAG: EPSMM

Field	Length (bits)
REF_PN	9
PILOT_STRENGTH	6
KEEP	1
REF_PILOT_REC_INCL	1
REF_PILOT_REC_TYPE	0 or 3
REF_RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × REF_RECORD_LEN
SF_RX_PWR	5
NUM_PILOTS	4

NUM_PILOTS occurrences of the following record:

PILOT_PN_PHASE	15
PILOT_STRENGTH	6
KEEP	1
PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × RECORD_LEN

REF_PN – Time reference PN sequence offset.

The mobile station shall set this field to the PN sequence offset of the pilot used by the mobile station to derive its time reference, relative to the zero offset pilot PN sequence in units of 64 PN chips.

PILOT_STRENGTH – Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \log_{10} PS \rfloor,$$

where PS is the strength of the pilot used by the mobile station to derive its time reference (see 6.1.5.1), measured as specified in 2.6.6.2.2. If this value ($\lfloor -2 \times 10 \log_{10} PS \rfloor$) is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

KEEP - Keep pilot indicator.

If the handoff drop timer (see 2.6.6.2.3) corresponding to the pilot used by the mobile station to derive its time reference (see 2.1.5 of [2]) has expired, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

REF_PILOT_REC_INCL - Reference pilot information included indicator.

The mobile station shall set this field to '1' if additional reference pilot information listed in the REF_PILOT_REC_TYPE and REF_RECORD_LEN fields are included. The mobile station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

REF_PILOT_REC_TYPE - Reference pilot record type.

If REF_PILOT_REC_INCL is set to '1', the mobile station shall set this field to the REF_PILOT_REC_TYPE value shown in Table 2.7.2.3.2.34-1 corresponding to the type of Pilot Record specified by this record.

Table 2.7.2.3.2.34-1. Pilot Record Types

Description	REF_PILOT_REC_TYPE PILOT_REC_TYPE (binary)
Auxiliary Pilot	001
All other REF_PILOT_REC_TYPE or PILOT_REC_TYPE values are reserved	

If REF_PILOT_REC_INCL is set to '0', the mobile station shall omit this field.

REF_RECORD_LEN - Reference pilot record length.

1 If REF_PILOT_REC_INCL is set to '1', the mobile station shall
 2 set this field to the number of octets in the type-specific fields
 3 of this pilot record.

4 If REF_PILOT_REC_INCL is set to '0', the mobile station shall
 5 omit this field.

6 Type-specific fields - Pilot record type-specific fields.

7 If REF_PILOT_REC_INCL is set to '1', the mobile station shall
 8 include type-specific fields based on the
 9 REF_PILOT_REC_TYPE of this pilot record.

10 If REF_PILOT_REC_INCL is set to '0', the mobile station shall
 11 omit this field.

12
 13 If REF_PILOT_REC_TYPE is equal to '000', the mobile station shall include the following
 14 fields:

15

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
PILOT_WALSH	(WALSH_LENGTH + 6)
RESERVED	0 to 7 (as needed)

16

17 QOF - Quasi-orthogonal function index.

18 The mobile station shall set this field to the index of the
 19 Quasi-orthogonal function of the corresponding Auxiliary
 20 Pilot.

21 WALSH_LENGTH - Length of the Walsh code for the reference pilot.

22 The mobile station shall set this field to the WALSH_LENGTH
 23 value shown in Table 2.7.2.3.2.34-2 corresponding to the
 24 length of the Walsh code for the pilot that is used as the
 25 Auxiliary Pilot.

Table 2.7.2.3.2.34-2. Walsh Code Length

Length of the WALSH_LENGTH	Walsh Code (binary)
64	'000'
128	'001'
256	'010'
512	'011'
Reserved	'100' – '111'

PILOT_WALSH - Walsh code for the Auxiliary Pilot used by the mobile station to derive its time reference.

The mobile station shall set this field to the Walsh code corresponding to the Auxiliary Pilot.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

SF_RX_PWR - The received power spectral density of the Serving Frequency.

The mobile station shall set this field to

$$\lceil (10 \times \log_{10}(\text{spec_density}) + 120) / 2 \rceil$$

where *spec_density* is the mobile station received power spectral density of the Serving Frequency, in mW/1.23MHz, averaged over the last N_{12m} frames (see 2.6.6.2.5.1).

If this value is less than 0, the mobile station shall set this field to '00000'.

NUM_PILOTS - Number of pilots reported.

The mobile station shall set this field to the number of pilots being reported other than the reference pilot.

The mobile station shall include NUM_PILOTS occurrences of the following record: one occurrence for each pilot in the Active Set, for each pilot in the Candidate Set whose strength exceeds T_ADD, and for each pilot in the Candidate Set whose strength satisfies the following inequality:

$$10 \times \log_{10} PS > \frac{\text{SOFT_SLOPE}_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{\text{ADD_INTERCEPT}_s}{2}$$

where the summation is performed over all pilots currently in the Active Set. The mobile station shall not include these fields for the pilot identified by the REF_PN field.

The mobile station shall order any occurrences of the following record which correspond to pilots in the Active Set such that they occur before any occurrences of the following record which correspond to pilots in the Candidate Set.

PILOT_PN_PHASE - Pilot measured phase.

The mobile station shall set this field to the phase of the pilot PN sequence relative to the zero offset pilot PN sequence of this pilot, in units of one PN chip, as specified in 2.6.6.2.4.

PILOT_STRENGTH - Pilot strength.

The mobile station shall set this field to

$$\lfloor -2 \times 10 \log_{10} PS \rfloor,$$

where PS is the strength of this pilot, measured as specified in 2.6.6.2.2. If this value $\lfloor -2 \times 10 \log_{10} PS \rfloor$ is less than 0, the mobile station shall set this field to '000000'. If this value is greater than '111111', the mobile station shall set this field to '111111'.

KEEP - Keep pilot indicator.

If the handoff drop timer (see 2.6.6.2.3) corresponding to this pilot has expired, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

PILOT_REC_INCL - Additional pilot information included indicator.

The mobile station shall set this field to '1' if additional pilot information listed in the PILOT_REC_TYPE and RECORD_LEN fields are included. The mobile station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

PILOT_REC_TYPE - Reference pilot record type.

If PILOT_REC_INCL is set to '1', the mobile station shall set this field to the PILOT_REC_TYPE value shown in Table 2.7.2.3.2.33-1 corresponding to the type of Pilot Record specified by this record.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field.

RECORD_LEN - Pilot record length.

If PILOT_REC_INCL is set to '1', the mobile station shall set this field to the number of octets in the type-specific fields of this pilot record.

1 If PILOT_REC_INCL is set to '0', the mobile station shall omit
2 this field.

3 Type-specific fields - Pilot record type-specific fields.

4 If PILOT_REC_INCL is set to '1', the mobile station shall
5 include type-specific fields based on the PILOT_REC_TYPE of
6 this pilot record as described in 3.7.6.1.

7 If PILOT_REC_INCL is set to '0', the mobile station shall omit
8 this field.

9

10

2.7.2.3.2.35 Extended Handoff Completion Message

MSG_TAG: EHOCM

Field	Length (bits)
LAST_HDM_SEQ	2
NUM_PILOTS	4

NUM_PILOTS occurrences of the following record:

PILOT_PN	9
PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or $8 \times \text{RECORD_LEN}$

LAST_HDM_SEQ – *Extended Handoff Direction Message, General Handoff Direction Message, or Universal Handoff Direction Message* sequence number.

The mobile station shall set this field to the value of the HDM_SEQ field from the *Extended Handoff Direction Message, General Handoff Direction Message, or the Universal Handoff Direction Message* that determined the current Active Set.

NUM_PILOTS – Number of pilots reported.

The mobile station shall set this field to the number of pilots in the current Active Set.

The mobile station shall include NUM_PILOTS occurrences of the following record: one occurrence for each pilot in the Active Set. If the Active Set contains more than one pilot, the mobile station shall include the pilot information in the same order as in the *Extended Handoff Direction Message, the General Handoff Direction Message, or the Universal Handoff Direction Message* that determined the current Active Set.

PILOT_PN – Pilot PN sequence offset.

The mobile station shall set this field to the pilot PN sequence offset, relative to the zero offset pilot PN sequence in units of 64 PN chips, for this pilot.

PILOT_REC_INCL – Additional pilot information included indicator.

The mobile station shall set this field to '1' if additional pilot information listed in the PILOT_REC_TYPE and RECORD_LEN fields are included. The mobile station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

PILOT_REC_TYPE - Reference pilot record type.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the PILOT_REC_TYPE value shown in Table 3.7.2.3.2.33-1 corresponding to the type of Pilot Record specified by this record.

RECORD_LEN - Pilot record length.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of octets in the type-specific fields of this pilot record.

Type-specific fields - Pilot record type-specific fields.

If PILOT_REC_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include type-specific fields based on the PILOT_REC_TYPE of this pilot record as described in 3.7.6.1.

2.7.2.3.2.36 Security Mode Request Message

MSG_TAG: SMRM

Order-Specific Field	Length (bits)
UI_ENC_INCL	1
UI_ENCRYPT_SUP	0 or 8
NUM_RECS	0 or 3

NUM_RECS + 1 occurrences of the following two field record

CON_REF	0 or 8
UI_ENCRYPT_REQ	0 or 1

SIG_ENC_INCL	1
SIG_ENCRYPT_SUP	0 or 8
SIG_ENCRYPT_REQ	0 or 1
RESERVED	0 - 7 (as needed)

UI_ENC_INCL – User information encryption fields included.

The mobile station shall set this field to '1' if the user information encryption related fields are included in this message. Otherwise, the mobile station shall set this field to '0'.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included the mobile station shall set this field to indicate the supported user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-9.

The mobile station shall set each subfield to '1' if the corresponding user information encryption algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

NUM_REC – Number of user information encryption records.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included the mobile station shall set this field to number of user information encryption records included in this message minus 1.

The mobile station shall include NUM_REC + 1 occurrences of the following two field record

CON_REF – Connection reference corresponding to the service instance requesting for encryption.

The mobile station shall include this field if UI_ENC_INCL is equal to '1'. If included, the mobile station shall set this field to the connection reference of the service option connection corresponding to this user information encryption request record.

UI_ENCRYPT_REQ – Request for user information encryption on the traffic channel indicator.

The mobile station shall set this field to '1' to request user information encryption for the user information corresponding to the service option connection identified by CON_REF; otherwise, the mobile station shall set this field to '0'.

SIG_ENC_INCL – Signaling encryption fields included.

The mobile station shall set this field to '1' if the following two fields related to signaling encryption fields are included in this message. Otherwise, the mobile station shall set this field to '0'.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The mobile station shall include this field if SIG_ENC_INCL is equal to '1'. If included the mobile shall set this field to indicate the supported signaling encryption algorithms supported by the mobile station.

1			This field consists of the subfields shown in Table 2.7.1.3.2.1-
2			4.
3	SIG_ENCRYPT_REQ	-	Signaling Message encryption request indicator.
4			The mobile station shall include this field if SIG_ENC_INCL is
5			equal to '1'. If included the mobile station shall set this field
6			to '1' to request signaling encryption to be turned on for
7			signaling messages sent on f-dsch, r-dsch, f-csch, and r-csch.
8	RESERVED	-	Reserved bits.
9			The mobile station shall add reserved bits as needed in order
10			to make the length of the entire message equal to an integer
11			number of octets. The mobile station shall set these bits
12			to '0'.
13			

2.7.2.3.2.37 Call Cancel Message

MSG_TAG: CLCM

Order-Specific Field	Length (bits)
TAG	4

TAG – Transaction identifier.

The mobile station shall set this field to the TAG value in the *Enhanced Origination Message* sent to originate this call.

2.7.2.3.2.38 Device Information Message

MSG_TAG: DIM

Field	Length (bits)
WLL_DEVICE_TYPE	3
NUM_INFO_RECORDS	5

NUM_INFO_RECORDS occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

WLL_DEVICE_TYPE – WLL device type indicator.

The mobile station shall set this field to the WLL_DEVICE_TYPE value shown in Table 2.7.1.3.2.1-3 corresponding to the mobile station device type.

NUM_INFO_RECORDS – Number of information records included.

The mobile station shall set this field to the number of information records which are included.

The mobile station shall include one occurrence of the following fields for each information record which is included:

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type code shown in Table 2.7.4-1 corresponding to the type of this information record.

RECORD_LEN – Information record length.

The mobile station shall set this field to the number of octets in the type -specific fields of this record.

Type -specific fields – Type -specific fields.

The mobile station shall set these fields as specified in 2.7.4 for this type of information record.

2.7.3 Orders

Order Messages are sent by the mobile station on the r-csch and on the r-dsch. The general PDU format used on the r-csch is defined in 2.7.1.3.2.2, and the general PDU format used on the r-dsch is defined in 2.7.2.3.2.1. There are many specific types of *Order Messages*, as shown in Table 2.7.3-1.

The mobile station may send on the r-csch any type of order shown in Table 2.7.3-1 with a 'Y' in the first column, but shall not send on the r-csch any type of order with an 'N' in the first column. The mobile station may send on the r-dsch any type of order shown in Table 2.7.3-1 with a 'Y' in the second column, but shall not send on the r-dsch any type of order with an 'N' in the second column. The mobile station shall be capable of sending all types of orders shown in Table 2.7.3-1 with a 'Y' in the sixth column.

An order consists of a 6-bit order code and zero or more order-specific fields. The mobile station shall set the ORDER field in the *Order Message* to the order code shown in Table 2.7.3-1 corresponding to the type of order being sent.

If the order qualification code in the fourth column of Table 2.7.3-1 is '00000000' and there are no other additional fields as shown by an 'N' in the fifth column, the mobile station shall include no order qualification code or other order-specific fields in the *Order Message*. The order qualification code of such a message is implicitly '00000000'.

If the order qualification code is not '00000000' and there are no other additional fields as shown in Table 2.7.3-1 by an 'N' in the fifth column, the mobile station shall include the order qualification code as the only order-specific field in the *Order Message*.

If there are other additional fields as shown in Table 2.7.3-1 by a 'Y' in the fifth column, the mobile station shall include order-specific fields as specified in the corresponding subsection of this section.

1 **Table 2.7.3-1. Order and Order Qualification Codes Used on the r-dsch and the r-csch**
 2 **(Part 1 of 4)**

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualificatio n Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
Y	Y	000010	00000000	Y	Y	<i>Base Station Challenge Order</i> (see 2.7.3.1)
Y	Y	000011	00000000	N	Y	<i>SSD Update Confirmation Order</i>
Y	Y	000011	00000001	N	Y	<i>SSD Update Rejection Order</i>
N	Y	000101	0000nnnn	N	Y	<i>Parameter Update Confirmation Order</i> (where 'nnnn' is the Request Number)
N	Y	001011	00000000	N	N	<i>Request Wide Analog Service Order</i>
N	Y	001011	00000001	N	N	<i>Request Narrow Analog Service Order</i>
N	Y	001011	00000010	N	N	<i>Request Analog Service Order</i>
Y	Y	010000	00000000	N	Y	<i>Mobile Station Acknowledgment Order</i> (see [4])
N	Y	010011	00000000	Y	N	<i>Service Option Request Order</i> (Band Class 0 only) (see 2.7.3.2)
N	Y	010100	00000000	Y	Y	<i>Service Option Response Order</i> (Band Class 0 only) (see 2.7.3.3)
Y	Y	010101	00000000	N	Y	<i>Release Order</i> (normal release)
Y	Y	010101	00000001	N	Y	<i>Release Order</i> (with power- down indication)
N	Y	010101	00000010	N	Y	<i>Release Order</i> (with service inactive indication)
N	Y	010111	00000000	N	N	<i>Long Code Transition Request Order</i> (request public)

N	Y	010111	00000001	N	N	<i>Long Code Transition Request Order (request private)</i>
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Table 2.7.3-1. Order and Order Qualification Codes Used on the r-dsch and the r-csch
(Part 2 of 4)

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualificatio n Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
N	Y	010111	00000010	N	Y	<i>Long Code Transition Response Order (use public)</i>
N	Y	010111	00000011	N	N	<i>Long Code Transition Response Order (use private)</i>
N	Y	011000	00000000	N	Y	<i>Connect Order</i>
N	Y	011001	0000nnnn	N	Y	<i>Continuous DTMF Tone Order (where 'nnnn' is the tone per Table 2.7.1.3.2.4-4).</i>
N	Y	011001	11111111	N	Y	<i>Continuous DTMF Tone Order (Stop continuous DTMF tone)</i>
N	Y	011101	nnnnnnnn	N	Y	<i>Service Option Control Order (Band Class 0 only) (the specific control is designated by 'nnnnnnnn' as determined by each service option)</i>
Y	Y	011110	nnnnnnnn	N	N	<i>Local Control Response Order (specific response as designated by 'nnnnnnnn' as determined by each system)</i>
Y	Y	011111	00000001	Y	Y	<i>Mobile Station Reject Order (unspecified reason; see 2.7.3.4)</i>
Y	Y	011111	00000010	Y	Y	<i>Mobile Station Reject Order (message not accepted in this state; see 2.7.3.4)</i>
Y	Y	011111	00000011	Y	Y	<i>Mobile Station Reject Order (message structure not acceptable; see 2.7.3.4)</i>

**Table 2.7.3-1. Order and Order Qualification Codes Used on the r-dsch and the r-csch
(Part 3 of 4)**

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualificatio n Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
Y	Y	011111	00000100	Y	Y	<i>Mobile Station Reject Order</i> (message field not in valid range; see 2.7.3.4)
N	Y	011111	00000101	Y	Y	<i>Mobile Station Reject Order</i> (message type or order code not understood; see 2.7.3.4)
Y	Y	011111	00000110	Y	Y	<i>Mobile Station Reject Order</i> (message requires a capability that is not supported by the mobile station; see 2.7.3.4)
Y	Y	011111	00000111	Y	Y	<i>Mobile Station Reject Order</i> (message cannot be handled by the current mobile station configuration; see 2.7.3.4)
Y	Y	011111	00001000	Y	Y	<i>Mobile Station Reject Order</i> (response message would exceed allowable length; see 2.7.3.4)
Y	Y	011111	00001001	Y	Y	<i>Mobile Station Reject Order</i> (information record is not supported for the specified band class and operating mode; see 2.7.3.4)
N	Y	011111	00001010	Y	Y	<i>Mobile Station Reject Order</i> (search set not specified; see 2.6.6.2.5.1)
N	Y	011111	00001011	Y	Y	<i>Mobile Station Reject Order</i> (invalid search request; see 2.6.6.2.5.1)

**Table 2.7.3-1. Order and Order Qualification Codes Used on the r-dsch and the r-csch
(Part 4 of 4)**

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualificatio n Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
N	Y	011111	00001100	Y	Y	<i>Mobile Station Reject Order</i> (invalid Frequency Assignment; see 2.6.6.2.5.1)
N	Y	011111	00001101	Y	Y	<i>Mobile Station Reject Order</i> (search period too short; see 2.6.6.2.5.1)
Y	N	011111	00001110	N	Y	<i>Mobile Station Reject Order</i> (RC does not match with the value in the field DEFAULT_CONFIG; see 2.6.3.3 and 2.6.3.5)
Y	N	011111	00001111	N	Y	<i>Mobile Station Reject Order</i> (Encryption key with the specified KEY_SEQ not stored)
N	Y	011111	00010000	Y	Y	<i>Mobile Station Reject Order</i> (call assignment not accepted)
N	Y	011111	00010001	Y	Y	<i>Mobile Station Reject Order</i> (no call control instance present with the specified identifier)
N	Y	011111	00010010	Y	Y	<i>Mobile Station Reject Order</i> (a call control instance is already present with the specified identifier)
N	Y	011111	00010011	Y	Y	<i>Mobile Station Reject Order</i> (TAG received does not match any of the TAG stored)
All other codes are reserved.						

2.7.3.1 Base Station Challenge Order

Order-Specific Field	Length (bits)
ORDQ	8
RANDBS	32

ORDQ – Order qualification code.

The mobile station shall set this field to '00000000'.

RANDBS – Random challenge data.

The mobile station shall set this field as specified in 2.3.12.1.5.

2.7.3.2 Service Option Request Order

Order-Specific Field	Length (bits)
ORDQ	8
SERVICE_OPTION	16

ORDQ – Order qualification code.

The mobile station shall set this field to '00000000'.

SERVICE_OPTION – Service option.

The mobile station shall set this field to the service option code specified in [30], corresponding to the requested or alternative service option.

2.7.3.3 Service Option Response Order

Order-Specific Field	Length (bits)
ORDQ	8
SERVICE_OPTION	16

ORDQ – Order qualification code.

The mobile station shall set this field to '00000000'.

SERVICE_OPTION – Service option.

The mobile station shall set this field to the service option code specified in [30], corresponding to the accepted service option, or to '0000000000000000' to reject the proposed service option. See 2.6.4.1.2.2.1.

2.7.3.4 Mobile Station Reject Order

Order-Specific Field	Length (bits)
ORDQ	8
REJECTED_TYPE	8

If the order is sent on the Access Channel or Enhanced Access Channel and

REJECTED_TYPE is '00000111',
 or if the order is sent on the Reverse Traffic Channel and
 REJECTED_TYPE is '00000001',
 the order-specific fields also include the following two fields:

REJECTED_ORDER	8
REJECTED_ORDQ	8

If the order is sent on the Reverse Traffic Channel and
 REJECTED_TYPE is '00001100',
 the order-specific fields also include the following field:

REJECTED_PARAM_ID	16
-------------------	----

If the order is sent on the Access Channel or Enhanced Access Channel and

REJECTED_TYPE is '00001100',
 or if the order is sent on the Reverse Traffic Channel and
 REJECTED_TYPE is '00000011' or
 REJECTED_TYPE is '00001110',
 the order-specific fields also include the following field:

REJECTED_RECORD	8
-----------------	---

If the ORDQ is '00010000', '00010001', or '00010010', the
 order-specific fields also include the following fields:

CON_REF	8
---------	---

If the ORDQ is '00010011', the order-specific fields also
 include the following fields:

CON_REF	8
TAG	4

REJECTED_PDU_TYPE	0 or 2
-------------------	--------

1	ORDQ	-	Order qualification code.
2			The mobile station shall set this field to the ORDQ value
3			shown in Table 2.7.3-1 corresponding to the reason for
4			rejecting the message.
5	REJECTED_TYPE	-	Message type of rejected message.
6			The mobile station shall set this field to the value of the
7			MSG_TYPE field of the message being rejected.
8			If the MSG_TYPE field is not 8 bits, the mobile station shall
9			set the least significant bits of this field to the value of the
10			MSG_TYPE field and set all the remaining bits to '0'.
11	REJECTED_ORDER	-	Order type of rejected message.
12			If the rejected message was an <i>Order Message</i> , the mobile
13			station shall set this field to the value of the ORDER field in
14			the rejected message.
15			If the REJECTED_PDU_TYPE equals '01', the mobile station
16			shall set this field to '00000000'.
17			Otherwise, the mobile station shall omit this field.
18	REJECTED_ORDQ	-	Order qualification code of rejected message.
19			If the rejected message was an <i>Order Message</i> including an
20			ORDQ field, the mobile station shall set this field to the value
21			of the ORDQ field in the rejected message. If the rejected
22			message was an <i>Order Message</i> not including an ORDQ field,
23			the mobile station shall set this field to '00000000'.
24			If the REJECTED_PDU_TYPE equals '01', the mobile station
25			shall set this field to '00000000'.
26			Otherwise, the mobile station shall omit this field.
27	REJECTED_PARAM_ID	-	Parameter identification of the rejected parameter.
28			If the rejected message was a <i>Set Parameters Message</i> , the
29			mobile station shall set this field to the PARAMETER_ID of the
30			first parameter for which the requested operation could not be
31			completed.
32			If the REJECTED_PDU_TYPE equals '01', the mobile station
33			shall set this field to '00000000'.
34			Otherwise, the mobile station shall omit this field.

- 1 REJECTED_RECORD – Record type of the rejected information record.
- 2 If the rejected message was a *Feature Notification Message*, an
- 3 *Alert With Information Message* or a *Flash With Information*
- 4 *Message*, the mobile station shall set this field to the
- 5 RECORD_TYPE field of the first information record that could
- 6 not be accepted.
- 7 If the REJECTED_PDU_TYPE equals '01', the mobile station
- 8 shall set this field to '00000000'.
- 9 Otherwise, the mobile station shall omit this field.
- 10 TAG – Transaction identifier.
- 11 The mobile station shall set this field to the transaction
- 12 identifier (received from the base station) of the call
- 13 assignment being rejected.
- 14 CON_REF – Connection reference.
- 15 The mobile station shall set this field to the value of the
- 16 connection reference of the service option connection
- 17 corresponding to the call.
- 18 REJECTED_PDU_TYPE – PDU type of the rejected message.
- 19 If P_REV_IN_USE_s is less than six, the mobile station shall
- 20 omit this field; otherwise, the mobile station shall set this
- 21 field to the REJECTED_PDU_TYPE code shown in Table
- 22 2.7.3.4-1 corresponding to the PDU type of the message being
- 23 rejected.
- 24
- 25

Table 2.7.3.4-1. REJECTED_PDU_TYPE codes

REJECTED_PDU_ TYPE (binary)	Description
00	20 ms regular message
01	5 ms mini message
01	Reserved
11	Reserved

26

27

2.7.4 Information Records

On the r-csch, information records may be included in the *Status Response Message*, the *Extended Status Response Message*, the *Origination Message*, and the *Device Information Message*. On the r-dsch, information records may be included in the *Origination Continuation Message*, the *Enhanced Origination Message*, the *Flash With Information Message*, the *Extended Flash With Information Message*, the *Service Request Message*, the *Service Response Message*, the *Status Message*, and the *Status Response Message*. Table 2.7.4-1 lists the information record type values that may be used with each message type. The following sections describe the contents of each of the record types in detail.

1

Table 2.7.4-1. Information Record Types (Part 1 of 2)

Information Record	Record Type (binary)	Message Type	r-csch	r-dsch
Reserved	00000001	None	-	-
Reserved for Obsolete Identification	00000010			
Keypad Facility	00000011	Flash	N	Y
Called Party Number	00000100	Flash	N	Y
Calling Party Number	00000101	Flash	N	Y
		Origination Continuation	N	Y
Reserved for Obsolete Identification	00000110	-	-	-
Call Mode	00000111	Status [1]	N	Y
Terminal Information	00001000	Status [1]	Y	Y
Roaming Information	00001001	Status [1]	Y	Y
Security Status	00001010	Status [1]	N	Y
Connected Number	00001011	Flash	N	Y
IMSI	00001100	Status [1]	Y	Y
ESN	00001101	Status [1]	Y	Y
Band Class Information	00001110	Status [2]	Y	Y
Power Class Information	00001111	Status [2]	Y	Y
Operating Mode Information	00010000	Status [2]	Y	Y
Service Option Information	00010001	Status [2]	Y	Y
Multiplex Option Information	00010010	Status [2]	Y	Y
		Status [2]	N	Y
Service Configuration Information	00010011	Service Request	N	Y
		Service Response	N	Y

2

1

Table 2.7.4-1. Information Record Types (Part 2 of 2)

Information Record	Record Type (binary)	Message Type	r-csch	r-dsch
Called Party Subaddress	00010100	Flash	N	Y
		Origination Continuation	N	Y
Calling Party Subaddress	00010101	Flash	N	Y
		Origination Continuation	N	Y
Connected Subaddress	00010110	Flash	N	Y
Power Control Information	00010111	Status [2]	Y	Y
IMSI_M	00011000	Status [2]	Y	Y
IMSI_T	00011001	Status [2]	Y	Y
Capability Information	00011010	Status [2]	Y	Y
Channel Configuration Capability Information	00011011	Status [2]	Y	Y
Extended Multiplex Option Information	00011100	Status [2]	Y	Y
Geo-location Information	00011101	Status [2]	Y	Y
Band Subclass Information	00011110	Status [2]	Y	Y
Global Emergency Call	00011111	Flash	N	Y
Hook Status	00100000	DIM	Y	Y
		Status [2]	Y	Y
QoS Parameters	00100001	Origination Continuation	N	Y
		Enhanced Origination	N	Y
Encryption Capability	00100010	Status [2]	Y	Y
Extended Record Type — International	11111110	Country-Specific		

All other record type values are reserved.

“Flash” refers to either the *Flash With Information Message* or the *Extended Flash With Information Message*.

“DIM” refers to the *Device Information Message*.

[1] This information record may be included in a *Status Message*, a *Status Response Message*, or an *Extended Status Response Message*.

[2] This information record may be included in a *Status Response Message* or an *Extended Status Response Message*.

1 2.7.4.1 Reserved

2

2.7.4.2 Keypad Facility

This information record can be included in a *Flash With Information Message* and allows the user to send characters entered via a keyboard or other such terminal.

Type-Specific Field	Length (bits)
One or more occurrences of the following field:	
CHARi	8

CHARi – Character.

The mobile station shall include one occurrence of this field for each character entered. The mobile station shall set each occurrence of this field to the ASCII representation corresponding to the character entered, as specified in [9], with the most significant bit set to '0'.

2.7.4.3 Called Party Number

This information record identifies the called party's number.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4

Zero or more occurrences of the following field:

CHARi	8
-------	---

RESERVED	1
----------	---

NUMBER_TYPE – Type of number.

The mobile station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the called number, as defined in [7], Section 4.5.9.

NUMBER_PLAN – Numbering plan.

The mobile station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the called number, as defined in [7], Section 4.5.9.

CHARi – Character.

The mobile stations shall include one occurrence of this field for each character in the called number. The mobile station shall set each occurrence of this field to the ASCII representation corresponding to the character, as specified in [9], with the most significant bit set to '0'.

RESERVED – Reserved bit.

The mobile station shall set this field to '0'.

2.7.4.4 Calling Party Number

This information record can be included in a *Flash With Information Message* and identifies the calling party's number.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4
PI	2
SI	2

Zero or more occurrences of the following field:

CHARi	8
-------	---

RESERVED	5
----------	---

NUMBER_TYPE – Type of number.

The mobile station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the calling number, as defined in [7], Section 4.5.9.

NUMBER_PLAN – Numbering plan.

The mobile station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the calling number, as defined in [7], Section 4.5.9.

PI – Presentation indicator.

This field indicates whether or not the calling number should be displayed.

The mobile station shall set this field to the PI value shown in Table 2.7.4.4-1 corresponding to the presentation indicator, as defined in [7], Section 4.5.9.

Table 2.7.4.4-1. Presentation Indicators

Description	PI (binary)
Presentation allowed	00
Presentation restricted	01
Number not available	10
Reserved	11

SI – Screening indicator.

This field indicates how the calling number was screened.

The mobile station shall set this field to the SI value shown in Table 2.7.4.4-2 corresponding to the screening indicator value, as defined in [7], Section 4.5.9.

Table 2.7.4.4-2. Screening Indicators

Description	SI (binary)
User-provided, not screened	00
User-provided, verified and passed	01
User-provided, verified and failed	10
Network-provided	11

CHARi – Character.

The mobile stations shall include one occurrence of this field for each character in the calling number. The mobile station shall set each occurrence of this field to the ASCII representation corresponding to the character, as specified in [9], with the most significant bit set to '0'.

RESERVED – Reserved bits.

The mobile station shall set this field to '00000'.

1 2.7.4.5 Reserved

2

3

2.7.4.6 Call Mode

This information record can be included in a *Status Message* or a *Status Response Message* to return the mobile station's preferred call mode and call-related information.

Type-Specific Field	Length (bits)
ORIG_MODE	1
PRI_SERVICE	16
SEC_SERVICE	16
RESERVED	7

ORIG_MODE – Origination mode indicator.

If the current call is a mobile-originated call, the mobile station shall set this field to '0'. If the current call is a mobile-terminated call, the mobile station shall set this field to '1'.

PRI_SERVICE – Primary service option.

The mobile station shall set this field to the value specified in [30], corresponding to the current primary service option. If no primary service option is active, the mobile station shall set this field to '0000000000000000'.

SEC_SERVICE – Secondary service option.

The mobile station shall set this field to the value specified in [30], corresponding to the current secondary service option. If no secondary service option is active, the mobile station shall set this field to '0000000000000000'.

RESERVED – Reserved bits.

The mobile station shall set this field to '0000000'.

2.7.4.7 Terminal Information

This information record can be included in a *Status Message*, a *Status Response Message*, or an *Extended Status Response Message* to return configuration information about the mobile station.

Type-Specific Field	Length (bits)
MOB_P_REV	8
MOB_MFG_CODE	8
MOB_MODEL	8
MOB_FIRM_REV	16
SCM	8
LOCAL_CTRL	1
SLOT_CYCLE_INDEX	3

One or more occurrences of the following field:

SERVICE_OPTION	16
----------------	----

RESERVED	4
----------	---

MOB_P_REV – Protocol revision of the mobile station.

If the status request does not specify a band class, the mobile station shall set this field to '00000111'; otherwise, the mobile station shall set this field to the MOB_P_REV associated with the requested band class and operating mode.

MOB_MFG_CODE – Manufacturer code.

This field identifies the manufacturer of the mobile station.

The mobile station shall set this field to the manufacturer code assigned to its manufacturer.

MOB_MODEL – Model number.

This number is assigned by the manufacturer for a particular model.

The mobile station shall set this field to the model number assigned by the manufacturer for this mobile station.

1	MOB_FIRM_REV	-	Firmware revision number.
2			This number is assigned by the manufacturer for a particular
3			firmware version.
4			The mobile station shall set this field to the revision number
5			assigned by the manufacturer for the firmware version
6			running in this mobile station.
7	SCM	-	Station class mark.
8			The mobile station shall set this field to its station class
9			mark. See 2.3.3.
10	LOCAL_CTRL	-	Local control indicator.
11			If local control is enabled, the mobile station shall set this
12			field to '1'. If local control is disabled, the mobile station shall
13			set this field to '0'. See [6].
14	SLOT_CYCLE_INDEX	-	Slot cycle index.
15			If the requested operating mode is CDMA and the mobile
16			station is configured for slotted mode operation, the mobile
17			station shall set this field to the preferred slot cycle index,
18			SLOT_CYCLE_INDEX _p (see 2.6.2.1.1); otherwise, the mobile
19			station shall set this field to '000'.
20	SERVICE_OPTION	-	Supported service option.
21			If the requested operating mode is CDMA, the mobile station
22			shall include one occurrence of this field for each service
23			option supported by the mobile station (see [30]); otherwise,
24			the mobile station shall include one occurrence of this field
25			with the value set to '0000000000000000'.
26	RESERVED	-	Reserved bits.
27			The mobile station shall set this field to '0000'.
28			

2.7.4.8 Roaming Information

This information record can be included in a *Status Message*, a *Status Response Message*, or an *Extended Status Response Message* to return roaming information about the mobile station.

Type-Specific Field	Length (bits)
ACCOLC	4
MOB_TERM_HOME	1
MOB_TERM_FOR_SID	1
MOB_TERM_FOR_NID	1

Zero or more occurrences of the following record:

SID	15
NID	16

RESERVED	0 - 7 (as needed)
----------	-------------------

- ACCOLC – Overload class.
- The mobile station shall set this field to the access overload class assigned to the mobile station.
- MOB_TERM_HOME – Home (non-roaming) registration enable indicator.
- If the mobile station is configured to receive mobile station terminated calls when not roaming, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'. See 2.6.5.3.
- MOB_TERM_FOR_SID – Foreign SID roaming registration enable indicator.
- If the mobile station is configured to receive mobile station terminated calls when it is a foreign SID roamer, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'. See 2.6.5.3.
- MOB_TERM_FOR_NID – Foreign NID roaming registration enable indicator.
- If the mobile station is configured to receive mobile station terminated calls when it is a foreign NID roamer, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'. See 2.6.5.3.

1 The mobile station shall include one occurrence of the following two-field record for each
2 home (non-roaming) (SID, NID) pair (see 2.6.5.2):

3 SID – System identification.

4 The mobile station shall set this field to the SID value for this
5 (SID, NID) pair.

6 NID – Network identification.

7 The mobile station shall set this field to the NID value for this
8 (SID, NID) pair.

9 RESERVED – Reserved bits.

10 The mobile station shall add reserved bits as needed in order
11 to make the length of the entire information record equal to
12 an integer number of octets. The mobile station shall set
13 these bits to '0'.
14

2.7.4.9 Security Status

This information record can be included in a *Status Message* or a *Status Response Message* to return the authentication, encryption, and voice privacy modes of the mobile station.

Type-Specific Field	Length (bits)
AUTH_MODE	2
ENCRYPT_MODE	2
PRIVATE_LCM	1
RESERVED	3

AUTH_MODE – Authentication mode.

If the mobile station provided standard authentication information at the initiation of this call, the mobile station shall set this field to '01'; otherwise, the mobile station shall set this field to '00'. All other values are reserved.

ENCRYPT_MODE – Message encryption mode.

The mobile station shall set this field to the value shown in Table 3.7.2.3.2.8-2 corresponding to the message encryption mode currently in use for this call.

PRIVATE_LCM – Private long code mask indicator.

If the mobile station is using the private long code mask for this call, the mobile station shall set this field to '1'. If the mobile station is using the public long code mask for this call, the mobile station shall set this field to '0'.

RESERVED – Reserved bits.

The mobile station shall set this field to '000'.

2.7.4.10 Connected Number

This information record can be included in a *Flash With Information Message* to identify the responding party to a call.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4
PI	2
SI	2

Zero or more occurrences of the following field:

CHARi	8
-------	---

RESERVED	5
----------	---

NUMBER_TYPE – Type of number.

The mobile station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the connected number as defined [7], Section 4.5.9.

NUMBER_PLAN – Numbering plan.

The mobile station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the connected number, as defined, in [7], Section 4.5.9.

PI – Presentation indicator.

This field indicates whether or not the connected number should be displayed. The mobile station shall set this field to the PI value shown in Table 2.7.4.4-1 corresponding to the presentation indicator, as defined in [7], Section 4.5.9.

SI – Screening indicator.

This field indicates how the connected number was screened. The mobile station shall set this field to the SI value shown in Table 2.7.4.4-2 corresponding to the screening indicator value, as defined in [7], Section 4.5.9.

CHARi – Character.

The mobile station shall include one occurrence of this field for each character in the connected number. The mobile station shall set each occurrence of this field to the ASCII representation corresponding to the character, as specified in [9], with the most significant bit set to '0'.

- 1 RESERVED – Reserved bits.
- 2 The mobile station shall set this field to '00000'.
- 3

2.7.4.11 IMSI

This information record can be included in a *Status Message*, a *Status Response Message*, or an *Extended Status Response Message* to return the mobile station's operational IMSI.

Type-Specific Field	Length (bits)
IMSI_CLASS	1
IMSI_ADDR_NUM	3
MCC_O	10
IMSI_O_11_12	7
IMSI_O_S	34
RESERVED	1

IMSI_CLASS – If IMSI_O is a class 0 IMSI, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

IMSI_ADDR_NUM – Number of IMSI_O address digits.
If IMSI_O is a class 1 IMSI, the mobile station shall set this field to four less than the number of digits in the NMSI; otherwise, the mobile station shall set this field to '000'.

MCC_O – Mobile Country Code of the operational IMSI.
The mobile station shall set this field to MCC_O_S. (see 2.3.1).

IMSI_O_11_12 – The 11th and 12th digits of the operational IMSI.
The mobile station shall set this field to IMSI_O_11_12_S. (see 2.3.1).

IMSI_O_S – Last ten digits of the operational IMSI.
The mobile station shall set this field to IMSI_O_S. (see 2.3.1.)

RESERVED – Reserved bit.
The mobile station shall set this field to '0'.

2.7.4.12 ESN

This information record can be included in a *Status Message*, a *Status Response Message*, or an *Extended Status Response Message* to return the mobile station ESN.

Type-Specific Field	Length (bits)
ESN	32

ESN – Mobile station electronic serial number.

The mobile station shall set this field to its electronic serial number (see 2.3.2).

2.7.4.13 Band Class Information

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return band class information about the mobile station.

Type-Specific Field	Length (bits)
BAND_CLASS_INFO	8 × RECORD_LEN

BAND_CLASS_INFO – Band class information.

This field indicates which band classes are supported by the mobile station.

This field currently consists of the following subfields which are included in the information record in the order shown:

Subfield	Length (bits)	Subfield Description
BAND_CLASS_0	1	800 MHz cellular band
BAND_CLASS_1	1	1.8 to 2.0 GHz PCS band
BAND_CLASS_2	1	872 to 960 MHz TACS band (see [30])
BAND_CLASS_3	1	832 to 925 MHz JTACS band (see [30])
BAND_CLASS_4	1	1.75 to 1.87 GHz Korean PCS band (see [30])
BAND_CLASS_5	1	450 MHz NMT (see [30])
BAND_CLASS_6	1	2 GHz IMT-2000 Band
BAND_CLASS_7	1	700 MHz (see [30])

The mobile station shall set each subfield to '1' if the corresponding band class is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

RESERVED – Reserved bits.

The mobile station shall set this field to '0'.

1 When more band classes are defined, the reserved bits will be
2 used for the new corresponding subfields. Sufficient octets
3 will be added to this field to accommodate the new subfields.
4 All the undefined bits in an additional octet will be reserved
5 bits.

6 The mobile station shall set all the reserved bits to '0'. If all
7 bits are set to '0' in an octet and all succeeding octets, the
8 mobile station shall omit the octet and the succeeding octets.
9

2.7.4.14 Power Class Information

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return power class information about the mobile station.

Type-Specific Field	Length (bits)
MAX_EIRP	8

MAX_EIRP – Maximum effective isotropic radiated power (EIRP).

The mobile station shall set this field to the minimum EIRP at maximum output (in dBW) for the mobile station plus 60 (see [11]). When the mobile station output power is expressed in ERP, it may be converted to EIRP by adding 2 dB to the ERP value.²²

²² For example, if a mobile station has a minimum ERP at maximum output of -4 dBW, then the mobile station sets this field to 58.

2.7.4.15 Operating Mode Information

This information record can be included in a *Status Response Message* or an *Extended Status Response Message* to return operating mode information about the mobile station.

Type-Specific Field	Length (bits)
OP_MODE_INFO	$8 \times \text{RECORD_LEN}$

OP_MODE_INFO – Operating mode information.

This field indicates which operating modes are supported by the mobile station.

This field currently consists of the following subfields which are included in the information record in the order shown in Table 2.7.4.15-1 for P_REV_IN_USE_S less than or equal to three and in Table 2.7.4.15-2 for P_REV_IN_USE_S greater than three.

Table 2.7.4.15-1. OP_MODE for P_REV_IN_USE_S Less Than or Equal to Three

Subfield	Length (bits)	Subfield Description
OP_MODE0	1	CDMA mode in Band Class 1 [24]
OP_MODE1	1	CDMA mode in Band Class 0 [24]
OP_MODE2	1	analog mode [24]
OP_MODE3	1	wide analog mode [22]
OP_MODE4	1	narrow analog mode [22]
RESERVED	3	–

Table 2.7.4.15-2. OP_MODE for P_REV_IN_USE_s Greater Than Three

Subfield	Length (bits)	Subfield Description	Standards for Band Class 0 and Band Class 1
OP_MODE0	1	CDMA mode	[24]
OP_MODE1	1	CDMA mode	[24]
OP_MODE2	1	Analog mode	[24]
OP_MODE3	1	Wide analog mode	[22]
OP_MODE4	1	Narrow analog mode	[22]
RESERVED	3	–	–

The mobile station shall set each subfield to '1', if the corresponding operating mode is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

RESERVED – Reserved bits.

The mobile station shall set this field to '000'.

When more operating modes are defined, the reserved bits will be used for the new corresponding subfields. Sufficient octets will also be added to this field to accommodate the corresponding new subfields. All the undefined bits in an additional octet will be reserved bits.

The mobile station shall set all the reserved bits to '0'. If all bits are set to '0' in an octet and all succeeding octets, the mobile station shall omit the octet and the succeeding octets.

2.7.4.16 Service Option Information

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return service option information about the mobile station.

Type-Specific Field	Length (bits)
---------------------	---------------

One or more occurrences of the following field:

RESERVED	6
FORWARD_SUPPORT	1
REVERSE_SUPPORT	1
SERVICE_OPTION	16

The mobile station shall include one occurrence of the following record for each service option supported:

RESERVED – Reserved bits.

The mobile station shall set this field to '000000'.

FORWARD_SUPPORT – Support indicator for Forward Traffic Channel.

The mobile station shall set this field to '1' if the service option specified in the SERVICE_OPTION field is supported on the Forward Traffic Channel.

REVERSE_SUPPORT – Support indicator for Reverse Traffic Channel.

The mobile station shall set this field to '1' if the service option specified in the SERVICE_OPTION field is supported on the Reverse Traffic Channel.

SERVICE_OPTION – Service option.

The mobile station shall set this field to the value specified in [30] for the service option supported.

2.7.4.17 Multiplex Option Information

This information record can be included in a *Status Response Message* or an *Extended Status Response Message* to return multiplex option information about the mobile station. The mobile station shall include at least one, and not more than six, instances of the record within the type-specific field according to the following rules:

- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 1. If this instance is included, the mobile station shall support Multiplex Option 1 for forward and reverse operation.
- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 2. If this instance is included, the mobile station shall support Multiplex Option 2 for forward and reverse operation.
- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 3, 5, 7, 9, 11, 13, or 15 and with FOR_RATES set to '00000000'. If this instance is included, the mobile station shall set MULTIPLEX_OPTION to the highest numbered multiplex option from the set {3, 5, 7, 9, 11, 13, 15} which the mobile station supports for reverse operation, and the mobile station shall support all multiplex options less than or equal to MULTIPLEX_OPTION from that set for reverse operation.
- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 4, 6, 8, 10, 12, 14, or 16 and with FOR_RATES set to '00000000'. If this instance is included, the mobile station shall set MULTIPLEX_OPTION to the highest numbered multiplex option from the set {4, 6, 8, 10, 12, 14, 16} which the mobile station supports for reverse operation, and the mobile station shall support all multiplex options less than or equal to MULTIPLEX_OPTION from that set for reverse operation.
- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 3, 5, 7, 9, 11, 13, or 15 and with REV_RATES set to '00000000'. If this instance is included, the mobile station shall set MULTIPLEX_OPTION to the highest numbered multiplex option from the set {3, 5, 7, 9, 11, 13, 15} which the mobile station supports for forward operation, and the mobile station shall support all multiplex options less than or equal to MULTIPLEX_OPTION from that set for forward operation.
- Within the type-specific field, the mobile station may include one instance of a record in which MULTIPLEX_OPTION is set to 4, 6, 8, 10, 12, 14, or 16 and with REV_RATES set to '00000000'. If this instance is included, the mobile station shall set MULTIPLEX_OPTION to the highest numbered multiplex option from the set {4, 6, 8, 10, 12, 14, 16} which the mobile station supports for forward operation, and the mobile station shall support all multiplex options less than or equal to MULTIPLEX_OPTION from that set for forward operation.
- Within the type-specific field, the mobile station shall include at least one instance of a record in which FOR_RATES is set to a value other than '00000000'.

- Within the type-specific field, the mobile station shall include at least one instance of a record in which REV_RATES is set to a value other than '00000000'.

Type-Specific Field	Length (bits)
One or more occurrences of the following record:	
MULTIPLEX_OPTION	16
FOR_NUM_BITS	8
REV_NUM_BITS	8

The mobile station shall include one occurrence of the following record for each specified multiplex option according to the previously stated rules:

MULTIPLEX_OPTION – Supported multiplex option.

The mobile station shall set this field to the number of the supported multiplex option from the set {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16} (e.g., 1 corresponds to Multiplex Option 1).

FOR_NUM_BITS – Forward Traffic Channel number of bits per frame.

If FOR_NUM_BITS = '00000000', then the specified multiplex option in this record shall indicate the supported multiplex option for the Reverse Traffic Channel only. In this case, no further interpretation of the FOR_NUM_BITS field shall be made. The mobile station shall not set both FOR_NUM_BITS and REV_NUM_BITS equal to '00000000' in the same information record.

If MULTIPLEX_OPTION is equal to 1, 3, 5, 7, 9, 11, 13, or 15, this field consists of the subfields specified in Table 2.7.4.17-1 which are included in the information record in the order shown in the table. The subfields in Table 2.7.4.17-1 refer to the number of bits per frame supported on the Fundamental Code Channel of the Forward Traffic Channel.

**Table 2.7.4.17-1. Forward Fundamental Traffic Channel
Number of Bits per Frame for Forward Multiplex Option 1**

Subfield	Length (bits)	Subfield Description
RS1_9600_FOR	1	172 bits per F-FCH frame
RS1_4800_FOR	1	80 bits per F-FCH
RS1_2400_FOR	1	40 bits per F-FCH frame
RS1_1200_FOR	1	16 bits per F-FCH frame
RESERVED	4	

If MULTIPLEX_OPTION is equal to 2, 4, 6, 8, 10, 12, 14, or 16, this field consists of the subfields specified in Table 2.7.4.17-2 which are included in the information record in the order shown in the table. The subfields in Table 2.7.4.17-2 refer to the number of bits per frame supported on the Fundamental Code Channel of the Forward Traffic Channel.

**Table 2.7.4.17-2. Forward Fundamental Traffic Channel
Number of Bits per Frame for MO_FOR_FCH equal to 2**

Subfield	Length (bits)	Subfield Description
RS2_14400_FOR	1	267 bits per F-FCH frame
RS2_7200_FOR	1	125 bits per F-FCH frame
RS2_3600_FOR	1	55 bits per F-FCH frame
RS2_1800_FOR	1	21 bits per F-FCH frame
RESERVED	4	

The mobile station shall set the subfields specified in Tables 2.7.4.17-1 and 2.7.4.17-2, corresponding to the Forward Traffic Channel number of bits per frame supported by the mobile station for this multiplex option to '1', and shall set the remaining subfields to '0'. The mobile station shall set RESERVED to '0000'.

REV_NUM_BITS – Reverse Traffic Channel transmission rates.

If REV_NUM_BITS is equal to '00000000', then the specified multiplex option in this record indicate the supported multiplex option for the Forward Traffic Channel only. In this case, no further interpretation of the REV_NUM_BITS field shall be made. The mobile station shall not set both FOR_NUM_BITS and REV_NUM_BITS equal to '00000000' in the same information record.

If MULTIPLEX_OPTION is equal to 1, 3, 5, 7, 9, 11, 13, or 15, this field consists of the subfields specified in Table 2.7.4.17-3 which are included in the information record in the order shown in the table. The subfields in Table 2.7.4.17-3 refer to the number of bits per frame supported on the Fundamental Code Channel of the Reverse Traffic Channel.

**Table 2.7.4.17-3. Reverse Fundamental Traffic Channel
Number of Bits per Frame for MO_REV_FCH equal to 1**

Subfield	Length (bits)	Subfield Description
RS1_9600_REV	1	172 bits per R-FCH frame
RS1_4800_REV	1	80 bits per R-FCH frame
RS1_2400_REV	1	40 bits per R-FCH frame
RS1_1200_REV	1	16 bits per R-FCH frame
RESERVED	4	

If MULTIPLEX_OPTION is equal to 2, 4, 6, 8, 10, 12, 14, or 16, this field consists of the subfields specified in Table 2.7.4.17-4 which are included in the information record in the order shown in the table. The subfields in Table 2.7.4.17-4 refer to the number of bits per frame supported on the Fundamental Code Channel of the Reverse Traffic Channel.

**Table 2.7.4.17-4. Reverse Fundamental Traffic Channel
Number of Bits per Frame for MO_REV_FCH equal to 1**

Subfield	Length (bits)	Subfield Description
RS2_14400_REV	1	267 bits per R-FCH frame
RS2_7200_REV	1	125 bits per R-FCH frame
RS2_3600_REV	1	55 bits per R-FCH frame
RS2_1800_REV	1	21 bits per R-FCH frame
RESERVED	4	

The mobile station shall set the subfields specified in Table 2.7.4.17-3 and Table 2.7.4.17-4 corresponding to the Reverse Traffic Channel transmission number of bits per frame supported by the mobile station for this multiplex option to '1', and shall set the remaining subfields to '0'. The mobile station shall set RESERVED to '0000'.

1 2.7.4.18 Service Configuration

2 The format of the Service Configuration information record is defined in 3.7.5.7.

3

4

2.7.4.19 Called Party Subaddress

This information record identifies the called party subaddress.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT – The extension bit.

The mobile station shall set this field to '1'.

SUBADDRESS_TYPE – Type of subaddress.

The mobile station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.8.

Table 2.7.4.19-1. Subaddress Types

Description	SUBADDRESS TYPE (binary)
NSAP (CCITT Recommendation X.213/ISO 8348 AD2)	000
User specified	010
Reserved	others

ODD/EVEN_INDICATOR – The indicator of odd/even bits.

The mobile station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.8. This field is only used when the type of subaddress is "User specified" and the coding is BCD.

Table 2.7.4.19-2. Odd/Even Indicator

Description	ODD/EVEN INDICATOR (binary)
Even number of address signals	0
Odd number of address signals	1

RESERVED – Reserved bits.

The mobile station shall set this field to '000'.

CHARi – Character.

The mobile station shall include one occurrence of this field for each character in the called party subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

When the SUBADDRESS_TYPE field is set to '010', the user-specified subaddress field is encoded according to the user specification, subject to a maximum length of 20 octets. When interworking with CCITT Recommendation X.25 networks, BCD coding should be applied.

2.7.4.20 Calling Party Subaddress

This information record identifies the calling party subaddress.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT – The extension bit.

The mobile station shall set this field to '1'.

SUBADDRESS_TYPE – Type of subaddress.

The mobile station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.10.

ODD/EVEN_INDICATOR – The indicator of odd/even bits.

The mobile station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.10. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED – Reserved bits.

The mobile station shall set this field to '000'.

CHAR_i – Character.

The mobile station shall include one occurrence of this field for each character in the calling party subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

When the SUBADDRESS_TYPE field is set to '010', user-specified subaddress field is encoded according to the user specification, subject to a maximum length of 20 octets. When interworking with CCITT Recommendation X.25 networks, BCD coding should be applied.

2.7.4.21 Connected Subaddress

This information record identifies the subaddress of the responding party.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT – The extension bit.

The mobile station shall set this field to '1'.

SUBADDRESS_TYPE – Type of subaddress.

The mobile station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.14.

ODD/EVEN_INDICATOR – The indicator of odd/even bits.

The mobile station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.14. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED – Reserved bits.

The mobile station shall set this field to '000'.

CHAR_i – Character.

The mobile station shall include one occurrence of this field for each character in the connected subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

1 When the SUBADDRESS_TYPE field is set to '010', user-
2 specified subaddress field is encoded according to the user
3 specification, subject to a maximum length of 20 octets.
4 When interworking with CCITT Recommendation X.25
5 networks, BCD coding should be applied.
6

2.7.4.22 Power Control Information

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return the minimum power control step size supported by the mobile station (see 2.1.2.3.2).

Type-Specific Field	Length (bits)
MIN_PWR_CNTL_STEP	3
RESERVED	5

MIN_PWR_CNTL_STEP – Minimum power control step size

The mobile station shall set this field to the PWR_CNTL_STEP value associated with the minimum closed loop power control step size shown in Table 3.7.3.3.2.25-1 that the mobile station supports.

RESERVED – Reserved bits.

The mobile station shall set this field to '00000'.

2.7.4.23 IMSI_M

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return the mobile station's IMSI_M_p.

Type-Specific Field	Length (bits)
IMSI_M_CLASS	1
IMSI_M_ADDR_NUM	3
MCC_M	10
IMSI_M_11_12	7
IMSI_M_S	34
RESERVED	1

IMSI_M_CLASS – IMSI_M Class assignment of the mobile station.

If the mobile station's IMSI_M is a class 0 IMSI, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

IMSI_M_ADDR_NUM – Number of IMSI_M_p address digits.

If the mobile station's IMSI_M is a class 1 IMSI, the mobile station shall set this field to four less than the number of digits in the NMSI; otherwise, the mobile station shall set this field to '000'.

MCC_M – Mobile Country Code of the MIN based IMSI.

The mobile station shall set this field the MCC_M_p. See 2.3.1.

IMSI_M_11_12 – The 11th and 12th digits of IMSI_M.

The mobile station shall set this field to IMSI_M_11_12_p. See 2.3.1.

IMSI_M_S – Last ten digits of the IMSI_M.

The mobile station shall set this field to IMSI_M_S_p. See 2.3.1.

RESERVED – Reserved bit.

The mobile station shall set this field to '0'.

2.7.4.24 IMSI_T

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return the mobile station's IMSI_T.

Type-Specific Field	Length (bits)
IMSI_T_CLASS	1
IMSI_T_ADDR_NUM	3
MCC_T	10
IMSI_T_11_12	7
IMSI_T_S	34
RESERVED	1

IMSI_T_CLASS – IMSI_T Class assignment of the mobile station.

If the mobile station's IMSI_T is a class 0 IMSI, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field to '1'.

IMSI_T_ADDR_NUM – Number of IMSI_T_p address digits.

If the mobile station's IMSI_T is a class 1 IMSI, the mobile station shall set this field to four less than the number of digits in the NMSI; otherwise, the mobile station shall set this field to '000'.

MCC_T – Mobile Country Code of the IMSI_T.

The mobile station shall set this field to the MCC_T_p. See 2.3.1.

IMSI_T_11_12 – The 11th and 12th digits of the IMSI_T_p.

The mobile station shall set this field to IMSI_T_11_12_p. See 2.3.1.

IMSI_T_S – Last ten digits of the IMSI_T_p.

The mobile station shall set this field to IMSI_T_S_p. See 2.3.1.

RESERVED – Reserved bit.

The mobile station shall set this field to '0'.

2.7.4.25 Capability Information

This information record identifies whether the following optional or MOB_P_REV dependent features are supported by the mobile station.

Type-Specific Field	Length (bits)
ACCESS_ENTRY_HO	1
ACCESS_PROBE_HO	1
ANALOG_SEARCH	1
HOPPING_BEACON	1
MAHHO	1
PUF	1
ANALOG_553A	1
QPCH	1
SLOTTED_TIMER	1
CHS_SUPPORTED	1
GATING_RATE_SET	0 or 2
EXT_CAP_INCLUDED	1

If EXT_CAP_INCLUDED is set to '1', include the following two-field record:

MABO	1
SDB	1

RLP_INFO_LEN	3
RLP_BLOB	8 X RLP_INFO_LEN
FLEX_SUPPORTED	1
F_FCH_FLEX_SUPPORTED	0 or 1
R_FCH_FLEX_SUPPORTED	0 or 1

(continues on next page)

1

Type-Specific Field	Length (bits)
F_DCCH_FLEX_SUPPORTED	0 or 1
R_DCCH_FLEX_SUPPORTED	0 or 1
F_SCH_FLEX_SUPPORTED	0 or 1
R_SCH_FLEX_SUPPORTED	0 or 1
VAR_SUPPORTED	1
F_SCH_VAR_SUPPORTED	0 or 1
R_SCH_VAR_SUPPORTED	0 or 1
MAX_SUM_NUM_BITS_C	0 or 16
MAX_SUM_NUM_BITS_T	0 or 16
RESERVED	0 - 7 (as needed)

2

3 ACCESS_ENTRY_HO – Access Entry Handoff Support.

4 This field identifies the mobile station's support for access
5 entry handoff (see 2.6.2.3). The mobile station shall set this
6 field to '1' if access entry handoff is supported; otherwise, the
7 mobile station shall set this field to '0'.

8 ACCESS_PROBE_HO – Access Probe Handoff Support.

9 This field identifies the mobile station's support for access
10 probe handoff (see 2.6.3.1.3.3). The mobile station shall set
11 this field to '1' if access probe handoff is supported; otherwise,
12 the mobile station shall set this field to '0'.

13 ANALOG_SEARCH – Analog Search Support.

14 This field identifies the mobile station's support for analog
15 searching (see 2.6.6.2.10). The mobile station shall set this
16 field to '1' if analog searching is supported; otherwise, the
17 mobile station shall set this field to '0'.

18 HOPPING_BEACON – Hopping Beacon Support.

19 This field identifies the mobile station's support for hopping pilot
20 beacons. The mobile station shall set this field to '1' if hopping
21 pilot beacons are supported; otherwise, this field shall be set to
22 '0'.

1	MAHHO	–	Mobile Assisted Hard Handoff Support.
2			This field identifies the mobile station's support for mobile
3			assisted hard handoff. The mobile station shall set this field to
4			'1'.
5	PUF	–	Location Power Up Function Support.
6			This field identifies the mobile station's support for location
7			power up function (see 2.6.4.1.7).
8			If MOB_P_REV _p is equal to '00000101', the mobile station shall
9			set this field to '1'; otherwise the mobile station shall set this
10			field as follows:
11			If the mobile station supports location power up function, the
12			mobile station shall set this field to '1', otherwise, the mobile
13			station shall set this field to '0'.
14	ANALOG_553A	–	Analog Support.
15			This field identifies the mobile station's compatibility with [12].
16			The mobile station shall set this field to '1'.
17	QPCH	–	Quick Paging Channel Support.
18			This field identifies the mobile station's support for the Quick
19			Paging Channel. The mobile station shall set this field to '1' if
20			the Quick Paging Channel is supported; otherwise, the mobile
21			station shall set this field to '0'.
22	SLOTTED_TIMER	–	Slotted Timer Support.
23			This field identifies the mobile station's support for the Slotted
24			Timer. The mobile station shall set this field to '1' if the Slotted
25			Timer is supported; otherwise, the mobile station shall set this
26			field to '0'.
27	CHS_SUPPORTED	–	Control Hold Mode supported indicator.
28			The mobile station shall set this field to '1' to indicate that the
29			mobile station supports the Control Hold Mode; otherwise, the
30			mobile station shall set this field to '0'.
31	GATING_RATE_SET	–	Set of supported Reverse Pilot gating rates.
32			If CHS_SUPPORTED is included and is set to '1', the mobile
33			station shall set this field to value shown in Table 2.7.4.25-1
34			corresponding to the set of supported reverse pilot gating
35			rates; otherwise the mobile station shall omit this field.
36			

Table 2.7.4.25-1. Set of supported Reverse Pilot Gating Rates

GATING_RATE SET field (binary)	Gating Rates Capability
00	Gating rates 1
01	Gating rates 1 and $\frac{1}{2}$
10	Gating rates 1, $\frac{1}{2}$ and $\frac{1}{4}$
11	Reserved

EXT_CAP_INCLUDED – Extended Capabilities Included indicator.

The mobile station shall set this field to '1' to indicate that extended capability indicators are included in this record; otherwise, the mobile station shall set this field to '0'.

MABO – Mobile Assisted Burst Operation capability indicator.

If EXT_CAP_INCLUDED is set to '1', the mobile station shall set this field to '1' to indicate that it supports the Mobile Assisted Burst Operation capability; otherwise, the mobile station shall set this field to '0'.

SDB – Short Data Burst supported indicator.

If EXT_CAP_INCLUDED is set to '1', the mobile station shall set this field to '1' to indicate that it supports Short Data Burst capability; otherwise, the mobile station shall set this field to '0'.

RLP_INFO_LEN – RLP capability information length.

The mobile station shall set this field to '000' if the RLP_BLOB field is not included in this record; otherwise, it shall set this field to the size of the RLP_BLOB field in integer number of octets.

RLP_BLOB – Radio Link Protocol information block of bits.

If the RLP_INFO_LEN field is set to '000', the mobile station shall omit this field; otherwise, the mobile station shall set this field as follows:

The mobile station shall set this field to the Radio Link Protocol information block of bits.

FLEX_SUPPORTED – Flexible rate feature supported indicator.

The mobile station shall set this field to '1' if it supports the flexible rate feature (the capability to support a non-listed frame format) on any of the forward or reverse Fundamental, Supplemental or Dedicated Control channels; otherwise, the mobile station shall set this field to '0'.

F_FCH_FLEX-

SUPPORTED – Forward Fundamental channel flexible rate feature supported indicator.

The mobile station shall include this field only if FLEX_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to '1' if it supports the flexible rate feature for the Forward Fundamental Channel; otherwise, the mobile station shall set this field to '0'.

R_FCH_FLEX-

SUPPORTED – Reverse Fundamental channel flexible rate feature supported indicator.

The mobile station shall include this field only if FLEX_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to '1' if it supports the flexible rate feature for the Reverse Fundamental Channel; otherwise, the mobile station shall set this field to '0'.

F_DCCH_FLEX-

SUPPORTED – Forward Dedicated Control channel flexible rate feature supported indicator.

The mobile station shall include this field only if FLEX_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to '1' if it supports the flexible rate feature for the Forward Dedicated Control Channel; otherwise, the mobile station shall set this field to '0'.

R_DCCH_FLEX-

SUPPORTED – Reverse Dedicated Control channel flexible rate feature supported indicator.

The mobile station shall include this field only if FLEX_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to '1' if it supports the flexible rate feature for the Reverse Dedicated Control Channel; otherwise, the mobile station shall set this field to '0'.

1		
2	F_SCH_FLEX-	
3	_SUPPORTED	- Forward Supplemental channel flexible rate feature supported
4		indicator.
5		The mobile station shall include this field only if
6		FLEX_SUPPORTED is equal to '1'. If this field is included, the
7		mobile station shall set this field to '1' if it supports the
8		flexible rate feature for the Forward Supplemental Channel;
9		otherwise, the mobile station shall set this field to '0'.
10	R_SCH_FLEX-	
11	_SUPPORTED	- Reverse Supplemental channel flexible rate feature supported
12		indicator.
13		The mobile station shall include this field only if
14		FLEX_SUPPORTED is equal to '1'. If this field is included, the
15		mobile station shall set this field to '1' if it supports the
16		flexible rate feature for the Reverse Supplemental Channel;
17		otherwise, the mobile station shall set this field to '0'.
18	VAR_SUPPORTED	- Variable rate feature supported indicator.
19		The mobile station shall set this field to '1' if it supports the
20		variable rate feature (the capability to support rate
21		determination) on any of the forward or reverse Supplemental
22		or Dedicated Control channels; otherwise, the mobile station
23		shall set this field to '0'.
24	F_SCH_VAR-	
25	_SUPPORTED	- Forward Supplemental Channel Variable Rate supported
26		indicator.
27		The mobile station shall include this field only if
28		FLEX_SUPPORTED is equal to '1'. If this field is included, the
29		mobile station shall set this field to '1' if it supports the rate
30		determination feature on the Forward Supplemental
31		Channels.
32	R_SCH_VAR-	
33	_SUPPORTED	- Reverse Supplemental Channel Variable Rate supported
34		indicator.
35		The mobile station shall include this field only if
36		FLEX_SUPPORTED is equal to '1'. If this field is included, the
37		mobile station shall set this field to '1' if it supports the rate
38		determination feature on the Reverse Supplemental
39		Channels.

1	MAX_SUM-	
2	_NUM_BITS_C	- Maximum sum of number of bits corresponding to
3		Convolutional rates in the variable rate set.
4		The mobile station shall include this field only if
5		F_SCH_VAR_SUPPORTED is equal to '1'. If this field is
6		included, the mobile station shall set this field to the
7		maximum of the sum of possible information bits per 20 ms
8		corresponding to the Convolutional Code rates in the Variable
9		Rate Set for a Forward Supplemental Channel below which
10		the mobile station is capable of performing rate
11		determination on the forward supplemental channel when
12		Convolutional coding is used.
13	MAX_SUM-	
14	_NUM_BITS_T	- Maximum sum of number of bits corresponding to Turbo Code
15		rates in the variable rate set
16		The mobile station shall include this field only if
17		F_SCH_VAR_SUPPORTED is equal to '1'. If this field is
18		included, the mobile station shall set this field to the
19		maximum of the sum of possible information bits per 20 ms
20		corresponding to the Turbo Code rates in the Variable Rate
21		Set for a Forward Supplemental Channel below which the
22		mobile station is capable of performing rate determination on
23		the forward supplemental channel when Turbo coding is used.
24	RESERVED	- Reserved bits.
25		The mobile station shall add reserved bits as needed in order
26		to make the length of the entire information record equal to
27		an integer number of octets. The mobile station shall set
28		these bits to '0'.
29		

1 2.7.4.26 Extended Record Type - International

2 The use of this record type is country-specific. The first ten bits of the type-specific fields
3 shall include the Mobile Country Code (MCC) associated with the national standards
4 organization administering the use of the record type. Encoding of the MCC shall be as
5 specified in 2.3.1.3. The remaining six bits of the first two octets of the type-specific fields
6 shall be used to specify the country-specific record type.

7

2.7.4.27 Channel Configuration Capability Information

This information record can be included in a *Status Response Message* or an *Extended Status Response Message* to return channel configuration capability information about the mobile station.

Type-Specific Field	Length (bits)
OTD_SUPPORTED	1
FCH_SUPPORTED	1
FCH Type-specific fields	0 or Variable
DCCH_SUPPORTED	1
DCCH Type-specific fields	0 or Variable
FOR_SCH_SUPPORTED	1
FOR_SCH Type-specific fields	0 or Variable
REV_SCH_SUPPORTED	1
REV_SCH Type-specific fields	0 or Variable
NONOCTET_ALIGNED_DATA	1
OCTET_ALIGNED_DATA	1
STS_SUPPORTED	1
3X_CCH_SUPPORTED	1

OTD_SUPPORTED – OTD supported indicator.

The mobile station shall set this field to '1' if the mobile station supports orthogonal transmission diversity; otherwise, the mobile station shall set this field to '0'.

FCH_SUPPORTED – Fundamental Channel supported indicator.

The mobile station shall set this field to '1', if the mobile station supports the Fundamental Channel; otherwise, the mobile station shall set this field to '0'.

FCH Type-specific fields – Fundamental Channel configuration capability information.

If the FCH_SUPPORTED field is set to '1', the mobile station shall include this field and set it as described in 2.7.4.27.1; otherwise the mobile station shall omit this field.

DCCH_SUPPORTED – Dedicated Control Channel supported indicator.

1		The mobile station shall set this field to '1' if the mobile
2		station supports the Dedicated Control Channel; otherwise,
3		the mobile station shall set this field to '0'.
4	DCCH Type -	
5	specific fields	- Fundamental Channel configuration capability information.
6		If the DCCH_SUPPORTED field is set to '1', the mobile station
7		shall include this field and set it as described in 2.7.4.27.2;
8		otherwise the mobile station shall omit this field.
9	FOR_SCH_SUPPORTED	- Forward Supplemental Channel supported indicator.
10		The mobile station shall set this field to '1' if the mobile
11		station supports the Forward Supplemental Channel;
12		otherwise, the mobile station shall set this field to '0'.
13	FOR_SCH Type -	
14	specific fields	- Forward Supplemental Channel Configuration Capability
15		Information.
16		If the FOR_SCH_SUPPORTED field is set to '1', the mobile
17		station shall include this field and set it as described in
18		2.7.4.27.3; otherwise the mobile station shall omit this field.
19	REV_SCH_SUPPORTED	- Reverse Supplemental Channel supported indicator.
20		The mobile station shall set this field to '1' if the mobile
21		station supports the Reverse Supplemental Channel;
22		otherwise, the mobile station shall set this field to '0'.
23	REV_SCH Type -	
24	specific fields	- Reverse Supplemental Channel Configuration capability
25		information.
26		If the REV_SCH_SUPPORTED field is set to '1', the mobile
27		station shall include this field and set it as described in
28		2.7.4.27.4; otherwise the mobile station shall omit this field.
29	NONOCTET_ALIGNED-	
30	_DATA	- Non-octet Aligned Data Block supported indicator.
31		If both the FOR_SCH_SUPPORTED and REV_SCH_SUPPORTED
32		fields are set to '0', the mobile station shall omit this field.
33		Otherwise, the mobile station shall set this field to '1' if it
34		supports use of non-octet aligned data blocks on a SCH.
35	OCTET_ALIGNED_DATA	- Octet Aligned Data Block supported indicator.

1 If both the FOR_SCH_SUPPORTED and REV_SCH_SUPPORTED
 2 fields are set to '0', the mobile station shall omit this field.
 3 Otherwise, the mobile station shall set this field to '1' if it
 4 supports use of octet aligned data blocks on a SCH.

5 STS_SUPPORTED – STS supported indicator.

6 The mobile station shall set this field to '1' if the mobile
 7 station supports Space Time Spreading Transmit Diversity;
 8 otherwise, the mobile station shall set this field to '0'.

9 3X_CCH_SUPPORTED– 3X Common Channel supported.

10 The mobile station shall set this field to '1' if the mobile
 11 station supports the Spreading Rate 3 common channels (3X
 12 BCCH, 3X F-CCCH, and 3X R-EACH); otherwise, the mobile
 13 station shall set this field to '0'.

14

15

2.7.4.27.1 FCH Type-specific Fields

The Fundamental Channel configuration capability information included in the FCH Type-specific fields contains the following subfields:

FCH_FRAME_SIZE	1
FOR_FCH_LEN	3
FOR_FCH_RC_MAP	3 x FOR_FCH_LEN
REV_FCH_LEN	3
REV_FCH_RC_MAP	3 x REV_FCH_LEN

FCH_FRAME_SIZE – Fundamental Channel Frame Size capability indicator.

If in addition to the 20 ms frame size the mobile station also supports the 5 ms frame size on the Fundamental Channel, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

FOR_FCH_LEN – Forward Fundamental Channel Configuration information length.

The mobile station shall set this field to the number of 3 bit units required to specify the length, in bits, of the FOR_FCH_RC_MAP field.

FOR_FCH_RC_MAP – Forward Fundamental Radio Configuration information.

The mobile station shall set this field as described below to indicate which Radio Configurations (see [2] Table 3.1.3.1-1) are supported by the mobile station on the Forward Fundamental Channel.

This field consists of the sequence of 1-bit indicators, each indicating the mobile station support for specific Radio Configuration. Bit positions of these indicators in the field and corresponding Radio Configurations are specified in Table 2.7.4.27.1-1.

The mobile station shall set each indicator to '1' if the corresponding Radio Configuration on the Forward Fundamental Channel is supported by the mobile station; otherwise, the mobile station shall set the indicator to '0'. The mobile station shall set any unused bits in the field to '0'.

Table 2.7.4.27.1-1. Forward Channel Radio Configurations Supported

Subfield	Length (bits)	Subfield Description
RC1	1	Radio Configuration 1
RC2	1	Radio Configuration 2
RC3	1	Radio Configuration 3
RC4	1	Radio Configuration 4
RC5	1	Radio Configuration 5
RC6	1	Radio Configuration 6
RC7	1	Radio Configuration 7
RC8	1	Radio Configuration 8
RC9	1	Radio Configuration 9

REV_FCH_LEN – Reverse Fundamental Channel Configuration information length.

The mobile station shall set this field to the number of 3 bit units required to specify the length, in bits, of the REV_FCH_RC_MAP field.

REV_FCH_RC_MAP – Reverse Fundamental Radio Configuration information.

The mobile station shall set this field as described below to indicate which Radio Configurations (see [2] Table 2.1.3.1-1) are supported by the mobile station on the Reverse Fundamental Channel.

This field consists of the sequence of 1-bit indicators, each indicating the mobile station support for specific Radio Configuration. Bit positions of these indicators in the field and corresponding Radio Configurations are specified in Table 2.7.4.27.1-2.

The mobile station shall set each indicator to '1' if the corresponding Radio Configuration on the Reverse Fundamental Channel is supported by the mobile station; otherwise, the mobile station shall set the indicator to '0'. The mobile station shall set any unused bits in the field to '0'.

1

Table 2.7.4.27.1 -2. Reverse Channel Radio Configurations Supported

Subfield	Length (bits)	Subfield Description
RC1	1	Radio Configuration 1
RC2	1	Radio Configuration 2
RC3	1	Radio Configuration 3
RC4	1	Radio Configuration 4
RC5	1	Radio Configuration 5
RC6	1	Radio Configuration 6

2

3

2.7.4.27.2 DCCH Type-Specific Fields

The Dedicated Control Channel configuration capability information included in the DCCH Type-specific fields contains the following subfields:

DCCH_FRAME_SIZE	2
FOR_DCCH_LEN	3
FOR_DCCH_RC_MAP	3 x FOR_DCCH_LEN
REV_DCCH_LEN	3
REV_DCCH_RC_MAP	3 x REV_DCCH_LEN

DCCH_FRAME_SIZE – Frame Size supported indicator on the Dedicated Control Channel.

The mobile station shall set this field to the frame size supported for the forward and reverse DCCH, as shown in Table 2.7.4.27.2-1.

Table 2.7.4.27.2-1. DCCH Frame Size Supported

DCCH_FRAME_SIZE (binary)	Description
00	Either 5 ms or 20 ms frame sizes (not dynamically switchable)
01	20 ms frame size only
10	5 ms frame size only
11	Both 5 ms and 20 ms frame sizes (Dynamically switchable)

FOR_DCCH_LEN – Forward Dedicated Control Channel Configuration information length.

The mobile station shall set this field to the number of 3 bit units required to specify the length, in bits, of the FOR_DCCH_RC_MAP field.

FOR_DCCH_RC_MAP – Forward Dedicated Channel Radio Configuration information.

The mobile station shall set this field as described below to indicate which Radio Configurations (See (see [2] Table 3.1.3.1-1) are supported by the mobile station on the Forward Dedicated Control Channel.

1			This field consists of the sequence of 1-bit indicators, each
2			indicating the mobile station support for specific Radio
3			Configuration. Bit positions of these indicators in the field
4			and corresponding Radio Configurations are specified in Table
5			2.7.4.27.1-1.
6			The mobile station shall set each indicator to '1' if the
7			corresponding Radio Configuration on the Forward Dedicated
8			Control Channel is supported by the mobile station;
9			otherwise, the mobile station shall set the indicator to '0'.
10			The mobile station shall set any unused bits in the field to '0'.
11	REV_DCCH_LEN	-	Reverse Dedicated Control Channel Configuration
12			information length.
13			The mobile station shall set this field to the number of 3 bit
14			units required to specify the length, in bits, of the
15			REV_DCCH_RC_MAP field.
16	REV_DCCH_RC_MAP	-	Reverse Dedicated Control Channel Radio Configuration
17			information.
18			The mobile station shall set this field as described below to
19			indicate which Radio Configurations (see [2] Table 2.1.3.1-1)
20			are supported by the mobile station on the Reverse Dedicated
21			Control Channel.
22			This field consists of the sequence of 1-bit indicators, each
23			indicating the mobile station support for specific Radio
24			Configuration. Bit positions of these indicators in the field
25			and corresponding Radio Configurations are specified in Table
26			2.7.4.27.1-2.
27			The mobile station shall set each indicator to '1' if the
28			corresponding Radio Configuration on the Reverse Dedicated
29			Control Channel is supported by the mobile station;
30			otherwise, the mobile station shall set the indicator to '0'.
31			The mobile station shall set any unused bits in the field to '0'.
32			

2.7.4.27.3 FOR_SCH Type-Specific Fields.

The Forward Supplemental Channel configuration capability information included in the FOR_SCH Type-specific fields contains the following subfields:

FOR_SCH_LEN	3
FOR_SCH_RC_MAP	3 x FOR_SCH_LEN
FOR_SCH_NUM	2

FOR_SCH_NUM occurrences of the following fields:

FOR_TURBO_SUPPORTED	1
FOR_MAX_TURBO_BLOCK_SIZE	0 or 4
FOR_CONV_SUPPORTED	1
FOR_MAX_CONV_BLOCK_SIZE	0 or 4
FOR_FRAME_40_SUPPORTED	1
FOR_FRAME_80_SUPPORTED	1
FOR_MAX_RATE	4

FOR_SCH_LEN – Forward Supplemental Channel information length in units of 3 bits.

The mobile station shall set this field to the number of 3 bit units required to specify the length, in bits, of the FOR_SCH_RC_MAP field.

FOR_SCH_RC_MAP – Forward Supplemental Channel Radio Configuration capability.

The mobile station shall set this field as described below to indicate which Radio Configurations (see [2] Table 3.1.3.1-1) are supported by the mobile station on the Forward Supplemental Channel.

This field consists of the sequence of 1-bit indicators, each indicating the mobile station support for specific Radio Configuration. Bit positions of these indicators in the field and corresponding Radio Configurations are specified in Table 2.7.4.27.1-1.

1 The mobile station shall set each indicator to '1' if the
 2 corresponding Radio Configuration on the Forward
 3 Supplemental Channel is supported by the mobile station;
 4 otherwise, the mobile station shall set the indicator to '0'.
 5 The mobile station shall set any unused bits in the field to '0'.

6 **FOR_SCH_NUM** – Number of Forward Supplemental Channels.

7 The mobile station shall set this field to the number of
 8 Forward Supplemental Channels supported by the mobile
 9 station.

10 If the FOR_SCH_NUM field is greater than zero, the mobile
 11 station shall include one occurrence of the following 8 fields
 12 for each Forward Supplemental Channel supported by the
 13 mobile station. The first occurrence is SCH0 related
 14 information. The second occurrence (if any) is SCH1 related
 15 information.

16 **FOR_TURBO-**
 17 **_SUPPORTED** – Forward Turbo Coding supported indicator.

18 If the mobile station supports Turbo Coding on this Forward
 19 Supplemental Channel, it shall set this field to '1'; otherwise,
 20 the mobile station shall set this field to '0'.

21 **FOR_MAX_TURBO-**
 22 **_BLOCK_SIZE** – Forward maximum Turbo Coding block size.

23 If the field FOR_TURBO_SUPPORTED is set to '0', the mobile
 24 station shall omit this field; otherwise the mobile station
 25 shall include this field and set it to the maximum block size
 26 allowed for Turbo coding (see Table 2.7.4.27.3-1).

27 **Table 2.7.4.27.3-1. Block Size**

FOR_MAX_TURBO_BLOCK_SIZE REV_MAX_TURBO_BLOCK_SIZE FOR_MAX_CONV_BLOCK_SIZE REV_MAX_CONV_BLOCK_SIZE (binary)	Block Size	
	Rate Set 1	Rate Set 2
0000	172	267
0001	360	552
0010	744	1128

0011	1512	2280
0100	3048	4584
0101	6120	9192
0110	12264	20712
RESERVED	All other values are reserved	

FOR_CONV-

_SUPPORTED

- Forward Convolutional Coding supported indicator.

If the mobile station supports Convolutional Coding on this Forward Supplemental Channel, it shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

FOR_MAX_CONV-

_BLOCK_SIZE

- Forward maximum Convolutional Coding block size.

If the field FOR_CONV_SUPPORTED is set to '0', the mobile station shall omit this field; otherwise the mobile station shall include this field and set it to the maximum block size allowed for Convolutional coding. (see Table 2.7.4.27.3-1)

FOR_FRAME_40-

_SUPPORTED

- Forward 40ms frame indicator.

If the mobile station supports 40 ms frames on this Forward Supplemental Channel, it shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

FOR_FRAME_80-

_SUPPORTED

- Forward 80ms frame Indicator.

If the mobile station supports 80 ms frames on this Forward Supplemental Channel, it shall set this field to '1'; otherwise, the mobile station shall set this field to '0'.

FOR_MAX_RATE

- Maximum forward supplemental channels rate

The mobile station shall set this field according to Table 2.7.4.27.3-2 to indicate the maximum forward supplemental channel frame rate supported.

1

2

Table 2.7.4.27.3-2. SCH Data Rate

REV_MAX_RATE FOR_MAX_RATE (binary)	Max Rate (kbps)	
	R-SCH RC 1, 3, 5	R-SCH RC 2, 4, 6
	F-SCH RC 1, 3, 4, 6, 7	F-SCH RC 2, 5, 8, 9
0000	9.6	14.4
0001	19.2	28.8
0010	38.4	57.6
0011	76.8	115.2
0100	153.6	230.4
0101	307.2	259.2
0110	614.4	460.8
0111	Reserved	518.4
1000	Reserved	1036.8
RESERVED	All other values are reserved	

3

2.7.4.27.4 REV_SCH Type-Specific Fields.

The Reverse Supplemental Channel configuration capability information included in the REV_SCH Type-specific fields contains the following subfields:

REV_SCH_LEN	3
REV_SCH_RC_MAP	3 x REV_SCH_LEN
REV_SCH_NUM	2

REV_SCH_NUM occurrences of the following fields:

REV_TURBO_SUPPORTED	1
REV_MAX_TURBO_BLOCK_SIZE	0 or 4
REV_CONV_SUPPORTED	1
REV_MAX_CONV_BLOCK_SIZE	0 or 4
REV_FRAME_40_SUPPORTED	1
REV_FRAME_80_SUPPORTED	1
REV_MAX_RATE	4

REV_SCH_LEN – Reverse Supplemental Channel information length in units of 3 bits.

The mobile station shall set this field to the number of 3 bit units required to specify the length, in bits, of the REV_SCH_RC_MAP field.

REV_SCH_RC_MAP – Reverse Supplemental Channel Radio Configuration capability.

The mobile station shall set this field as described below to indicate which Radio Configurations (See [2] Table 2.1.3.1-1) are supported by the mobile station on the Reverse Supplemental Channel.

This field consists of the sequence of 1-bit indicators, each indicating the mobile station support for specific Radio Configuration. Bit positions of these indicators in the field and corresponding Radio Configurations are specified in Table 2.7.4.27.1-1.

1		The mobile station shall set each indicator to '1' if the
2		corresponding Radio Configuration on the Reverse
3		Supplemental Channel is supported by the mobile station;
4		otherwise, the mobile station shall set the indicator to '0'.
5		The mobile station shall set any unused bits in the field to '0'.
6	REV_SCH_NUM	- Number of Reverse Supplemental Channels
7		The mobile station shall set this field to the number of
8		Reverse Supplemental Channels supported by the mobile
9		station.
10		If the REV_SCH_NUM field is greater than zero, the mobile
11		station shall include one occurrence of the following 8 fields
12		for each Reverse Supplemental Channel supported by the
13		mobile station. The first occurrence is SCH0 related
14		information. The second occurrence (if any) is SCH1 related
15		information.
16	REV_TURBO-	
17	_SUPPORTED	- Reverse Turbo Coding supported indicator.
18		If the mobile station supports Turbo Coding on this Reverse
19		Supplemental Channel, it shall set this field to '1'; otherwise,
20		the mobile station shall set this field to '0'.
21	REV_MAX_TURBO-	
22	_BLOCK_SIZE	- Reverse maximum Turbo Coding block size.
23		If the field REV_TURBO_SUPPORTED is set to '0', the mobile
24		station shall omit this field; otherwise the mobile station
25		shall include this field and set it to the maximum block size
26		allowed for Turbo coding (see Table 2.7.4.27.3-1).
27	REV_CONV_SUPPORTED	- Reverse Convolutional Coding supported indicator.
28		If the mobile station supports Convolutional Coding on this
29		Reverse Supplemental Channel, it shall set this field to '1';
30		otherwise, the mobile station shall set this field to '0'.
31	REV_MAX_CONV-	
32	_BLOCK_SIZE	- Reverse maximum Convolutional Coding block size.
33		If the field REV_CONV_SUPPORTED is set to '0', the mobile
34		station shall omit this field; otherwise the mobile station
35		shall include this field and set it to the maximum block size
36		allowed for Convolutional coding (see Table 2.7.4.27.3-1).
37	REV_FRAME_40-	
38	_SUPPORTED	- Reverse 40ms frame indicator.

1 If the mobile station supports 40 ms frames on this Reverse
2 Supplemental Channel, it shall set this field to '1'; otherwise,
3 the mobile station shall set this field to '0'.

4 REV_FRAME_80-

5 _SUPPORTED – Reverse 80ms frame indicator.

6 If the mobile station supports 80 ms frames on this Reverse
7 Supplemental Channel, it shall set this field to '1'; otherwise,
8 the mobile station shall set this field to '0'.

9 REV_MAX_RATE – Maximum reverse supplemental channels rate

10 The mobile station shall set this field according to Table
11 2.7.4.27.3-2 to indicate the maximum reverse supplemental
12 channel frame rate supported.
13

- 1 2.7.4.28 Extended Multiplex Option Information
- 2 This information record can be included in a *Status Response Message* or an *Extended*
- 3 *Status Response Message* to return multiplex option information about the mobile station.

Type-Specific Field	Length (bits)
NUM_MO_FOR_FCH	4

NUM_MO_FOR_FCH occurrences of the following two-field record:

MO_FOR_FCH	16
FOR_NUM_BITS_FCH	8

NUM_MO_REV_FCH	4
----------------	---

NUM_MO_REV_FCH occurrences of the following two-field record:

MO_REV_FCH	16
REV_NUM_BITS_FCH	8

NUM_MO_FOR_DCCH	4
-----------------	---

NUM_MO_FOR_DCCH occurrences of the following one-field record:

MO_FOR_DCCH	16
-------------	----

NUM_MO_REV_DCCH	4
-----------------	---

NUM_MO_REV_DCCH occurrences of the following one-field record:

MO_REV_DCCH	16
-------------	----

NUM_MO_FOR_SCH	4
----------------	---

NUM_MO_FOR_SCH occurrences of the following two-field record:

FOR_SCH_ID	1
MO_FOR_SCH	16

NUM_MO_REV_SCH	4
----------------	---

NUM_MO_REV_SCH occurrences of the following two-field record:

REV_SCH_ID	1
MO_REV_SCH	16

1		
2	NUM_MO_FOR_FCH	- Number of Forward Fundamental Channel Multiplex Options.
3		The mobile station shall set this field to the number of the
4		Forward Fundamental Channel Multiplex Options supported
5		by the mobile station.
6		If NUM_MO_FOR_FCH is not equal to '0000', the mobile
7		station shall include NUM_MO_FOR_FCH occurrences of the
8		following two fields for each supported Forward Fundamental
9		Channel multiplex option:
10	MO_FOR_FCH	- Forward Fundamental Channel multiplex option.
11		The mobile station shall set this field to the Forward
12		Fundamental Channel multiplex option.
13	FOR_NUM-	
14	_BITS_FCH	- Forward Fundamental Channel number of bits per frame.
15		The mobile station shall set this field as described below to
16		indicate which number of bits per frame are supported by the
17		mobile station on the Forward Fundamental Channel.
18		This field consists of the sequence of 1-bit indicators, each
19		indicating the mobile station support for specific number of
20		bits per frame. Bit positions of these indicators in the field
21		and corresponding number of bits per frame are specified in
22		Table 2.7.4.28-1 if MO_FOR_FCH is equal to 1, Table 2.7.4.28-
23		2 if MO_FOR_FCH is equal to 2, and Table 2.7.4.28-3 if
24		MO_FOR_FCH is equal to 0x704.
25		The mobile station shall set each indicator to '1' if the
26		corresponding number of bits per frame on the Forward
27		Fundamental Channel is supported by the mobile station;
28		otherwise, the mobile station shall set the indicator to '0'.
29		

Table 2.7.4.28-1. Forward Fundamental Channel Number of Bits per Frame for MO_FOR_FCH equal to 1

Subfield	Length (bits)	Subfield Description
RS1_9600_FOR	1	172 bits per F-FCH frame
RS1_4800_FOR	1	80 bits per F-FCH frame
RS1_2400_FOR	1	40 bits per F-FCH frame
RS1_1200_FOR	1	40 bits per F-FCH frame
RESERVED	4	

Table 2.7.4.28-2. Forward Fundamental Channel Number of Bits per Frame for MO_FOR_FCH equal to 2

Subfield	Length (bits)	Subfield Description
RS2_14400_FOR	1	267 bits per F-FCH frame
RS2_7200_FOR	1	125 bits per F-FCH frame
RS2_3600_FOR	1	55 bits per F-FCH frame
RS2_1800_FOR	1	21 bits per F-FCH frame
RESERVED	4	

Table 2.7.4.28-3. Forward Fundamental Channel Number of Bits per Frame for MO_FOR_FCH equal to 0x704

Subfield	Length (bits)	Subfield Description
R1	1	Highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0000])
R2	1	Second highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0001])
R3	1	Third highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0010])
R4	1	Forth highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0011])
R5	1	Fifth Second highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0100])
R6	1	Sixth highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0101])
R7	1	Seventh highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0110])
R8	1	Eighth highest possible number of bits on F-FCH (specified by NUM_BITS _S [FFCH_NBIT_TABLE_ID][0111])

NUM_MO_REV_FCH – Number of Reverse Fundamental Channel Multiplex Options.

The mobile station shall set this field to the number of the Reverse Fundamental Channel Multiplex Options supported by the mobile station.

If NUM_MO_REV_FCH is not equal to '0000', the mobile station shall include NUM_MO_REV_FCH occurrences of the following two fields for each supported Reverse Fundamental Channel multiplex option:

MO_REV_FCH – Reverse Fundamental Channel multiplex option.

The mobile station shall set this field to the Reverse Fundamental Channel multiplex option.

REV_NUM-

_BITS_FCH – Reverse Fundamental Channel number of bits per frame.

The mobile station shall set this field as described below to indicate which number of bits per frame are supported by the mobile station on the Reverse Fundamental Channel.

This field consists of the sequence of 1-bit indicators, each indicating the mobile station support for number of bits per frame. Bit positions of these indicators in the field and corresponding number of bits per frame are specified in Table 2.7.4.28-4 if MO_REV_FCH is equal to 1, Table 2.7.4.28-5 if MO_REV_FCH is equal to 2, and Table 2.7.4.28-6 if MO_REV_FCH is equal to 0x704.

The mobile station shall set each indicator to '1' if the corresponding number of bits per frame on the Reverse Fundamental Channel is supported by the mobile station; otherwise, the mobile station shall set the indicator to '0'.

Table 2.7.4.28-4. Reverse Fundamental Channel Number of Bits per Frame for MO_REV_FCH equal to 1

Subfield	Length (bits)	Subfield Description
RS1_9600_REV	1	172 bits per R-FCH frame
RS1_4800_REV	1	80 bits per R-FCH frame
RS1_2400_REV	1	40 bits per R-FCH frame
RS1_1200_REV	1	16 bits per R-FCH frame
RESERVED	4	

**Table 2.7.4.28-5. Reverse Fundamental Channel Number of
Bits per Frame for MO_REV_FCH equal to 2**

Subfield	Length (bits)	Subfield Description
RS2_14400_REV	1	267 bits per R-FCH frame
RS2_7200_REV	1	125 bits per R-FCH frame
RS2_3600_REV	1	55 bits per R-FCH frame
RS2_1800_REV	1	21 bits per R-FCH frame
RESERVED	4	

Table 2.7.4.28-6. Reverse Fundamental Channel Number of Bits per Frame for MO_REV_FCH equal to 0x704

Subfield	Length (bits)	Subfield Description
R1	1	Highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0000])
R2	1	Second highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0001])
R3	1	Third highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0010])
R4	1	Forth highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0011])
R5	1	Fifth Second highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0100])
R6	1	Sixth highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0101])
R7	1	Seventh highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0110])
R8	1	Eighth highest possible number of bits on R-FCH (specified by NUM_BITS _S [RFCH_NBIT_TABLE_ID][0111])

NUM_MO_FOR_DCCH – Number of Forward Dedicated Control Channel Multiplex Options.

The mobile station shall set this field to the number of the Forward Dedicated Control Channel Multiplex Options supported by the mobile station.

If NUM_MO_FOR_DCCH is not equal to '0000', the mobile station shall include NUM_MO_FOR_DCCH occurrence of the following one field for each supported Forward Dedicated Control Channel multiplex option:

MO_FOR_DCCH – Forward Dedicated Control Channel multiplex option.

1			The mobile station shall set this field to the Forward
2			Dedicated Control Channel multiplex option.
3	NUM_MO_REV_DCCH	-	Number of Reverse Dedicated Control Channel Multiplex
4			Options.
5			The mobile station shall set this field to the number of the
6			Reverse Dedicated Control Channel Multiplex Options
7			supported by the mobile station.
8			If NUM_MO_REV_DCCH is not equal to '0000', the mobile
9			station shall include NUM_MO_REV_DCCH occurrence of the
10			following one field for each supported Reverse Dedicated
11			Control Channel multiplex option:
12	MO_REV_DCCH	-	Reverse Dedicated Control Channel multiplex option.
13			The mobile station shall set this field to the Reverse
14			Dedicated Control Channel multiplex option.
15			
16	NUM_MO_FER_SCH	-	Number of Forward Supplemental Channel Multiplex Options.
17			The mobile station shall set this field to the number of the
18			Reverse Supplemental Channel Multiplex Options supported
19			by the mobile station.
20			If NUM_MO_FER_SCH is not equal to '0000', the mobile
21			station shall include NUM_MO_FER_SCH occurrence of the
22			following two fields:
23	FOR_SCH_ID	-	Forward Supplemental Channel identifier.
24			The mobile station shall set this field to specify the Forward
25			Supplemental Channel to which the Forward Supplemental
26			multiplex option supported by the mobile station corresponds.
27	MO_FOR_SCH	-	Forward Supplemental Channel multiplex option.
28			The mobile station shall set this field to the Forward
29			Supplemental Channel multiplex option.
30	NUM_MO_REV_SCH	-	Number of Reverse Supplemental Channel Multiplex Options.
31			The mobile station shall set this field to the number of the
32			Reverse Supplemental Channel Multiplex Options supported
33			by the mobile station.
34			If NUM_MO_REV_SCH is not equal to '0000', the mobile
35			station shall include NUM_MO_REV_SCH occurrence of the
36			following two fields:
37	REV_SCH_ID	-	Reverse Supplemental Channel identifier.

1 The mobile station shall set this field to specify the Reverse
2 Supplemental Channel to which the Reverse Supplemental
3 multiplex option supported by the mobile station corresponds.
4 MO_REV_SCH – Reverse Supplemental Channel multiplex option.
5 The mobile station shall set this field to the Reverse
6 Supplemental Channel multiplex option.
7

2.7.4.29 Geo-Location Capability

This information record identifies the geo-location capabilities of the mobile station. The mobile station shall use the following fixed-length format for the type -specific fields:

Type-Specific Field	Length (bits)
GEO_LOC	3

GEO_LOC – Geo-location.

The mobile station shall set this field to the value shown in Table 2.7.4.34-1.

Table 2.7.4.34-1. Geo-location Codes

GEO_LOC (binary)	Type of Wireless Assisted GPS Identifiers
000	No mobile station assisted geo-location capabilities
001	IS-801 capable (Advanced Forward Link Triangulation only)
010	IS-801 capable (Advanced Forward Link Triangulation and Global Positioning Systems)
011	Global Positioning Systems only
All other GEO_LOC_TYPE values are reserved.	

2.7.4.30 Band Subclass Information

This information record can be included in a *Status Response Message*, or an *Extended Status Response Message* to return band subclass information about the mobile station.

Type-Specific Field	Length (bits)
BAND_SUBCLASS_INFO	$8 \times \text{RECORD_LEN}$

BAND_SUBCLASS_INFO – Band subclass information.

This field indicates which band subclasses are supported by the mobile station.

If BAND_CLASS specified in the *Status Request Message* is equal to '00010' (TACS Band), this field consists of the following subfields which are included in the information record in the order shown:

Subfield	Length (bits)	Subfield Description
BAND_SUBCLASS_0	1	Band Subclass 0
BAND_SUBCLASS_1	1	Band Subclass 1
BAND_SUBCLASS_2	1	Band Subclass 2
RESERVED	5	

If BAND_CLASS specified in the *Status Request Message* is equal to '00101' (450 MHz NMT Band), this field consists of the following subfields which are included in the information record in the order shown:

Subfield	Length (bits)	Subfield Description
BAND_SUBCLASS_0	1	Band Subclass 0
BAND_SUBCLASS_1	1	Band Subclass 1
BAND_SUBCLASS_2	1	Band Subclass 2
BAND_SUBCLASS_3	1	Band Subclass 3
BAND_SUBCLASS_4	1	Band Subclass 4
BAND_SUBCLASS_5	1	Band Subclass 5
BAND_SUBCLASS_6	1	Band Subclass 6
BAND_SUBCLASS_7	1	Band Subclass 7

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The mobile station shall set each subfield to '1' if the corresponding sub-band class is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

RESERVED – Reserved bits.

The mobile station shall set all reserved bits to '0'.

When more band classes are defined, the reserved bits will be used for the new corresponding subfields. Sufficient octets will be added to this field to accommodate the new subfields. All the undefined bits in an additional octet will be reserved bits.

The mobile station shall set all the reserved bits to '0'. If all bits are set to '0' in an octet and all succeeding octets, the mobile station shall omit the octet and the succeeding octets.

2.7.4.31 Global Emergency Call

This information record identifies that an emergency call is being originated. This record may be included in a *Flash With Information Message* or an *Extended Flash With Information Message* and allows the user to originate an emergency call.

Type-Specific Field	Length (bits)
NUM_INCL	1
DIGIT_MODE	0 or 1
NUMBER_TYPE	0 or 3
NUMBER_PLAN	0 or 4
NUM_CHAR	0 or 8

If NUM_INCL is set to '1', include NUM_CHAR occurrences of the following field:

CHARi	4 or 8
-------	--------

RESERVED	0 to 7 (as needed)
----------	--------------------

NUM_INCL – Dialed number included indicator.

The mobile station shall set this field to '1' to indicate that the dialed digits are included in this information record; otherwise, the mobile station shall set this field to '0'.

DIGIT_MODE – Digit mode indicator.

If NUM_INCL is set to '1', the mobile station shall set this field to indicate whether the dialed digits are 4bit DTMF codes or 8-bit ASCII codes using a specified numbering plan; otherwise, the mobile station shall omit this field.

To originate the call using the binary representation of DTMF digits, the mobile station shall set this field to '0'. To originate the call using ASCII characters, the mobile station shall set this field to '1'.

NUMBER_TYPE – Type of number.

If NUM_INCL is set to '1', the mobile station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the called number, as defined in [7], Section 4.5.9; otherwise, the mobile station shall omit this field.

1	NUMBER_PLAN	-	Numbering plan.
2			If NUM_INCL is set to '1', the mobile station shall set this
3			field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3
4			corresponding to the numbering plan used for the called
5			number, as defined in [7], Section 4.5.9; otherwise, the
6			mobile station shall omit this field.
7	NUM_CHAR	-	Number of characters.
8			If NUM_INCL is set to '1', the mobile station shall set this
9			field to the number of characters included in this record;
10			otherwise, the mobile station shall omit this field.
11	CHAR _i	-	Character.
12			The mobile stations shall include one occurrence of this field
13			for each character in the called number. The mobile station
14			shall set each occurrence of this field to the ASCII
15			representation corresponding to the character, as specified in
16			[9], with the most significant bit set to '0'.
17	RESERVED	-	Reserved bits.
18			The mobile station shall add reserved bits as needed in order
19			to make the length of the entire information record equal to
20			an integer number of octets. The mobile station shall set
21			these bits to '0'.
22			

2.7.4.32 Hook Status

This information record shall indicate the status of the hook switch in Wireless Local Loop mobile stations. The mobile station shall use the following fixed-length format for the type-specific fields:

Type-Specific Field	Length (bits)
HOOK_STATUS	4
RESERVED	4

HOOK_STATUS – WLL terminal hook status.

The mobile station shall set this sub-field to the value shown in Table 2.7.1.3.2.1-4 corresponding to the hook state.

RESERVED – Reserved bits.

The mobile station shall set this field to '0000'.

2.7.4.33 QoS Parameters

This information record conveys to the user the QoS parameters associated with the service to be provided:

Type-Specific Field	Length (bits)
QoS Parameters	variable
RESERVED	0 - 7 (as needed)

QoS Parameters - Block containing the QoS Parameters.

The mobile station shall set this field to the QoS parameters associated with the user (per subscription), service type (e.g., assured vs. non-assured services) and the service option. The details of the QoS parameters may be found in documents describing the service options.

RESERVED - Reserved bits for octet alignment.

The mobile station shall add the minimum number of bits necessary to make the record length in bits an integral multiple of 8. The mobile station shall set these bits to '0'.

2.7.4.34 Encryption Capability

This information record identifies the encryption capability of the mobile station.

Type-Specific Field	Length (bits)
SIG_ENCRYPT_SUP	8
UI_ENCRYPT_SUP	8

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The mobile station shall set this field to indicate which signaling encryption algorithms are supported by the mobile station, as shown in Table 2.7.1.3.2.1-4.

The mobile station shall set each subfield to '1' if the corresponding signaling encryption algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The mobile station shall set this field to indicate the supported user information encryption algorithms, as shown in Table 2.7.1.3.2.4-9.

The mobile station shall set each subfield to '1' if the corresponding user information encryption algorithm is supported by the mobile station; otherwise, the mobile station shall set the subfield to '0'.

1 **REQUIREMENTS FOR BASE STATION CDMA OPERATION**

2 This section defines requirements that are specific to CDMA base station equipment and
3 operation.

4 **3.1 Reserved**

5 **3.2 Reserved**

6 **3.3 Security and Identification**

7 3.3.1 Authentication

8 The base station may be equipped with a database that includes unique mobile station
9 authentication keys, shared secret data, or both for each registered mobile station in the
10 system. This database is used for authentication of mobile stations that are equipped for
11 authentication operation.

12 If the base station supports mobile station authentication, it shall provide the following
13 capabilities: The base station shall send and receive authentication messages and
14 perform the authentication calculations described in 2.3.12.1. If the base station supports
15 800 MHz analog operation, the base station should set the RAND parameter of the *Access*
16 *Parameters Message* to the same value transmitted on the forward analog control channel
17 (see [6]).

18 3.3.2 Encryption

19 If the base station supports mobile station authentication (see 3.3.1), it may also support
20 message encryption by providing the capability to send encryption control messages and
21 the ability to perform the operations of encryption and decryption as specified in 2.3.12.2.

22 3.3.3 Voice Privacy

23 If the base station supports mobile station authentication (see 3.3.1), it may also support
24 voice privacy using the private long code mask, as specified in 2.3.12.3.

25 **3.4 Supervision**

26 3.4.1 Access Channel or Enhanced Access Channel

27 The base station shall continually monitor each active Access Channel or Enhanced
28 Access Channel or both. The base station should provide control in cases of overload by
29 using either the *Access Parameters Message* or the *Enhanced Access Parameters Message*.

30 3.4.2 Reverse Traffic Channel

31 The base station shall continually monitor each active Reverse Traffic Channel to
32 determine if the call is active. If the base station detects that the call is no longer active,
33 the base station shall declare loss of Reverse Traffic Channel continuity (see 3.6.4).

3.5 Reserved

3.6 Layer 3 Processing

This section describes base station layer 3 processing. It contains frequent references to the messages that flow between the base station and the mobile station. While reading this section, it may be helpful to refer to the message formats (see 2.7 and 3.7), and to the call flow examples (see Annex B). The values for the time and numeric constants used in this section (e.g., T_{1b} and N_{4m}) are specified in Annex D.

Base station processing consists of the following types of processing:

- *Pilot and Sync Channel Processing* - During *Pilot and Sync Channel Processing*, the base station transmits the Pilot Channel and Sync Channel which the mobile station uses to acquire and synchronize to the CDMA system while the mobile station is in the *Mobile Station Initialization State*.
- *Common Channel Processing* - During *Common Channel Processing*, the base station transmits the Paging Channel and/or the Forward Common Control Channel/Broadcast Control Channel which the mobile station monitors to receive messages while the mobile station is in the *Mobile Station Idle State* and the *System Access State*.
- *Access Channel and Enhanced Access Channel Processing* - During *Access Channel and Enhanced Access Channel Processing*, the base station monitors the Access Channel and/or the Enhanced Access Channel to receive messages which the mobile station sends while the mobile station is in the *System Access State*.
- *Traffic Channel Processing* - During *Traffic Channel Processing*, the base station uses the Forward and Reverse Traffic Channels to communicate with the mobile station while the mobile station is in the *Mobile Station Control on the Traffic Channel State*.

3.6.1 Pilot and Sync Channel Processing

During *Pilot and Sync Channel Processing*, the base station transmits the Pilot and Sync Channels which the mobile station uses to acquire and synchronize to the CDMA system while the mobile station is in the *Mobile Station Initialization State*.

3.6.1.1 Preferred Set of CDMA Channels

The preferred set of frequency assignments are the CDMA Channels on which the mobile station attempts to acquire the CDMA system (see [2]).

The base station shall support at least one member of the preferred set of frequency assignments. The base station may support additional CDMA Channels.

3.6.1.2 Pilot Channel Operation

The Pilot Channel (see [2]) is a reference channel which the mobile station uses for acquisition, timing, and as a phase reference for coherent demodulation.

The base station shall continually transmit a Pilot Channel for every CDMA Channel supported by the base station, unless the base station is classified as a hopping pilot beacon.

3.6.1.3 Sync Channel Operation

The Sync Channel (see [2]) provides the mobile station with system configuration and timing information.

The base station shall transmit at most one Sync Channel for each supported CDMA Channel. The base station shall support a Sync Channel on at least one member of the preferred set of frequency assignments that it supports. The base station should support a Sync Channel on every member of the preferred set of frequency assignments that it supports.

If the base station operates in Band Class 0 and supports the Primary CDMA Channel, then the base station shall transmit a Sync Channel on the Primary CDMA Channel.

The base station shall continually send the *Sync Channel Message* on each Sync Channel that the base station transmits.

3.6.2 Common Channel Processing

3.6.2.1 Paging Channel and Forward Common Control Channel Procedures

During *Common Channel Processing*, the base station transmits the Paging Channel or the Forward Common Control Channel (see [2]) which the mobile station monitors to receive messages while the mobile station is in the *Mobile Station Idle State* and the *System Access State*.

The base station may transmit up to seven Paging Channels on each supported CDMA Channel. The base station may transmit up to seven Forward Common Control Channels and one Broadcast Control Channel on each supported CDMA Channel.

For each Paging Channel that the base station transmits, the base station shall continually send valid Paging Channel messages (see 3.7.2), which may include the *Null Message* (see [4]).

The base station shall not send any message which is not completely contained within two consecutive Paging Channel or Forward Common Control Channel slots, unless the processing requirements for the message explicitly specify a different size limitation.²³

3.6.2.1.1 CDMA Channel Determination

The base station may send the *CDMA Channel List Message* and the *Extended CDMA Channel List Message* on the Paging Channel. When the base station supports Broadcast

²³See, for example, [14] which specifies processing requirements for the *Data Burst Message*.

Control Channel, the base station shall send the *Extended CDMA Channel List Message* on the Primary Broadcast Control Channel.

To determine the mobile station's assigned CDMA Channel, the base station first determines a subset of CDMA channels in the *Extended CDMA Channel List Message*. The subset of CDMA channels is based on where the mobile station receives the *Extended CDMA Channel List Message* and the mobile station's capabilities of supporting RC greater than 2, Quick Paging Channel and transmit diversity, with which the mobile station is registered.

When the base station sends the *CDMA Channel List Message* on the Paging Channel, the base station shall determine the assigned CDMA Channel for MOB_P_REV_S less than six using the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 2.3.1)
- Number of CDMA Channels in the *CDMA Channel List Message*.

When the base station sends the *Extended Channel List Message* on the Paging Channel, the base station shall determine the assigned CDMA Channel using the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 2.3.1)
- Number of CDMA Channels of the selected channel subset of CDMA channels in the *Extended CDMA Channel List Message* in accordance with the procedures defined in 2.6.2.2.12.1 for mobile stations with:

MOB_P_REV_S equal to six.

MOB_P_REV_S greater than or equal to seven, if the base station does not support Broadcast Control Channel.

When the base station sends the *Extended CDMA Channel List Message* on the Primary Broadcast Control Channel, the base station shall determine the assigned CDMA Channel using the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 2.3.1)
- Number of CDMA Channels of the selected channel subset of CDMA channels in the *Extended CDMA Channel List Message* in accordance with the procedures defined in 2.6.2.2.12.2.

3.6.2.1.2 Common Channel Determination

To determine the mobile station's assigned Paging Channel or Forward Common Control Channel, the base station shall use the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 2.3.1)
- Number of Paging Channels or Forward Common Control Channels which the base station transmits on the mobile station's assigned CDMA Channel.

3.6.2.1.3 Paging Slot Determination

To determine the assigned Paging Channel or Forward Common Control Channel slots for a mobile station with a given slot cycle index, the base station shall select a number PGSLOT using the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 6.3.1)
- Maximum number of Paging Channel or Forward Common Control Channel slots (2048).

The assigned Paging Channel or Forward Common Control Channel slots for the mobile station are those slots for which

$$(\lfloor t/4 \rfloor - \text{PGSLOT}) \bmod (16 \times T) = 0,$$

where t is the System Time in frames, and T is the slot cycle length in units of 1.28 seconds given by

$$T = 2^i,$$

where i is the slot cycle index.

When the base station is able to determine that the mobile station is operating in the slotted mode and is able to determine the mobile station's preferred slot cycle index, the base station uses for the mobile station's slot cycle index the smaller of the mobile station's preferred slot cycle index and the maximum slot cycle index.

When the base station is not able to determine whether the mobile station is operating in the slotted mode, or the base station is not able to determine the mobile station's preferred slot cycle index, the base station uses for the mobile station's slot cycle index the smaller of the maximum slot cycle index and 1.

3.6.2.1.4 Message Transmission and Acknowledgment Procedures

The Paging Channel or Forward Common Control Channel acknowledgment procedures facilitate the reliable exchange of messages between the base station and the mobile station on the f-csch and r-csch. The acknowledgment procedures and requirements are described in 3.1.1.2 and 3.1.2.1 of [4].

3.6.2.2 Overhead Information

The base station sends overhead messages to provide the mobile station with the information that it needs to operate with the base station. If the base station supports the Broadcast Control Channel for overhead messages, it shall support the Forward Common Control Channel for all other general page information.

The base station with a P_REV greater than six that supports Broadcast Control Channel shall send overhead messages on the Broadcast Control Channel. The base station with a P_REV greater than six that does not support the Broadcast Control Channel shall send overhead messages on each Paging Channel. The overhead messages sent on the Broadcast Control Channel are:

1 *ANSI-41 System Parameters Message*
 2 *User Zone Identification Message*
 3 *Private Neighbor List Message*
 4 *Extended Global Service Redirection Message*
 5 *Extended CDMA Channel List Message*
 6 *MC-RR Parameters Message*
 7 *Universal Neighbor List Message*
 8 *Enhanced Access Parameters Message*
 9 *ANSI-41 RAND Message*

10 The overhead messages on the Paging Channel are:

11 *System Parameters Message*
 12 *Neighbor List Message (Band Class 0 only)*
 13 *Access Parameter Message*
 14 *CDMA Channel List Message*
 15 *Extended System Parameters Message*
 16 *Extended Neighbor List Message (Band Class 1 only)*
 17 *General Neighbor List Message*
 18 *Global Service Redirection Message*
 19 *User Zone Identification Message*
 20 *Private Neighbor List Message*
 21 *Extended Global Service Redirection Message*
 22 *Extended CDMA Channel List Message*

23 The base station shall maintain a configuration sequence number (CONFIG_SEQ) for
 24 configuration messages transmitted on the Paging Channel, and shall increment
 25 CONFIG_SEQ modulo 64 whenever the base station modifies the following messages:

26 *System Parameters Message*
 27 *Neighbor List Message (Band Class 0 only)*
 28 *CDMA Channel List Message*
 29 *Extended System Parameters Message*
 30 *Extended Neighbor List Message (Band Class 1 only)*
 31 *General Neighbor List Message*
 32 *Global Service Redirection Message*

1 *User Zone Identification Message*

2 *Private Neighbor List Message*

3 *Extended Global Service Redirection Message*

4 *Extended CDMA Channel List Message*

5 The base station shall maintain a configuration sequence number (CONFIG_SEQ) for
6 configuration messages transmitted on the Broadcast Control Channel, and shall
7 increment CONFIG_SEQ modulo 64 whenever the base station modifies the following
8 messages:

9 *ANSI-41 System Parameters Message*

10 *User Zone Identification Message*

11 *Private Neighbor List Message*

12 *Extended Global Service Redirection Message*

13 *Extended CDMA Channel List Message*

14 *MC-RR Parameters Message*

15 *Universal Neighbor List Message*

16 The base station shall maintain an access configuration sequence number
17 (ACC_CONFIG_SEQ) for the Access Channel, and shall increment ACC_CONFIG_SEQ
18 modulo 64 whenever the base station modifies the *Access Parameters Message*.

19 The base station shall maintain an access configuration sequence number
20 (ACC_CONFIG_SEQ) for the Enhanced Access Channel, and shall increment
21 ACC_CONFIG_SEQ modulo 64 whenever the base station modifies the *Enhanced Access*
22 *Parameters Message*.

23 On each Broadcast Control Channel which the base station transmits, the base station
24 shall send each of the following system overhead messages at least once per T_{1b} seconds:

25 *Extended CDMA Channel List Message*

26 *ANSI-41 System Parameters Message*

27 *MC-RR Parameters Message*

28 *Enhanced Access Parameters Message*

29 *Universal Neighbor List Message*

30 If the base station supports Broadcast Control Channels, and the base station is sending
31 the *ANSI-41 RAND Message*, it shall send it at least once per T_{1b} seconds.

32 On each of the Paging Channels the base station transmits, the base station shall send
33 each of the following system overhead messages at least once per T_{1b} seconds:

34 1. *Access Parameters Message*

35 2. *CDMA Channel List Message*

3. *Extended System Parameters Message*

4. *System Parameters Message*

For the messages sent on the Paging Channel, if BAND_CLASS is equal to '00001', the base station shall send the *Extended Neighbor List Message* and may also send the *General Neighbor List Message*. If BAND_CLASS is equal to '00000', the base station shall send the *Neighbor List Message*, and may also send the *General Neighbor List Message*. If the base station is sending the *Neighbor List Message*, it shall send it at least once per T_{1b} seconds. If the base station is sending the *Extended Neighbor List Message*, it shall send it at least once per T_{1b} seconds. If the base station is sending the *General Neighbor List Message*, it shall send it at least once per T_{1b} seconds.

Overhead Messages sent on the Broadcast Control Channel shall be transmitted on a continuous basis, consecutively.

If the base station uses addressing modes requiring use of only the IMSI_M_S, independent of values of the IMSI_M_11_12 and MCC_M, the base station shall set IMSI_T_SUPPORTED to '0', MCC to '1111111111', and IMSI_11_12 to '1111111' in the *Extended System Parameters Message* and *ANSI-41 System Parameters Message*.

If the base station sets IMSI_T_SUPPORTED to '1', the base station shall not set PREF_MSID_TYPE to '00' in the *Extended System Parameters Message* and *ANSI-41 System Parameters Message*.

The base station may send a *Global Service Redirection Message* on any given Paging Channel. If the message is sent, the base station shall send it at least once per T_{1b} seconds.

If P_REV is greater than or equal to six, the base station may send an *Extended Global Service Redirection Message*. If the message is sent, the base station shall send it at least once per T_{1b} seconds. The base station may send this message to redirect only those mobile stations with MOB_P_REV equal to or greater than six.

When both the *Global Service Redirection Message* and the *Extended Global Service Redirection Message* are sent, the base station shall use the *Global Service Redirection Message* for mobile stations with MOB_P_REV less than six, and shall use the *Extended Global Service Redirection Message* for mobile stations with MOB_P_REV equal to or greater than six. When only the *Global Service Redirection Message* is sent and this message is for mobile station with MOB_P_REV less than six, the base station shall set EXCL_P_REV_MS to '1'.

If only the *Global Service Redirection Message* is sent and this message is for redirecting all mobile stations, the base station shall set EXCL_P_REV_MS to '0'.

The base station may send a *User Zone Identification Message*. If the message is sent, the base station shall send it at least once per T_{1b} seconds.

The base station may send a *Private Neighbor List Message*. If the message is sent, the base station shall send it at least once per T_{1b} seconds.

1 The base station may send an *Extended CDMA Channel List*. If the message is sent, the
2 base station shall send it at least once per T_{1b} seconds.

3 3.6.2.3 Mobile Station Directed Messages

4 The base station may send the following messages directed to a mobile station on the f-
5 csch. If the base station sends a message, the base station shall comply with the specified
6 requirements for sending the message, if any:

7 *Abbreviated Alert Order*

8 *Audit Order*

9 *Authentication Challenge Message*

10 *Base Station Challenge Confirmation Order*

11 *Channel Assignment Message*

12 *Data Burst Message*

13 *Extended Channel Assignment Message*

14 *Feature Notification Message*

15 *General Page Message*

16 *Intercept Order*

17 *Local Control Order*

18 *Lock Until Power-Cycled Order*

19 *Maintenance Required Order*

20 *PACA Message*

21 *Registration Accepted Order*

22 *Registration Rejected Order*

23 *Registration Request Order*

24 *Release Order*

25 *Reorder Order*

26 *Retry Order*

27 *Security Mode Command Message*

28 *Service Redirection Message*

29 *Service Release Message*

30 *Slotted Mode Order*

31 *SSD Update Message*

32 *Status Request Message*

1 *TMSI Assignment Message*

2 *Universal Page Message* (Forward Common Control Channel Only)

3 *Unlock Order*

4 *User Zone Reject Message*

5 The base station should send at least one *General Page Message* in each Paging Channel
6 slot. The base station shall not omit a *General Page Message* in two adjacent Paging
7 Channel slots.

8 The base station should send at least one *General Page Message* or *Universal Page Message*
9 in each Forward Common Control Channel slot. The base station shall not omit both a
10 *General Page Message* and a *Universal Page Message* in two adjacent slots.

11 3.6.2.3.1 Processing when the General Page Message is Used

12 The base station shall use the following rules for selecting the Paging Channel or Forward
13 Common Control Channel slot in which to send a message to a mobile station:

- 14 • If the base station is able to determine that the mobile station is operating in the
15 non-slotted mode, the base station may send the message to the mobile station in
16 any Paging Channel or Forward Common Control Channel slot.
- 17 • If the base station is able to determine that the mobile station is operating in the
18 slotted mode and is able to determine the mobile station's slot cycle index (see
19 2.6.2.1.1.3), the base station shall send the message at least once in an assigned
20 Paging Channel or Forward Common Control Channel slot for the mobile station
21 (see 3.6.2.1.3), with the position within the slot subject to the following limitations:
 - 22 – If the mobile station has registered with a class 0 IMSI, the base station shall
23 not send the message in the assigned Paging Channel or Forward Common
24 Control Channel slot after sending a *General Page Message* with CLASS_0_DONE
25 set to '1' in that slot.
 - 26 – If the mobile station has registered with a class 1 IMSI, the base station shall
27 not send the message in the assigned Paging Channel or Forward Common
28 Control Channel slot after sending a *General Page Message* with CLASS_1_DONE
29 set to '1' in that slot.
 - 30 – If the mobile station has been assigned a TMSI, the base station shall not send
31 the message in the assigned Paging Channel or Forward Common Control
32 Channel slot after sending a *General Page Message* with TMSI_DONE set to '1' in
33 that slot.

- If the base station is not able to determine whether the mobile station is operating in the non-slotted mode, or the base station is not able to determine the mobile station's slot cycle index, the base station shall assume that the mobile station is operating in the slotted mode with a slot cycle index which is the smaller of MAX_SLOT_CYCLE_INDEX and 1. The base station shall send the message at least once in an assigned Paging Channel or Forward Common Control Channel slot for the mobile station (see 3.6.2.1.3), with the position within the slot subject to the following limitations:
 - If the mobile station has registered with a class 0 IMSI, the base station shall not send the message in the assigned Paging Channel or Forward Common Control Channel slot after sending a *General Page Message* with CLASS_0_DONE set to '1' in that slot.
 - If the mobile station has registered with a class 1 IMSI, the base station shall not send the message in the assigned Paging Channel or Forward Common Control Channel slot after sending a *General Page Message* with CLASS_1_DONE set to '1' in that slot.
 - If the mobile station has been assigned a TMSI, the base station shall not send the message in the assigned Paging Channel or Forward Common Control Channel slot after sending a *General Page Message* with TMSI_DONE set to '1' in that slot.

The base station should send messages directed to mobile stations operating in the slotted mode as the first messages in the slot.

If the base station sends a *General Page Message* with ORDERED_TMSIS set to '1' in a slot, the base station shall order page records with PAGE_CLASS equal to '10' in ascending order such that if a particular TMSI_CODE value for one page record is greater than the TMSI_CODE value for another page record, the page record with the greater TMSI_CODE value is sent later in the slot.

3.6.2.3.2 Processing when the Universal Page Message is Used

The base station shall use the following rules for selecting the Forward Common Control Channel slot in which to send a message to a mobile station:

- If the base station is able to determine that the mobile station is operating in the non-slotted mode, the base station may send the message to the mobile station in any Forward Common Control Channel slot.
- If the base station is able to determine that the mobile station is operating in the slotted mode and that the mobile station is waiting for a priority access channel assignment, or that the slotted timer in the mobile station is active, the base station may send the message to the mobile station in any Forward Common Control Channel slot with the position within the slot subject to the following limitation:

- 1 – The base station shall not send the message later in the slot than a *Universal*
2 *Page Message* which lacks a mobile station-directed message announcement
3 and which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that
4 mobile station.
- 5 • If the base station is able to determine that the mobile station is operating in the
6 slotted mode and that the mobile station is not waiting for a priority access channel
7 assignment and that the slotted timer in the mobile station is not active and the
8 base station is able to determine the mobile station's slot cycle index (see
9 2.6.2.1.1.3.3), the base station shall send the message at least once in an assigned
10 Forward Common Control Channel slot for the mobile station (see 3.6.2.1.3) or in
11 the following slot, with the position within these two slots subject to the following
12 limitation:
 - 13 – The base station shall not send the message later in the slot than a *Universal*
14 *Page Message* that lacks a mobile station-directed message announcement and
15 which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that mobile
16 station.
- 17 • If the base station is not able to determine whether the mobile station is operating
18 in the non-slotted mode, or the base station is not able to determine the mobile
19 station's slot cycle index, the base station shall assume that the mobile station is
20 operating in the slotted mode with a slot cycle index which is the smaller of
21 MAX_SLOT_CYCLE_INDEX and 1. The base station shall send the message at least
22 once in an assigned Forward Common Control Channel slot for the mobile station
23 (see 3.6.2.1.3), or in the following slot, with the position within these two slots
24 subject to the following limitation:
 - 25 – The base station shall not send the message later in the slot than a *Universal*
26 *Page Message* that lacks a mobile station-directed message announcement and
27 which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that mobile
28 station.

29 The base station should send messages directed to both mobile stations operating in the
30 slotted mode and mobile stations operating in the non-slotted mode later in the slot than
31 the *Universal Page Message*.

3.6.2.4 Broadcast Messages

3.6.2.4.1 Broadcast Messages Sent on the Paging Channel

The base station may transmit *Data Burst Messages* directed to broadcast addresses. When transmitting broadcast messages that are to be received by mobile stations operating in the slotted mode, the base station may use broadcast page records (see 3.7.2.3.2.17) in accordance with the broadcast procedures specified in 3.6.2.4.1 to announce the presence of broadcast *Data Burst Messages* on the Paging Channel. The base station should use the rules specified in 3.6.2.4.1.1 for selecting the Paging Channel slot in which to send a broadcast *Data Burst Message*.

3.6.2.4.1.1 Broadcast Procedures for Slotted Mode

The base station may announce the presence of broadcast Data Burst Messages on the Paging Channel by paging, using a broadcast address with PAGE_CLASS equal to '11' and PAGE_SUBCLASS equal to '00'.

3.6.2.4.1.1.1 General Overview

The base station may transmit Data Burst Messages directed to broadcast addresses. Since mobile stations operating in slotted mode do not constantly monitor a Paging Channel, it is necessary to use special procedures to ensure that mobile stations operating in the slotted mode are able to receive the message. The base station may either send a broadcast message in many slots, or may send a broadcast message in a predetermined paging slot. This single transmission of the pending broadcast message may be announced by a preceding "broadcast page". A broadcast page is a *General Page Message* record with the PAGE_CLASS field set to '11'.

If pending transmission of the broadcast message is announced by the broadcast page, mobile stations use the BC_ADDR and the BURST_TYPE fields of the broadcast page record to determine whether or not to receive the announced broadcast message. The base station sets the value of the BC_ADDR according to the requirements of the standards related to the BURST_TYPE. There is a predetermined timing relationship between the sending of the broadcast page and the sending of the related broadcast message. This timing relationship allows mobile stations to determine which slot to monitor in order to receive the broadcast message.

To reduce the overhead for sending broadcast pages or broadcast messages, a base station may use periodic broadcast paging (see 3.6.2.4.1.2.1.2). When periodic broadcast paging is enabled, broadcast pages or broadcast messages are sent only once during a broadcast paging cycle. Mobile stations that are operating in the slotted mode and are configured to receive broadcast messages monitor the paging channel during the slot in which the broadcast pages or broadcast messages are sent. For the purpose of periodic broadcast paging, system time is divided into broadcast paging cycles, each having a duration of (**B** + 3) Paging Channel slots, where **B** is a power of two. In each broadcast paging cycle, the first paging slot may contain broadcast pages or broadcast messages.

3.6.2.4.1.1.2 Requirements for Sending Broadcast Messages

3.6.2.4.1.1.2.1 Broadcast Delivery Options

When transmitting broadcast messages that are to be received by mobile stations operating in the slotted mode and monitoring the Paging Channel, the base station shall use one of the two following procedures to transmit a broadcast message.

3.6.2.4.1.1.2.1.1 Method 1: Multi-Slot Broadcast Message Transmission

The base station may send a broadcast message using this method without regard to whether periodic broadcast paging is enabled or disabled (see 3.6.2.4.1.2.3).

When using this method, the base station shall send the broadcast message in a sufficient number of paging slots such that it may be received by any mobile station that is operating in the slotted mode. For example, the base station may send the broadcast message in **M** successive paging slots where **M** is the number of slots in a maximum paging cycle as defined in 2.6.2.1.1.3.3.

3.6.2.4.1.1.2.1.2 Method 2: Periodic Broadcast Paging

If the base station sends a broadcast message using this method, then the base station shall enable periodic broadcast paging (see 3.6.2.4.1.2.3).

To deliver a broadcast message using this method, the base station should perform the following:

- If the number and size of the broadcast messages waiting to be sent are such that the messages can be sent in a single slot, the base station should send the broadcast messages in the first slot of the next broadcast paging cycle (see 2.6.2.1.1.3.3).
- If there is a single broadcast message waiting to be sent, the base station should send the broadcast message beginning in the first slot of the next broadcast paging cycle (see 2.6.2.1.1.3.3).
- Otherwise, the base station should first include a broadcast page for each broadcast message to be sent, in a *General Page Message* that is sent in the first slot of the next broadcast paging cycle (see 2.6.2.1.1.3.3). The base station should then send the related broadcast messages in the paging slots specified in 3.6.2.4.1.2.4.

3.6.2.4.1.1.2.2 Duplicate Broadcast Message Transmission

If the base station sends a broadcast message or a broadcast page and an associated broadcast message more than once when periodic broadcast paging is enabled (see 3.6.2.4.1.2.3), then all repetitions of the broadcast message or the broadcast page and the associated broadcast message should be sent within $4 \times (\mathbf{B} + 3)$ paging slots of the paging slot in which the broadcast message or broadcast page was first sent. (**B** + 3 is the duration of the broadcast paging cycle as defined in 2.6.2.1.1.3.3).

When a base station sends a broadcast message or a broadcast page when periodic broadcast paging is enabled (see 3.6.2.4.1.2.3), and the base station has a second, different broadcast message to send which contains identical BURST_TYPE and BC_ADDR fields, then the base station shall wait $4 \times (\mathbf{B} + 3)$ paging slots after the first slot of the broadcast paging cycle containing the final sending of the first broadcast message or broadcast page before sending the second, different broadcast message or related broadcast page.

3.6.2.4.1.1.2.3 Periodic Broadcast Paging

The base station uses the BCAST_INDEX field of the *Extended System Parameters Message* to specify the current state of periodic broadcast paging to all mobile stations.

To enable periodic broadcast paging, the base station shall set the BCAST_INDEX field of the *Extended System Parameters Message* to an unsigned 3-bit number in the range 1-7, equal to the broadcast slot cycle index as defined in 2.6.2.1.1.3.3. The value of the BCAST_INDEX field may exceed the value of the MAX_SLOT_CYCLE_INDEX field sent in the *System Parameters Message*.

To indicate that periodic broadcast paging is either disabled or is not supported by the base station, the base station shall set the BCAST_INDEX field to '000'.

3.6.2.4.1.1.2.4 Broadcast Message Slot Determination

When a base station uses broadcast paging, it shall determine the slot in which to send the corresponding broadcast message using the following procedures:

- The base station shall consider a broadcast page to have been sent in the paging slot in which the *General Page Message* containing the broadcast page began.
- The reference slot is defined as the paging slot in which the broadcast page was sent.
- Let n represent the ordinal number of the broadcast page relative to other broadcast pages that are contained in the same *General Page Message* ($n = 1, 2, 3, \dots$). The base station shall send the broadcast message announced by broadcast page n in the paging slot that occurs $n \times 3$ paging slots after the reference slot.

3.6.2.4.2 Broadcast Messages Sent on the Broadcast Control Channel

The base station may transmit *Data Burst Messages* directed to broadcast addresses. When transmitting broadcast messages that are to be received by mobile stations operating in the slotted mode, the base station may use enhanced broadcast pages (see 3.7.2.3.2.17) in accordance with the broadcast procedures specified in 3.6.2.4.2 to announce the presence of broadcast *Data Burst Messages* on the Broadcast Control Channel. The base station should use the rules specified in 3.6.2.4.2.1 for selecting the Broadcast Control Channel slot in which to send a broadcast *Data Burst Message*.

3.6.2.4.2.1 Broadcast Procedures for Slotted Mode

The base station may announce the presence of broadcast *Data Burst Messages* on the Broadcast Control Channel by sending an enhanced broadcast page.

3.6.2.4.2.1.1 General Overview

The base station may transmit *Data Burst Messages* directed to broadcast addresses. Since mobile stations operating in slotted mode do not constantly monitor a Broadcast Control Channel, it is necessary to use special procedures to ensure that mobile stations operating in the slotted mode are able to receive the message. The base station may either send an enhanced broadcast page in many Forward Common Control Channel slots, directing the mobile station to the appropriate Broadcast Control Channel slot, or the base station may also send an enhanced broadcast page in a predetermined slot, called a broadcast slot, on the Forward Common Control Channel, directing the mobile station to a specified Broadcast Control Channel slot.

If pending transmission of the broadcast message is announced by the enhanced broadcast page, mobile stations use the BC_ADDR and the BURST_TYPE fields of the enhanced broadcast page record to determine whether or not to receive the announced broadcast message. The base station sets the value of the BC_ADDR according to the requirements of the standards related to the BURST_TYPE. The timing relationship between the sending of the enhanced broadcast page and the sending of the related broadcast message is specified in the enhanced broadcast page. This timing relationship allows mobile stations to determine which Broadcast Control Channel slot to monitor in order to receive the broadcast message.

To reduce the overhead for sending broadcast pages or broadcast messages, a base station may use Periodic Enhanced Broadcast Paging (see 3.6.2.4.2.2.1.2). When Periodic Enhanced Broadcast Paging is enabled, enhanced broadcast pages are sent only once during a broadcast paging cycle. Mobile stations that are operating in the slotted mode and are configured to receive broadcast messages monitor the Forward Common Control Channel during the broadcast slot in which the enhanced broadcast pages are sent. For the purpose of Periodic Enhanced Broadcast Paging, system time is divided into broadcast paging cycles, each having a duration of $(\mathbf{B} + 7)$ Forward Common Control Channel slots, where \mathbf{B} is a power of two. In each broadcast paging cycle, the first Forward Common Control Channel slot may contain enhanced broadcast pages.

3.6.2.4.2.1.2 Requirements for Sending Broadcast Messages

3.6.2.4.2.1.2.1 Broadcast Delivery Options

When transmitting broadcast messages that are to be received by mobile stations operating in the slotted mode and monitoring the Forward Common Control Channel/Broadcast Control Channel, the base station shall use one of the two following procedures to transmit a broadcast message.

3.6.2.4.2.1.2.1.1 Method 1: Multi-Slot Enhanced Broadcast Paging

The base station may send a broadcast message using this method without regard to whether Periodic Enhanced Broadcast Paging is enabled or disabled (see 3.6.2.4.2.2.3).

When using this method, the base station shall send the enhanced broadcast page in a sufficient number of Forward Common Control Channel slots such that it may be received

by any mobile station that is operating in the slotted mode. The enhanced broadcast page then directs mobile stations to a subsequent Broadcast Control Channel slot.

The base station shall not send an enhanced broadcast page that directs a mobile station to receive a broadcast message on the Primary Broadcast Control Channel.

The base station shall not send a broadcast message on the Forward Common Control Channel.

3.6.2.4.2.1.2 Method 2: Periodic Enhanced Broadcast Paging

If the base station sends a broadcast message using this method, then the base station shall enable Periodic Enhanced Broadcast Paging (see 3.6.2.4.2.2.3).

To deliver a broadcast message using this method, the base station should perform the following:

- The base station should first include an enhanced broadcast page for each broadcast message to be sent, in a page that is sent on the Forward Common Control Channel in the first slot of the next broadcast paging cycle (see 2.6.2.1.1.3.3). The base station should then send the corresponding broadcast messages in the Broadcast Control Channel slots specified in 3.6.2.4.2.2.4.

The base station shall not send an enhanced broadcast page that directs a mobile station to receive a broadcast message on the Primary Broadcast Control Channel.

The base station shall not send a broadcast message on the Forward Common Control Channel.

3.6.2.4.2.1.2.2 Duplicate Broadcast Message Transmission

If the base station sends an enhanced broadcast page and an associated broadcast message more than once when Periodic Enhanced Broadcast Paging is enabled (see 3.6.2.4.2.2.3), then all repetitions of the enhanced broadcast page should be sent within $4 \times (\mathbf{B} + 7)$ slots of the slot in which the enhanced broadcast page was first sent. ($\mathbf{B} + 7$ is the duration of the broadcast paging cycle as defined in 2.6.2.1.1.3.3).

When a base station sends an enhanced broadcast page when Periodic Enhanced Broadcast Paging is enabled (see 3.6.2.4.2.2.3), and the base station has a second, different broadcast message to send which contains identical BURST_TYPE and BC_ADDR fields, then the base station shall wait $4 \times (\mathbf{B} + 7)$ paging slots after the first slot of the broadcast paging cycle containing the final sending of the first broadcast message or enhanced broadcast page before sending the second, different enhanced broadcast page.

3.6.2.4.2.1.2.3 Periodic Enhanced Broadcast Paging

The base station uses the BCAST_INDEX fields of the *MC-RR Parameters Message* to specify the current state of Periodic Enhanced Broadcast Paging to all mobile stations.

To enable Periodic Enhanced Broadcast Paging, the base station shall set the BCAST_INDEX field to a non-zero unsigned 3-bit number equal to the broadcast slot cycle index as defined in 2.6.2.1.1.3.3.

To indicate that Periodic Enhanced Broadcast Paging is either disabled or is not supported by the base station, the base station shall set the BCAST_INDEX field to '000'.

3.6.2.4.2.1.2.4 Broadcast Message Slot Determination

When a base station uses broadcast message announcement, it shall determine the slot in which to send the corresponding broadcast message using the following procedures:

- The base station shall consider an enhanced broadcast page to have been sent in the Forward Common Control Channel slot in which the page message containing the enhanced broadcast page began.
- The reference slot is defined as the Forward Common Control Channel slot in which the enhanced broadcast page was sent.
- The base station shall send a first transmission of the broadcast message announced by the enhanced broadcast page in the Broadcast Control Channel slot which begins $40 \text{ ms} \times (1 + \text{TIME_OFFSET})$ later than the beginning of the slot in which the page message containing the enhanced broadcast page began. The base station may send a repetition of the broadcast message announced by the enhanced broadcast page in the Broadcast Control Channel slot which begins $40 \text{ ms} \times (1 + \text{REPEAT_TIME_OFFSET})$ later than the Broadcast Control Channel slot in which the first transmission began.

3.6.2.5 Quick Paging Channel Processing

The base station may support a Quick Paging Channel. The base station may transmit up to three Quick Paging Channels on each supported CDMA Channel.

When a Quick Paging Channel is supported, the base station shall transmit paging indicators to the mobile station in the assigned positions in the assigned Quick Paging Channel slot. The base station shall set the paging indicators to "ON" if the mobile station is operating in the slotted mode and is to receive the Paging Channel or Forward Common Control Channel in the assigned Paging Channel or Forward Common Control Channel slot following its assigned Quick Paging Channel slot.

When the base station changes CONFIG_MSG_SEQ, the base station should set the paging indicators for all mobile stations to "ON" for each Quick Paging Channel slot for a time interval T (in units of 1.28 seconds), such that

$$T = N \times 2^{\text{MAX_SLOT_CYCLE_INDEX}},$$

where N is an integer greater than or equal to one.

If the base station supports configuration change indicators on the Quick Paging Channel, when the base station changes CONFIG_MSG_SEQ, the base station shall set all configuration change indicators to "ON" for each Quick Paging Channel slot for a time interval of T_{31m} seconds. At all other times, the base station shall set all configuration change indicators to "OFF".

If the base station does not support configuration change indicators on the Quick Paging

Channel, then the base station shall set all configuration change indicators to “OFF”.

When the base station sends a broadcast message using Multi-Slot Broadcast Message Transmission (see 3.6.2.4.1.2.1.1), the base station should set all paging indicators to “ON” for the Quick Paging Channel slot which begins 100 ms prior to the beginning of the Paging Channel slot in which the broadcast message begins.

When the base station sends an enhanced broadcast page using Multi-Slot Enhanced Broadcast Paging (see 3.6.2.4.2.1.2.1.1), the base station should set all paging indicators to “ON” for the Quick Paging Channel slot which begins 100 ms prior to the beginning of the Forward Common Control Channel slot in which the message containing the enhanced broadcast page begins.

When the base station sends an enhanced broadcast page using Periodic Enhanced Broadcast Paging (see 3.6.2.4.2.1.2.1.2), the base station should set all broadcast indicators to “ON” for the Quick Paging Channel broadcast slot which begins 100 ms prior to the beginning of the Forward Common Control Channel slot in which the message containing the enhanced broadcast page begins. At all other times, the base station shall set all broadcast indicators for a Quick Paging Channel broadcast slot to “OFF”.

The base station shall set all reserved indicators to “OFF”.

3.6.2.5.1 Quick Paging Channel Determination

To determine the mobile station’s assigned Quick Paging Channel, the base station shall use the hash function specified in 2.6.7.1 with the following inputs:

- IMSI_S based on the IMSI with which the mobile station registered (see 2.3.1)
- Number of Quick Paging Channels which the base station transmits on the mobile station’s assigned CDMA Channel.

3.6.2.5.2 Quick Paging Channel Slot Determination

The mobile station’s assigned Quick Paging Channel slots are those slots for which

$$\lfloor (t+5)/4 \rfloor - \text{PGSLOT} \bmod (16 \times T) = 0,$$

where t is the System Time in frames, PGSLOT is selected in the range 0 to 2047 by using the hash function specified in 2.6.7.1, and T is the slot cycle length in units of 1.28 seconds such that

$$T = 2^i,$$

and i is the slot cycle index.

3.6.2.5.3 Paging Indicator Position Determination

To determine the mobile station’s assigned paging indicators, the base station shall use the same formula as used by the mobile station (see 2.6.2.1.2.2).

3.6.2.5.4 Configuration Change Indicator Position Determination

Configuration change indicators are transmitted on the first Quick Paging Channel.

If the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the bit positions of the first pair of configuration change indicators in a Quick Paging Channel slot shall be the last two bits in the first 40 ms half of the Quick Paging Channel slot. The bit positions of the second pair of configuration change indicators in a Quick Paging Channel slot shall be the last two bits in the Quick Paging Channel slot.

If the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the bit positions of the first four configuration change indicators in a Quick Paging Channel slot shall be the last four bits in the first 40 ms half of the Quick Paging Channel slot. The bit position of the second four configuration change indicators in a Quick Paging Channel slot shall be the last four bits in the Quick Paging Channel slot.

3.6.2.5.5 Broadcast Indicator Position Determination

Broadcast indicators are transmitted on the first Quick Paging Channel.

On the first Quick Paging Channel, if the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the broadcast indicator positions are described as follows:

- The two Quick Paging Channel bit positions prior to the last two bits in the first 40 ms half of a Quick Paging Channel broadcast slot are broadcast indicators. The two Quick Paging Channel bit positions prior to the last two bits in a Quick Paging Channel broadcast slot are also broadcast indicators.

On the first Quick Paging Channel, if the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the broadcast indicator positions are described as follows:

- The four Quick Paging Channel bit positions prior to the last four bits in the first 40 ms half of a Quick Paging Channel broadcast slot are broadcast indicators. The four Quick Paging Channel bit positions prior to the last four bits in a Quick Paging Channel broadcast slot are also broadcast indicators.

3.6.2.5.6 Reserved Indicator Positions

On the first Quick Paging Channel, if the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the reserved indicator positions are described as follows:

- The two Quick Paging Channel bit positions prior to the last two bits in the first 40 ms half of a Quick Paging Channel slot that is not a Quick Paging Channel Broadcast slot are reserved. The two Quick Paging Channel bit positions prior to the last two bits in a Quick Paging Channel slot that is not a Quick Paging Channel Broadcast slot are also reserved.

On the first Quick Paging Channel, if the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the reserved indicator positions are described as follows:

- The four Quick Paging Channel bit positions prior to the last four bits in the first 40 ms half of a Quick Paging Channel slot that is not a Quick Paging Channel Broadcast slot are reserved. The four Quick Paging Channel bit positions prior to the last four bits in a Quick Paging Channel slot that is not a Quick Paging Channel Broadcast slot are also reserved.

On Quick Paging Channels other than the first Quick Paging Channel, if the Quick Paging Channel data rate is 2400 bps (indicator rate is 4800 bps), the reserved indicator positions are described as follows:

- The last four Quick Paging Channel bit positions in the first 40 ms half of a Quick Paging Channel slot are reserved. The last four Quick Paging Channel bit positions in a Quick Paging Channel slot are also reserved.

On Quick Paging Channels other than the first Quick Paging Channel, if the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the reserved indicator positions are described as follows:

- The last eight Quick Paging Channel bit positions in the first 40 ms half of a Quick Paging Channel slot are reserved. The last eight Quick Paging Channel bit positions in a Quick Paging Channel slot are also reserved.

3.6.3 Access Channel and Enhanced Access Channel Processing

During *Access Channel Processing*, the base station monitors the Access Channel to receive messages which the mobile station sends while the mobile station is in the *System Access State*.

Each Access Channel is associated with a Paging Channel. Up to 32 Access Channels can be associated with a Paging Channel. The number of Access Channels associated with a particular Paging Channel is specified in the *Access Parameters Message* sent on that Paging Channel.

If the base station supports Access Channels, the base station shall continually monitor all Access Channels associated with each Paging Channel that the base station transmits.

If the base station supports Enhanced Access Channels, then during *Enhanced Access Channel Processing*, the base station monitors the Enhanced Access Channel to receive messages which the mobile station sends while the mobile station is in the *System Access State*.

Each Enhanced Access Channel is associated with a Forward Common Control Channel. Up to 32 Enhanced Access Channels can be associated with a Forward Common Control Channel. The number of Enhanced Access Channels associated with a particular Forward Common Control Channel is specified in the *Enhanced Access Parameters Message* sent on the Broadcast Control Channel.

If the base station supports Enhanced Access Channel, the base station shall continually monitor all Enhanced Access Channels associated with each Forward Common Control Channel that the base station transmits.

3.6.3.1 Reserved

3.6.3.2 Reserved

3.6.3.3 Response to Page Response Message

If the base station receives a *Page Response Message*, the base station should send a *Channel Assignment Message*, an *Extended Channel Assignment Message*, or a *Release Order*. The base station may also start authentication procedures (see 2.3.12), start TMSI assignment procedures (see 2.3.15), send a *Data Burst Message*, or request status information records with the *Status Request Message*. If the base station is operating with the mobile station in Band Class 0, the base station may also request the status information records with the *Status Request Order*.

If the base station sends the *Extended Channel Assignment Message*, the base station may include more than one pilot to be in the Active Set.

If the base station sends a *Channel Assignment Message* or an *Extended Channel Assignment Message*, the base station shall perform the following:

- If the message directs the mobile station to a CDMA Traffic Channel, the base station shall begin *Traffic Channel Processing* (see 3.6.4) for the mobile station.
- If the message directs the mobile station to an 800 MHz wide analog voice channel, the base station shall follow the procedure described in [6].
- If the message directs the mobile station to an 800 MHz narrow analog voice channel, the base station shall follow the procedure described in 3.6.5A of [22].
- Layer 3 shall send a *mobile station inactive on common channel* indication to Layer 2 (see 3.1.1.2.2 of [4]).

3.6.3.4 Response to Orders

No requirements.

3.6.3.5 Response to Origination Message

If the base station receives an *Origination Message*, the base station should send a *Channel Assignment Message*, an *Extended Channel Assignment Message*, an *Intercept Order*, a *Reorder Order*, a *Release Order*, a *Retry Order*, a *PACA Message*, or a *Service Redirection Message*. The base station may also commence authentication procedures (see 2.3.12) or TMSI assignment procedures (see 2.3.15). The base station may also request status information records with the *Status Request Message*. If the base station is operating with the mobile station in Band Class 0, the base station may also request status information records with the *Status Request Order*.

If the base station sends the *Extended Channel Assignment Message*, the base station may include more than one pilot to be in the Active Set.

If the base station sends a *Channel Assignment Message* or an *Extended Channel Assignment Message*, the base station shall perform the following:

- 1 • If the message directs the mobile station to a CDMA Traffic Channel, the base
2 station shall begin *Traffic Channel Processing* (see 3.6.4) for the mobile station.
- 3 • If the message directs the mobile station to an 800 MHz wide analog voice channel,
4 the base station shall follow the procedure described in [2].
- 5 • If the message directs the mobile station to an 800 MHz narrow analog voice
6 channel, the base station shall follow the procedure described in 3.6.5A of [22].
- 7 • The base station shall raise a *mobile station inactive on common channel* indication
8 for the mobile station.

9 If the base station sends a *Channel Assignment Message*, the base station shall not set
10 RESPOND equal to '0' when ASSIGN_MODE = '001', ASSIGN_MODE = '010', or
11 ASSIGN_MODE = '101'. If the base station sends an *Extended Channel Assignment Message*,
12 the base station shall not set RESPOND equal to '0' when ASSIGN_MODE = '001' or
13 ASSIGN_MODE = '010'

14 3.6.3.6 Response to Registration Message

15 If the base station receives a *Registration Message*, the base station may send a *Registration*
16 *Accepted Order*, a *Registration Rejected Order*, or a *Service Redirection Message*. The base
17 station may also start authentication procedures (see 2.3.12), may start TMSI assignment
18 procedures (see 2.3.15), or may request status information records with the *Status Request*
19 *Message*. If the base station is operating with the mobile station in Band Class 0, the base
20 station may also request the status information records with a *Status Request Order*.

21 If the *Registration Message* specifies a power-down registration, Layer 3 shall send a *mobile*
22 *station inactive on common channel* indication to Layer 2 (see 3.1.1.2.2 of [4]).

23 3.6.3.7 Response to Data Burst Message

24 No requirements.

25 3.6.3.8 Reserved

26 3.6.3.9 Reserved

27 3.6.3.10 Service Redirection

28 If the base station sends a *Service Redirection Message* to the mobile station, Layer 3 shall
29 send a *mobile station inactive on common channel* indication to Layer 2 (see 3.1.1.2.2 of [4]).

30 3.6.4 Traffic Channel Processing

31 During *Traffic Channel Processing*, the base station uses the Forward and Reverse Traffic
32 Channels to communicate with the mobile station while the mobile station is in the
33 *Mobile Station Control on the Traffic Channel State*.

34 Traffic Channel processing consists of the following substates:

- 1 • *Traffic Channel Initialization Substate* - In this substate, the base station begins
2 transmitting on the Forward Traffic Channel and receiving on the Reverse Traffic
3 Channel.
- 4 • *Traffic Channel Substate* - In this substate, the base station exchanges Traffic
5 Channel frames with the mobile station in accordance with the current service
6 configuration. While in this substate, one or more Call Control instances can be
7 activated (see 3.6.8).
- 8 • *Release Substate* - In this substate, the base station disconnects the calls and the
9 physical channels.

10 3.6.4.1 Special Functions and Actions

11 The base station performs the following special functions and actions in one or more of the
12 Traffic Channel processing substates:

13 3.6.4.1.1 Forward Traffic Channel Power Control

14 When the base station enables Forward Traffic Channel power control, the mobile station
15 reports frame error rate statistics to the base station using the *Power Measurement Report*
16 *Message*.

17 The base station may enable Forward Traffic Channel power control using the *System*
18 *Parameters Message* sent on the Paging Channel and the *Power Control Parameters Message*
19 sent on the Forward Traffic Channel. The base station may enable Forward Traffic
20 Channel power control using the *MC-RR Parameters Message* sent on the Broadcast Control
21 Channel and the *Power Control Parameters Message* sent on the Forward Traffic Channel.
22 The base station may enable periodic reporting which causes the mobile station to report
23 frame error rate statistics at specified intervals. The base station may also enable
24 threshold reporting which causes the mobile station to report frame error rate statistics
25 when the frame error rate reaches a specified threshold.²⁴

26 The base station may use the reported frame error rate statistics to adjust the transmit
27 power of the Forward Traffic Channel.

28 3.6.4.1.2 Service Configuration and Negotiation

29 During Traffic Channel operation, the mobile station and base station communicate
30 through the exchange of Forward and Reverse Traffic Channel Configurations. The mobile
31 station and base station use a common set of attributes for building and interpreting
32 Traffic Channel frames. This set of attributes, referred to as a service configuration,
33 consists of both negotiable and non-negotiable parameters.

34 The set of negotiable service configuration parameters consists of the following:

²⁴In this section the term base station may imply multiple cells or sectors.

Forward and Reverse Multiplex Options: These control the way in which the information bits of the Forward and Reverse Traffic Channel frames, respectively, are divided into various types of traffic, such as signaling traffic, primary traffic and secondary traffic. A multiplex option together with a radio configuration specifies the frame structures and transmission rates (see [3]). The Multiplex Options which support Supplemental Code Channel transmission and Supplemental Channel transmission on the Forward and Reverse Traffic Channels are included in [3]. Invocation of Supplemental Code Channel operation on the Forward or Reverse Traffic Channels occurs by transmission of the *Supplemental Channel Request Message*, the *Supplemental Channel Assignment Message*, and the *General Handoff Direction Message*. The Multiplex Options which support Supplemental Code Channel transmission and Supplemental Channel transmission on the Forward and Reverse Traffic Channels are included in [3]. The multiplex option used for the Forward Traffic Channel can be the same as that used for the Reverse Traffic Channel, or it can be different.

Forward and Reverse Traffic Channel Configurations: These include the radio configurations and other necessary attributes for the Forward and Reverse Traffic Channels. The Traffic Channel Configuration used can be different for the Forward and Reverse Traffic Channels or it can be the same.

Forward and Reverse Traffic Channel Transmission Rates: These are the transmission rates actually used for the Forward and Reverse Traffic Channels, respectively. The transmission rates for the Forward Traffic Channel can include all of the transmission rates supported by the radio configuration associated with the Forward Traffic Channel multiplex option, or a subset of the supported rates. Similarly, the transmission rates used for the Reverse Traffic Channel can include all rates supported by the radio configuration associated with the Reverse Traffic Channel multiplex option, or a subset of the supported rates. The transmission rates used for the Forward Traffic Channel can be the same as those used for the Reverse Traffic Channel, or they can be different.

Service Option Connections: These are the services in use on the Traffic Channel. There can be multiple service option connections. It is also possible that there is no service option connection, in which case the base station uses the Forward Traffic Channel as follows:

- Sends signaling traffic and null traffic on the Forward Fundamental Channel.
- Sends signaling traffic on the Forward Dedicated Control Channel.
- Sends power control bits on the Forward Fundamental Channel if FPC_PRI_CHAN is set to '0'; sends power control bits on the Forward Dedicated Control Channel if FPC_PRI_CHAN is set to '1'.

Associated with each service option connection are a service option, a Forward Traffic Channel traffic type, a Reverse Traffic Channel traffic type, and a service

option connection reference. The associated service option formally defines the way in which traffic bits are processed by the mobile station and base station. The associated Forward and Reverse Traffic Channel traffic types specify the types of traffic used to support the service option. A service option can require the use of a particular type of traffic, such as primary or secondary, or it can accept more than one traffic type. A service option can be one-way, in which case it can be supported on the Forward Traffic Channel only or the Reverse Traffic Channel only. Alternatively, a service option can be two-way, in which case it can be supported on the Forward and Reverse Traffic Channels simultaneously. Connected service options can also invoke operation on Supplemental Code Channels in either one or both of the Forward and Reverse Traffic Channels by negotiating a multiplex option that supports operation on Supplemental Code Channels (see [3] for Multiplex Options applicable to Supplemental Code Channels), and by using the appropriate Supplemental Code Channel related messages (i.e., the *Supplemental Channel Request Message*, the *Supplemental Channel Assignment Message*, and the *General Handoff Direction Message*). After Supplemental Code Channels have been assigned by the base station, the connected service option can transmit primary and/or secondary traffic on Supplemental Code Channels. Connected service options can also invoke operation on Supplemental Channels in either one or both of the Forward and Reverse Traffic Channels by negotiating a multiplex option that supports operation on Supplemental Channels (see [3] for Multiplex Options applicable to Supplemental Channels) and by using the appropriate Supplemental Channel related messages (i.e., the *Supplemental Channel Request Message*, the *Universal Handoff Direction Message*, the *Supplemental Channel Request Mini Message*, the *Extended Supplemental Channel Assignment Message*, the *Forward Supplemental Channel Assignment Mini Message*, and the *Reverse Supplemental Channel Assignment Mini Message*). After Supplemental Channels have been assigned by the base station, the connected service option can transmit primary and/or secondary traffic on Supplemental Channels. The associated service option connection reference provides a means for uniquely identifying the service option connection. The reference serves to resolve ambiguity when there are multiple service option connections in use.

The non-negotiable service configuration parameters are sent from the base station to the mobile stations only, and consist of the following:

Reverse Pilot Gating Rate: This controls the way in which the reverse pilot is gated on the Reverse Pilot Channel. The base station specifies the reverse pilot gating rate to be used in the *Service Connect Message*, the *General Handoff Direction Message*, and the *Universal Handoff Direction Message*.

Forward and Reverse Power Control Parameters: These consist of forward power control operation mode, outer loop power control parameters (e.g. target frame error rate, minimum E_b/N_t setpoint, and maximum E_b/N_t setpoint) for the Forward Fundamental Channel and Forward Dedicated Control Channel, and Power Control Subchannel indicator which indicates where the mobile station is to perform the primary inner loop estimation and the base station is to multiplex the Power Control Subchannel.

Logical to Physical Mapping: This is a table of logical to physical mapping entries, consisting of service reference identifier, logical resource, physical resource, forward flag, reverse flag, and priority.

Partition Table: The base station may include this table to specify the number of bits allocated for each service in the Fundamental Channel or Dedicated Control Channel.

SCH LTU Size Table: The base station may include this table to specify the number of bits per supplemental channel LTU.

Information related to Variable Rate feature (the capability to support rate determination) on Forward and Reverse Supplemental Channels

Information related to Flexible Rate feature (the capability to support non-listed rates) on Forward and Reverse Fundamental Channel, Dedicated Control Channel, and Supplemental Channels

The mobile station can request a default service configuration associated with a service option at call origination, and can request new service configurations during Traffic Channel operation. A requested service configuration can differ greatly from its predecessor or it can be very similar. For example, the mobile station can request a service configuration in which all of the service option connections are different from those of the existing configuration; or the mobile station can request a service configuration in which the existing service option connections are maintained with only minor changes, such as a different set of transmission rates or a different mapping of service option connections to Forward and Reverse Traffic Channel traffic types.

If the mobile station requests a service configuration that is acceptable to the base station, they both begin using the new service configuration. If the mobile station requests a service configuration that is not acceptable to the base station, the base station can reject the requested service configuration or propose an alternative service configuration. If the base station proposes an alternative service configuration, the mobile station can accept or reject the base station's proposed service configuration, or propose yet another service configuration. This process, called service negotiation, ends when the mobile station and base station find a mutually acceptable service configuration, or when either the mobile station or base station rejects a service configuration proposed by the other.

It is also possible for the base station to request a default service configuration, associated with a service option, when paging the mobile station and to request new service configurations during Traffic Channel operation. The service negotiation proceeds as described above, but with the roles of the mobile station and base station reversed.

For CDMA mode operation in Band Class 0, the mobile station and base station can also use an alternative method for negotiating a service configuration known as service option negotiation. Service option negotiation is similar to service negotiation, but offers less flexibility for specifying the attributes of the service configuration. During service option negotiation, the base station or mobile station specifies only which service option is to be used. There is no facility for explicitly specifying the multiplex options, traffic types or transmission rates to be used on the Forward and Reverse Traffic Channels in conjunction with the service option. Instead, implicit service configuration attributes are assumed. In particular, the Forward and Reverse Multiplex Options and transmission rates are assumed to be the default multiplex options and transmission rates associated with the requested service option, and the traffic type for both the Forward and Reverse Traffic Channels is assumed to be primary traffic. Furthermore, a service configuration established using service option negotiation is restricted to having only a single service option connection.

At mobile station origination and termination, the type of negotiation to use, either service negotiation or service option negotiation, is indicated in the *Channel Assignment Message*. Service negotiation is always used with the *Extended Channel Assignment Message*. If a CDMA-to-CDMA hard handoff occurs during the call, the type of negotiation to use following the handoff is indicated in the *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message*.

For CDMA mode operation in Band Class 1, only service negotiation is to be used.

The following messages are used to support service negotiation:

Service Request Message: The mobile station can use this message to propose a service configuration, or to accept or reject a service configuration proposed in a *Service Response Message*. The base station can use this message to propose a service configuration, or to reject a service configuration proposed in a *Service Response Message*.

Service Response Message: The mobile station can use this message to accept or reject a service configuration proposed in a *Service Request Message*, or to propose an alternative service configuration. The base station can use this message to reject a service configuration proposed in a *Service Request Message*, or to propose an alternative service configuration.

Service Connect Message: The base station can use this message to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*, and instruct the mobile station to begin using the service configuration. The base station may use this message to instruct the mobile station to use the stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record) if the 16-bit CRC computed over the new service configuration (see 2.6.11) matches the SYNC_ID that the mobile station has reported in the *Origination Message* or *Page Response Message*.

Service Connect Completion Message: The mobile station can use this message

1 to acknowledge the transition to a new service configuration.

2 *Service Option Control Message:* The mobile station and base station can use
3 this message to invoke service option specific functions.

4 *Extended Channel Assignment Message:* The base station can use this message
5 to accept or reject the initial service configuration proposed by the mobile
6 station in an *Origination Message* or a *Page Response Message*.

7 The following messages are used to support service option negotiation:

8 *Service Option Request Order:* The mobile station and base station can use this
9 message either to request a service option or suggest an alternative service
10 option.

11 *Service Option Response Order:* The mobile station and base station can use this
12 message to accept or reject a service option request.

13 *Service Option Control Order:* The mobile station and base station can use this
14 message to invoke service option specific functions.

15 The following messages are used to support both service negotiation and service option
16 negotiation:

17 *Origination Message:* The mobile station can use this message to propose an
18 initial service configuration.

19 *Channel Assignment Message:* The base station can use this message to accept
20 or reject the initial service configuration proposed by the mobile station in
21 an *Origination Message* or a *Page Response Message*, and to indicate which
22 type of negotiation, either service negotiation or service option negotiation,
23 is to be used during the call.

24 *Extended Handoff Direction Message:* The base station can use this message to
25 indicate which type of negotiation, either service negotiation or service
26 option negotiation, is to be used following a CDMA-to-CDMA hard handoff.

27 *General Handoff Direction Message:* The base station can use this message to
28 indicate which type of negotiation, either service negotiation or service
29 option negotiation, is to be used following a CDMA-to-CDMA hard handoff.
30 The base station can use this message to accept a service configuration
31 proposed in a *Service Request Message* or *Service Response Message*. The base
32 station can also use this message to instruct the mobile station to begin
33 using the service configuration.

34 *General Page Message* or *Universal Page Message:* The base station can use a
35 mobile-station-addressed page in a *General Page Message* or *Universal Page*
36 *Message* to propose an initial service configuration.

37 *Page Response Message:* The mobile station can use this message to accept or
38 reject the initial service configuration proposed by the base station in a
39 mobile-station-addressed page, or to propose an alternative initial service
40 configuration.

Status Request Message: The base station can use this message to request service capability information from the mobile station.

Status Response Message: The mobile station can use this message to return the service capability information requested by the base station in a *Status Request Message*.

Extended Status Response Message: The mobile station can use this message to return the service capability information requested by the base station in a *Status Request Message*.

Universal Handoff Direction Message: The base station can use this message to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used following a CDMA-to-CDMA hard handoff. The base station can use this message to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*. The base station can also use this message to instruct the mobile station to begin using the service configuration.

3.6.4.1.2.1 Use of Variables

3.6.4.1.2.1.1 Maintaining the Service Request Sequence Number

The base station shall maintain a service request sequence number variable, SERV_REQ_NUM, for use with service negotiation. Upon beginning Traffic Channel processing, the base station shall set SERV_REQ_NUM to 0. Each time the base station sends a new *Service Request Message*, it shall set the SERV_REQ_SEQ field of the message to the current value of SERV_REQ_NUM and shall then set SERV_REQ_NUM equal to (SERV_REQ_NUM + 1) modulo 8.

3.6.4.1.2.1.2 Maintaining the Service Connect Sequence Number

The base station shall maintain a service connect sequence number variable, SERV_CON_NUM, for use with service negotiation. Upon beginning Traffic Channel processing, the base station shall set SERV_CON_NUM to 0. Each time the base station sends a new *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message* containing a service configuration record, it shall set the SERV_CON_SEQ field of the message to the current value of SERV_CON_NUM and shall then set SERV_CON_NUM equal to (SERV_CON_NUM + 1) modulo 8.

3.6.4.1.2.1.3 Assigning Service Option Connection References

When the base station assigns a service option connection reference for use in identifying a new service option connection during service negotiation, the base station shall use the following criteria:

The base station shall not assign a reference equal to '00000000'; and

The base station shall not assign a reference that is associated with a service option connection of the current service configuration; and

If there was a previous service configuration, the base station shall not assign a reference that was associated with a service option connection of the previous service configuration.

3.6.4.1.2.1.4 Maintaining the Service Negotiation Indicator Variable

The base station shall maintain a service negotiation indicator variable, SERV_NEG, to indicate which type of negotiation to use, either service negotiation or service option negotiation. The base station shall set SERV_NEG to enabled whenever service negotiation is to be used, and shall set SERV_NEG to disabled whenever service option negotiation is to be used. The precise rules for setting SERV_NEG are specified in 3.6.4.2 and 3.6.6.2.2.2.

For CDMA operation in Band Class 1, the base station shall set SERV_NEG to enabled.

3.6.4.1.2.1.5 Maintaining the Service Option Request Number

The base station shall maintain a service option request number variable, SO_REQ, for use with service option negotiation. The base station shall set SO_REQ to a special value, NULL, if the base station does not have an outstanding service option request. If the base station has an outstanding service option request, the base station shall set SO_REQ to the number of the service option associated with the outstanding request.

3.6.4.1.2.2 Service Subfunctions

As illustrated in Figure 3.6.4.1.2.2-1, the base station supports service configuration and negotiation by performing the following set of service subfunctions.

- *Normal Service Subfunction* - While this subfunction is active, the base station processes service configuration requests from the mobile station and sends service configuration requests to the mobile station.
- *Waiting for Service Request Message Subfunction* - While this subfunction is active, the base station waits to receive a *Service Request Message*.
- *Waiting for Service Response Message Subfunction* - While this subfunction is active, the base station waits to receive a *Service Response Message*.
- *Waiting for Service Action Time Subfunction* - While this subfunction is active, the base station waits for the action time associated with a new service configuration.
- *Waiting for Service Connect Completion Message Subfunction* - While this subfunction is active, the base station waits to receive a *Service Connect Completion Message*.
- *SO Negotiation Subfunction* - While this subfunction is active and the base station is operating in Band Class 0, the base station supports service option negotiation with the mobile station.

The *SO Negotiation Subfunction* supports service option negotiation. All of the other service subfunctions support service negotiation.

1 At any given time during Traffic Channel processing, only one of the service subfunctions
2 is active. For example, when the base station first begins Traffic Channel processing,
3 either the *Normal Service Subfunction* or the *SO Negotiation Subfunction* is active. Each of
4 the other service subfunctions may become active in response to various events which
5 occur during the Traffic Channel substates. Typically, the base station processes events
6 pertaining to service configuration and negotiation in accordance with the requirements
7 for the active service subfunction. However, some Traffic Channel substates do not allow
8 for the processing of certain events pertaining to service configuration and negotiation, or
9 specify requirements for processing such events which supersede the requirements of the
10 active service subfunction.

11

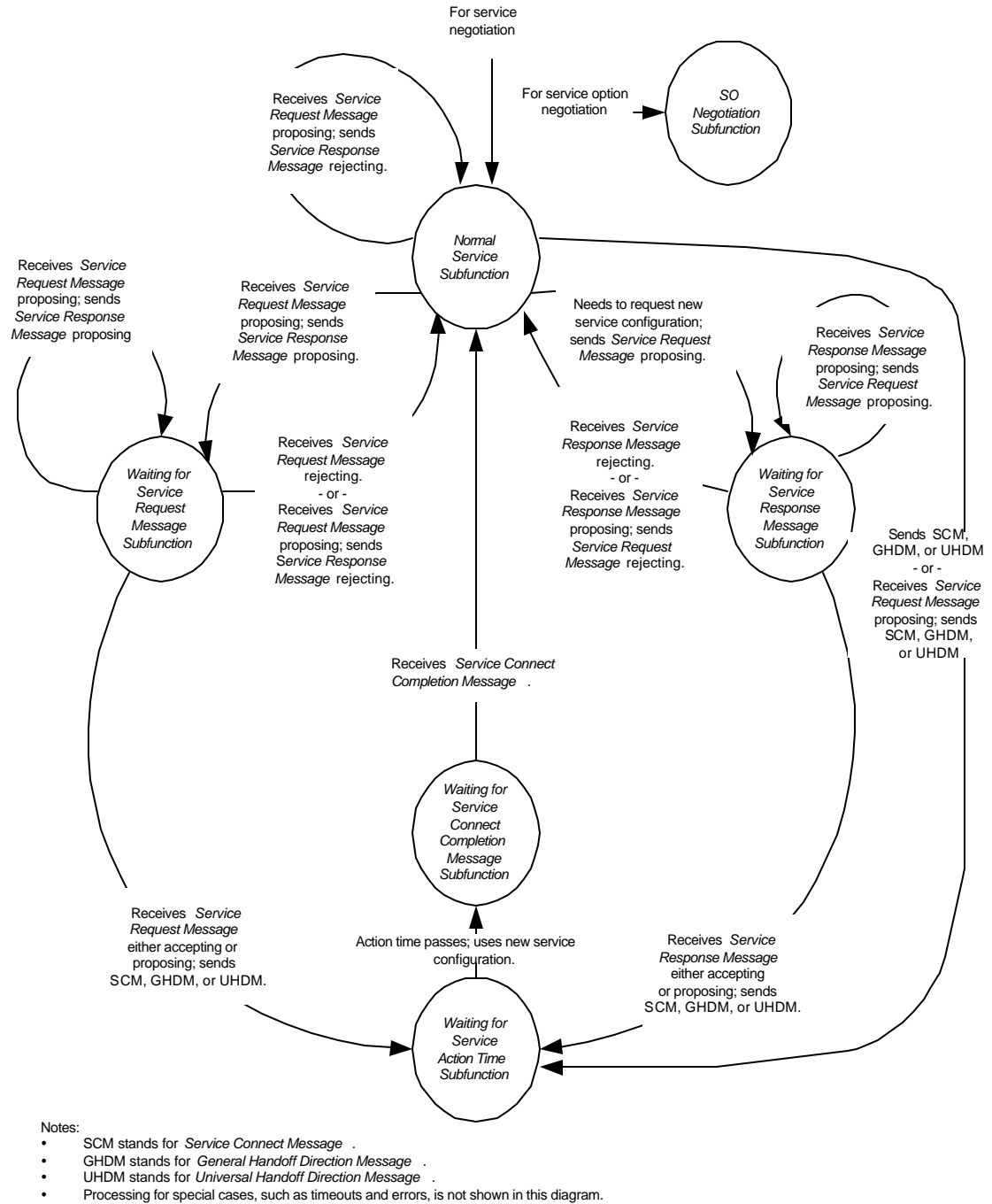


Figure 3.6.4.1.2.2-1. Base Station Service Subfunctions

3.6.4.1.2.2.1 Normal Service Subfunction

While this subfunction is active, the base station processes service configuration requests from the mobile station and sends service configuration requests to the mobile station.

While the *Normal Service Subfunction* is active, the base station shall perform the following:

- The base station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The base station shall discard any Reverse Traffic Channel frame which has a format that is not supported by the base station. The base station may discard any type of Reverse Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- To initiate service negotiation for a new service configuration, the base station shall send a *Service Request Message* to propose the new service configuration and shall activate the *Waiting for Service Response Message Subfunction*.
- For any service option connection that is part of the current service configuration, the base station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- The base station may send a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message* containing a service configuration record. If the base station sends this message, the base station shall activate the *Waiting for Service Action Time Subfunction*.
- If SERV_NEG changes from enabled to disabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and 3.6.6.2.2.11), the base station shall activate the *SO Negotiation Subfunction*.
- If the base station receives one of the following service negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Connect Completion Message*
 2. *Service Option Control Message*: If the service option connection specified by the message is part of the current service configuration, and the service option specified by the message is the same as the service option associated with the service option connection, the base station shall process the message in accordance with the requirements for the service option.
 3. *Service Request Message*: The base station shall process the message as follows:
 - If the purpose of the message is to propose a service configuration, the base station shall process the message as follows:

- If the base station accepts the proposed service configuration, the base station shall send a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message* containing a service configuration record and shall activate the *Waiting for Service Action Time Subfunction*.
- If the base station does not accept the proposed service configuration and does not have an alternative service configuration to propose, the base station shall send a *Service Response Message* to reject the proposed service configuration.
- If the base station does not accept the proposed service configuration and has an alternative service configuration to propose, the base station shall send a *Service Response Message* to propose the alternative service configuration. The base station shall activate the *Waiting for Service Request Message Subfunction*.

4. *Service Response Message*

- If the base station receives one of the following service option negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Option Request Order*
 2. *Service Option Response Order*
 3. *Service Option Control Order*

3.6.4.1.2.2.2 *Waiting for Service Request Message Subfunction*

While this subfunction is active, the base station waits to receive a *Service Request Message*.

While the *Waiting for Service Request Message Subfunction* is active, the base station shall perform the following:

- If the base station does not receive a *Service Request Message*, the base station shall activate the *Normal Service Subfunction*.
- The base station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The base station shall discard any Reverse Traffic Channel frame which has a format that is not supported by the base station. The base station may discard any type of Reverse Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- For any service option connection that is part of the current service configuration, the base station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.

- 1 • If SERV_NEG changes from enabled to disabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and
2 3.6.6.2.2.11), the base station shall activate the *SO Negotiation Subfunction*.
- 3 • If the base station receives one of the following service negotiation messages, the
4 base station shall process the message according to the specified requirements, if
5 any:
 - 6 1. *Service Connect Completion Message*
 - 7 2. *Service Option Control Message*: If the service option connection specified by the
8 message is part of the current service configuration, and the service option
9 specified by the message is the same as the service option associated with the
10 service option connection, the base station shall process the message in
11 accordance with the requirements for the service option.
 - 12 3. *Service Request Message*: The base station shall process the message as follows:
 - 13 • If the purpose of the message is to accept a proposed service configuration,
14 the base station shall perform one of the following actions:
 - 15 – The base station shall send a *Service Connect Message*, *General Handoff*
16 *Direction Message*, or *Universal Handoff Direction Message* and shall
17 activate the *Waiting for Service Action Time Subfunction*.
 - 18 – The base station shall send a *Service Request Message* to propose an
19 alternative service configuration and shall activate the *Waiting for*
20 *Service Response Message Subfunction*.
 - 21 • If the purpose of the message is to reject a proposed service configuration,
22 the base station shall activate the *Normal Service Subfunction*.
 - 23 • If the purpose of the message is to propose a service configuration, the base
24 station shall process the message as follows:
 - 25 – If the base station accepts the proposed service configuration, the base
26 station shall send a *Service Connect Message*, a *General Handoff Direction*
27 *Message*, or a *Universal Handoff Direction Message* containing a service
28 configuration record and shall activate the *Waiting for Service Action Time*
29 *Subfunction*.
 - 30 – If the base station does not accept the proposed service configuration
31 and does not have an alternative service configuration to propose, the
32 base station shall send a *Service Response Message* to reject the proposed
33 service configuration. The base station shall activate the *Normal Service*
34 *Subfunction*.
 - 35 – If the base station does not accept the proposed service configuration
36 and has an alternative service configuration to propose, the base station
37 shall send a *Service Response Message* to propose the alternative service
38 configuration.
 - 39 4. *Service Response Message*

- If the base station receives one of the following service option negotiation messages, the base station shall process the message according to the specified requirements, if any:

1. *Service Option Request Order*
2. *Service Option Response Order*
3. *Service Option Control Order*

3.6.4.1.2.2.3 Waiting for Service Response Message Subfunction

While this subfunction is active, the base station waits to receive a *Service Response Message*.

While the *Waiting for Service Response Message Subfunction* is active, the base station shall perform the following:

- If the base station does not receive a *Service Response Message*, the base station shall activate the *Normal Service Subfunction*.
- The base station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The base station shall discard any Reverse Traffic Channel frame which has a format that is not supported by the base station. The base station may discard any type of Reverse Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- For any service option connection that is part of the current service configuration, the base station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the associated service option.
- If SERV_NEG changes from enabled to disabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and 3.6.6.2.2.11), the base station shall activate the *SO Negotiation Subfunction*.
- If the base station receives one of the following service negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Connect Completion Message*
 2. *Service Option Control Message*: If the service option connection specified by the message is part of the current service configuration, and the service option specified by the message is the same as the service option associated with the service option connection, the base station shall process the message in accordance with the requirements for the service option.
 3. *Service Request Message*: The base station should not process the layer 3 fields of the message.
 4. *Service Response Message*: The base station shall process the message as follows:

- 1 • If the service request sequence number (SERV_REQ_SEQ) from the message
2 does not match the sequence number of the *Service Request Message* for
3 which the base station is expecting a response, the base station shall not
4 process the layer 3 fields of the message.
- 5 • If the purpose of the message is to accept a proposed service configuration,
6 the base station shall perform one of the following actions:
 - 7 – The base station shall send a *Service Connect Message*, a *General Handoff*
8 *Direction Message*, or a *Universal Handoff Direction Message* containing a
9 service configuration record and shall activate the *Waiting for Service*
10 *Action Time Subfunction*. Or
 - 11 – The base station shall send a *Service Request Message* to propose an
12 alternative service configuration.
- 13 • If the purpose of the message is to reject a proposed service configuration,
14 the base station shall activate the *Normal Service Subfunction*.
- 15 • If the purpose of the message is to propose a service configuration, the base
16 station shall process the message as follows:
 - 17 – If the base station accepts the proposed service configuration, the base
18 station shall send a *Service Connect Message*, a *General Handoff Direction*
19 *Message*, or a *Universal Handoff Direction Message* containing a service
20 configuration record and shall activate the *Waiting for Service Action Time*
21 *Subfunction*.
 - 22 – If the base station does not accept the proposed service configuration
23 and does not have an alternative service configuration to propose, the
24 base station shall send a *Service Request Message* to reject the proposed
25 service configuration. The base station shall activate the *Normal Service*
26 *Subfunction*.
 - 27 – If the base station does not accept the proposed service configuration
28 and has an alternative service configuration to propose, the base station
29 shall send a *Service Request Message* to propose the alternative service
30 configuration.
- 31 • If the base station receives one of the following service option negotiation
32 messages, the base station shall process the message according to the specified
33 requirements, if any:
 - 34 1. *Service Option Request Order*
 - 35 2. *Service Option Response Order*
 - 36 3. *Service Option Control Order*

37 3.6.4.1.2.2.4 Waiting for Service Action Time Subfunction

38 While this subfunction is active, the base station waits for the action time associated with
39 a new service configuration.

While the *Waiting for Service Action Time Subfunction* is active, the base station shall perform the following:

- Prior to the action time associated with the *Service Connect Message*, a *General Handoff Direction Message*, or *Universal Handoff Direction Message* containing a service configuration record, the base station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The base station shall discard any Reverse Traffic Channel frame which has a format that is not supported by the base station. The base station may discard any type of Reverse Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- At the action time associated with the *Service Connect Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message* containing a service configuration record, the base station shall begin to use the service configuration specified by the *Service Connect Message*, the *General Handoff Direction Message*, or the *Universal Handoff Direction Message* containing a service configuration record, as the current service configuration and shall begin to process Forward and Reverse Traffic Channel frames accordingly. The base station shall activate the *Waiting for Service Connect Completion Message Subfunction*.
- If SERV_NEG changes from enabled to disabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and 3.6.6.2.2.11), the base station shall activate the *SO Negotiation Subfunction*.
- If the base station receives one of the following service negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Connect Completion Message*
 2. *Service Option Control Message*: If the service option connection specified by the message is part of the current or pending service configuration, and the service option specified by the message is the same as the service option associated with the service option connection, the base station shall process the message in accordance with the requirements for the service option.
 3. *Service Request Message*
 4. *Service Response Message*
- If the base station receives one of the following service option negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Option Request Order*
 2. *Service Option Response Order*
 3. *Service Option Control Order*

3.6.4.1.2.2.5 Waiting for Service Connect Completion Message Subfunction

While this subfunction is active, the base station waits to receive a *Service Connect Completion Message*.

While the *Waiting for Service Connect Completion Message Subfunction* is active, the base station shall perform the following:

- If the base station does not receive a *Service Connect Completion Message*, the base station shall activate the *Normal Service Subfunction*.
- The base station shall process Forward and Reverse Traffic Channel frames in accordance with the current service configuration. The base station shall discard any Reverse Traffic Channel frame which has a format that is not supported by the base station. The base station may discard any type of Reverse Traffic Channel traffic that is not signaling traffic and is not part of the current service configuration.
- The base station shall not initiate service negotiation for a new service configuration.
- If SERV_NEG changes from enabled to disabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and 3.6.6.2.2.11), the base station shall activate the *SO Negotiation Subfunction*.
- If the base station receives one of the following service negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Connect Completion Message*: The base station shall activate the *Normal Service Subfunction*.
 2. *Service Option Control Message*: If the service option connection specified by the message is part of the current service configuration, and the service option specified by the message is the same as the service option associated with the service option connection, the base station shall process the message in accordance with the requirements for the service option.
 3. *Service Request Message*
 4. *Service Response Message*
- If the base station receives one of the following service option negotiation messages, the base station shall process the message according to the specified requirements, if any:
 1. *Service Option Request Order*
 2. *Service Option Response Order*
 3. *Service Option Control Order*

3.6.4.1.2.2.6 SO Negotiation Subfunction

While this subfunction is active, the base station supports service option negotiation with the mobile station.

Upon activating the *SO Negotiation Subfunction*, the base station shall set SO_REQ to NULL. The base station shall delete from the current service configuration any service option connection which does not use primary traffic on both the Forward and Reverse Traffic Channels.

While the *SO Negotiation Subfunction* is active, the base station shall perform the following:

- If the current service configuration includes a service option connection, the base station shall process the received primary traffic bits in accordance with the requirements for the service option associated with the service option connection; otherwise, the base station shall discard the received primary traffic bits.
- If the current service configuration includes a service option connection, the base station shall transmit primary traffic bits in accordance with the requirements for the service option associated with the service option connection; otherwise, the base station shall transmit null traffic and power control bits on the Forward Fundamental Channel, if the Fundamental channel is present to transmit power control bits on the Forward Dedicated Control Channel, if only the Dedicated Control Channel is present.
- If the current service configuration includes a service option connection, the base station may send a *Service Option Control Order* to invoke a service option specific function in accordance with the requirements for the service option associated with the service option connection.
- To initiate service option negotiation, the base station shall set SO_REQ to the number of the requested service option and shall send a *Service Option Request Order* containing the requested service option number.
- If SERV_NEG changes from disabled to enabled (see 3.6.6.2.2.2, 3.6.6.2.2.10, and 3.6.6.2.2.11), the base station shall activate the *Normal Service Subfunction*.
- The base station shall process a service option request received in an *Origination Message*, a *Page Response Message*, or a *Service Option Request Order* as follows:
 - If the base station accepts the requested service option, the base station shall set SO_REQ to NULL and shall send a *Service Option Response Order* accepting the requested service option within T_{4b} seconds. The base station shall begin using the service configuration implied by the requested service option in accordance with the requirements for the requested service option. The implied service configuration shall include the default Forward and Reverse Multiplex Options and transmission radio configurations associated with the requested service option. This implied service configuration shall include one service option connection for which the service option connection reference is 1, for which the service option is the requested service option, and for which the Forward and Reverse Traffic Channel types are both primary traffic.

- 1 – If the base station does not accept the requested service option and has an
2 alternative service option to request, the base station shall set SO_REQ to the
3 alternative service option number and shall send a *Service Option Request Order*
4 requesting the alternative service option within T_{4b} seconds.
- 5 – If the base station does not accept the requested service option and does not
6 have an alternative service option to request, the base station shall set SO_REQ
7 to NULL and shall send a *Service Option Response Order* to reject the request
8 within T_{4b} seconds. The base station shall continue to use the current service
9 configuration.
- 10 • If the base station receives a *Service Option Response Order*, it shall process the
11 order as follows:
 - 12 – If the service option number specified in the order is equal to SO_REQ, the base
13 station shall set SO_REQ to NULL and shall begin using the service
14 configuration implied by the specified service option in accordance with the
15 requirements for the service option. The implied service configuration shall
16 include the default Forward and Reverse Multiplex Options and radio
17 configurations associated with the requested service option. This implied
18 service configuration shall include one service option connection for which the
19 service option connection reference is 1, for which the service option is the
20 requested service option, and for which the Forward and Reverse Traffic
21 Channel types are both primary traffic.
 - 22 – If the order indicates a service option rejection, the base station shall set
23 SO_REQ to NULL. The base station shall continue to use the current service
24 configuration.
 - 25 – If the order does not indicate a service option rejection and the service option
26 specified in the order is not equal to SO_REQ, the base station shall set SO_REQ
27 to NULL, should send a *Release Order* (ORDQ = '00000010'), and should enter the
28 *Release Substate*.
- 29 • If the base station receives a *Service Option Control Order*, the base station shall
30 process the order as follows:
 - 31 – If the current service configuration includes a service option connection, the
32 base station shall process the received *Service Option Control Order* in
33 accordance with the requirements for the service option associated with the
34 service option connection.
- 35 • If the base station receives one of the following service negotiation messages, the
36 base station shall process the message according to the specified requirements, if
37 any:
 - 38 1. *Service Connect Completion Message*
 - 39 2. *Service Option Control Message*
 - 40 3. *Service Request Message*

4. Service Response Message

3.6.4.1.3 Ordering of Messages

The Layer 2 protocol does not guarantee delivery of messages in any order. If the base station requires that the mobile station receive a set of messages in a certain order, the base station shall send each message in assured mode requiring confirmation of delivery and shall wait for the confirmation of delivery of each message before transmitting the next message in the set.

3.6.4.1.4 Message Action Times

A Forward Traffic Channel message without a USE_TIME field or with a USE_TIME field set to '0' has an implicit action time. A message that has its USE_TIME field set to '1' has an explicit action time that is specified in the ACTION_TIME field of the message.

A message with an explicit action time is called a pending message.

Unless otherwise specified, a message having an implicit action time shall take effect no later than the first 80 ms boundary (relative to System Time) occurring at least 80 ms after the end of the frame containing the last bit of the message. A message with an explicit action time, except for a *Power Up Function Message*, shall take effect when System Time (in 80 ms units) modulo 64 becomes equal to the message's ACTION_TIME field. A *Power Up Function Message* shall take effect ACTION_TIME_FRAME frames after the time when System Time (in 80 ms units) modulo 64 becomes equal to the message's ACTION_TIME field. The difference in time between ACTION_TIME and the end of the frame containing the last bit of the message shall be at least 80 ms.

The base station shall support two pending messages at any given time, not including pending *Service Option Control Orders*, *Service Option Control Messages*, or *Power Up Function Messages*. The number of pending *Service Option Control Orders* or *Service Option Control Messages* that the base station is required to support is specific to the service option (see the relevant service option descriptions). In addition, the base station shall support one pending *Power Up Function Message*.

3.6.4.1.5 Long Code Transition Request Processing

If a request for voice privacy is specified in the *Origination Message* or *Page Response Message*, the base station may send a *Long Code Transition Request Order* (ORDQ = '00000001') requesting a transition to the private long code.

The base station shall process the *Long Code Transition Request Order* as follows:

- If the *Long Code Transition Request Order* requests a transition to the private long code and the base station accepts the request, the base station shall send a *Long Code Transition Request Order* (ORDQ = '00000001'). If the base station does not accept the private long code transition request, the base station shall send a *Long Code Transition Request Order* (ORDQ = '00000000').

- If the *Long Code Transition Request Order* requests a transition to the public long code and the base station accepts the request, the base station shall send a *Long Code Transition Request Order* (ORDQ = '00000000'). If the base station does not accept the public long code transition request, the base station shall send a *Long Code Transition Request Order* (ORDQ = '00000001').

The base station shall process the *Long Code Transition Response Order* as follows:

- If the *Long Code Transition Response Order* indicates that the mobile station accepts the long code transition requested in the *Long Code Transition Request Order* sent by the base station, the base station shall use the requested long code mask on both the Forward Traffic Channel and the Reverse Traffic Channel. The base station shall specify an explicit action time in the *Long Code Transition Request Order*. The base station shall begin using the requested long code mask using the explicit action time (see 3.6.4.1.4).

3.6.4.1.6 Processing Resource Request Messages

The base station shall process *Resource Request Message* and *Resource Request Mini Message*, as follows:

The base station may send one of the messages that assign appropriate resources (e.g. *Extended Supplemental Channel Assignment Message*, *Resource Allocation Message*, *Resource Allocation Mini Message*, *Universal Handoff Direction Message*, *Retry Order*, etc) to the mobile station. If the base station sends one of these messages, the base station shall set PILOT_GATING_USE_RATE to '0' and start transmitting the Forward Power Control Subchannel with the maximum rate at the action time of the message.

The base station may send a *Retry Order* to the mobile station.

3.6.4.1.7 Response to Enhanced Origination Message

If the base station receives an *Enhanced Origination Message*, the base station should perform the following:

- If the base station does not accept this call request from the mobile station, the base station should send one of the following messages:

A *Call Assignment Message* to the mobile station, with the RESPONSE_IND field set to '1', the ACCEPT_IND field set to '0', and the TAG field set to the value of the TAG field of the *Enhanced Origination Message*.

A *Retry Order* if the *Enhanced Origination Message* is for a packet data service option.

- If the base station accepts this call request from the mobile station, the base station should send a *Call Assignment Message*, *Service Connect Message*, *General Handoff Direction Message* (with the Service Configuration information record included), or *Universal Handoff Direction Message* (with the Service Configuration information record included) to assign the call:

If the base station sends a *Call Assignment Message* to assign the call, the base station shall perform the following:

The base station shall set the RESPONSE_IND field to '1', the ACCEPT_IND field to '1', and the TAG field to the value of the TAG field of the *Enhanced Origination Message*. The base station shall set the CON_REF_INCL field of the message to '1' and the CON_REF field of the message to the value of the connection reference of the service option connection corresponding to this call.

The base station shall establish a service option connection corresponding to this call (if not already established) by performing service negotiation.

At the action time corresponding to this message, the layer 3 shall instantiate a Call Control instance (as specified in 3.6.8). The layer 3 shall identify this Call Control instance by the value of the CON_REF field included in the *Call Assignment Message*.

If the base station sends a *Service Connect Message*, *General Handoff Direction Message* (with the Service Configuration information record included), or a *Universal Handoff Direction Message* (with the Service Configuration information record included), to assign the call, the base station shall perform the following:

The base station shall set the call control parameters corresponding to this call included in the message as follows: The base station shall set the RESPONSE_IND field to '1', and the TAG field to the value of the TAG field of the *Enhanced Origination Message*.

At the action time corresponding to this message, the layer 3 shall instantiate a Call Control instance (as specified in 3.6.8). The layer 3 shall identify this Call Control instance by the value of the CON_REF assigned to the service option connection corresponding to this call.

3.6.4.1.8 Processing Resource Release Request Message and Resource Release Request Mini Message

The base station may perform the following in response to receiving a *Resource Release Request Message* or a *Resource Release Request Mini Message* from the mobile station:

- If the mobile station requests to release a service option connection, the base station may send a *Service Connect Message*, *General Handoff Direction Message*, or a *Universal Handoff Direction Message* to release the service option connection.
- If the mobile station requests to commence reverse pilot gating operation, the base station may send a *Extended Release Message*, *Extended Release Mini Message*, or a *Universal Handoff Direction Message* to instruct the mobile station to commence the reverse pilot gating operation.

3.6.4.2 Traffic Channel Initialization Substate

In this substate, the base station begins transmitting on the Forward Traffic Channel and acquires the Reverse Traffic Channel.

Upon entering the *Traffic Channel Initialization Substate*, the base station shall perform the following:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to reset the message acknowledgment procedures as specified in 3.2.1.1 and 3.2.2.1 of [4].
- The base station shall set its Forward and Reverse Traffic Channel long code masks to the public long code mask (see [2]).
- The base station shall set its Forward and Reverse Traffic Channel frame offsets (see [2]) to the frame offset assigned to the mobile station.
- If the base station set the ASSIGN_MODE field of the *Channel Assignment Message* to '000', the base station shall set SERV_NEG to disabled. If the base station set the ASSIGN_MODE field of the *Channel Assignment Message* to '100', the base station shall set SERV_NEG to enabled. For operation in Band Class 1, SERV_NEG is always equal to enabled.
- If the base station uses the *Extended Channel Assignment Message*, the base station shall set the SERV_NEG to enabled.
- The base station shall determine the initial service configuration as follows:
 - If SERV_NEG is equal to disabled, the initial service configuration shall include Multiplex Option 1 and Radio Configuration 1 for both the Forward and Reverse Traffic Channels, and shall include no service option connections.
 - If SERV_NEG is equal to enabled and the base station set the GRANTED_MODE field of the *Channel Assignment Message* or the *Extended Channel Assignment Message* to '00', the initial service configuration shall include the multiplex option and radio configuration for the Forward and Reverse Traffic Channels as specified by the DEFAULT_CONFIG field, and shall include no service option connections.
 - If SERV_NEG is equal to enabled and the base station set the GRANTED_MODE field of the *Channel Assignment Message* or the *Extended Channel Assignment Message* to '01' or '10', the initial service configuration shall include the default Forward and Reverse Traffic Channel multiplex options and transmission rates corresponding to the service option requested by the mobile station in the *Origination Message*, in the case of a mobile-station-originated call, or the *Page Response Message*, in the case of a mobile station terminated call, and shall include no service option connections.
- If SERV_NEG is equal to disabled, the base station shall activate the *SO Negotiation Subfunction* (see 3.6.4.1.2.2.6); otherwise, the base station shall activate the *Normal Service Subfunction* (see 3.6.4.1.2.2.1).
- The base station shall set PILOT_GATING_USE_RATE to '0'.

While in the *Traffic Channel Initialization Substate*, the base station shall perform the following:

- If the Forward Fundamental Channel is assigned, the base station shall transmit null Traffic Channel data on the Forward Fundamental Channel, except when transmitting signaling traffic.
- If FPC_PRI_CHAN is set to '0', the base station shall transmit power control bits on the Forward Fundamental Channel. If FPC_PRI_CHAN is set to '1', the base station shall transmit power control bits on the Forward Dedicated Control Channel.
- If the base station acquires the Reverse Traffic Channel, Layer 3 shall send a *reverse dedicated channel acquired* indication to Layer 2 (see 2.2.2.1.2 of [4]). The layer 3 shall instantiate a Call Control instance (as specified in 3.6.8). The layer 3 shall assign the default identifier of NULL to this Call Control instance. The layer 3 shall enter the *Traffic Channel Substate*.
- If the base station fails to acquire the Reverse Traffic Channel, the base station should perform one of the following:
 - retransmit the *Channel Assignment Message* or the *Extended Channel Assignment Message* on the Paging Channel and remain in the *Traffic Channel Initialization Substate*
 - retransmit the *Extended Channel Assignment Message* on the Forward Common Control Channel and remain in the *Traffic Channel Initialization Substate*, or
 - disable transmission on the Forward Traffic Channel and discontinue the *Traffic Channel Processing* for the mobile station.

3.6.4.3 Traffic Channel Substate

In this substate, the base station may exchange Traffic Channel frames with the mobile station in accordance with the current service configuration.

Upon entering the *Traffic Channel Substate*, the base station shall perform the following:

- If the call is a mobile station terminated call and the base station set BYPASS_ALERT_ANSWER to '0', the base station shall perform the following:

If SERV_NEG is equal to disabled, the base station shall process the service option request specified in the *Page Response Message* in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

If SERV_NEG is equal to enabled and the base station sets the GRANTED_MODE field of the *Channel Assignment Message* or the *Extended Channel Assignment Message* to '00' or '01', the base station should initiate service negotiation to request a service configuration in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

If SERV_NEG is equal to enabled and the base station set the GRANTED_MODE field of the *Channel Assignment Message* or the *Extended Channel Assignment Message* to '10', the base station should send a *Service Connect Message* in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

- Otherwise, the base station shall perform the following:

If SERV_NEG equals enabled, the call is mobile-station-originated and the base station sets the GRANTED_MODE field of the *Channel Assignment Message* or the *Extended Channel Assignment Message* to '10', the base station should send a *Service Connect Message* in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

If SERV_NEG equals disabled and the call is mobile-station-originated, the base station shall process the service option request specified in the *Origination Message* in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

While in the *Traffic Channel Substate*, the base station shall perform the following:

- The base station shall transmit the power control subchannel as specified in [2].
- The base station shall process Forward and Reverse Traffic Channel frames in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).
- When PILOT_GATING_USE_RATE is equal to '0' and the base station is to establish a Fundamental Channel or a Dedicated Control Channel, the base station shall send a *Universal Handoff Direction Message* to the mobile station.
- When PILOT_GATING_USE_RATE is equal to '1' and the base station has data to send, the base station may send a *Resource Allocation Message*, *Resource Allocation Mini Message*, *Extended Supplemental Channel Assignment Message*, *Forward Supplemental Channel Assignment Mini Message*, *Reverse Supplemental Channel Assignment Mini Message*, or *Universal Handoff Direction Message* to start transmitting the Forward Power Control Subchannel with the maximum rate at the action time of the message and start exchange of user information.
- If both the Fundamental Channel and the Dedicated Control Channel are currently established, and the base station is to release one of these two channels, the base station shall send a *Universal Handoff Direction Message*, *Extended Release Message*, or an *Extended Release Mini Message* to the mobile station.
- When PILOT_GATING_USE_RATE is equal to '0' and the base station does not have any data to send and the base station has determined that the mobile station does not have any data to send (see the RLP out-of-data indication in TIA/EIA/IS-707-A), then the base station may send an *Extended Release Message*, *Extended Release Mini Message* or *Universal Handoff Direction Message* to start transmitting the Forward Power Control Subchannel with the specified rate at the action time of the message and stop the exchange of user information.

- 1 • If the base station declares a loss of Reverse Traffic Channel continuity (see 3.4),
2 the base station should send a *Release Order* to the mobile station. If the base
3 station sends a *Release Order*, the layer 3 shall send a “release indication” to all
4 Call Control instances, and shall enter the *Release Substate*.
- 5 • The base station may perform Forward Traffic Channel power control as specified in
6 3.6.4.1.1.
- 7 • The base station may request a new service configuration by initiating service
8 negotiation or service option negotiation in accordance with the requirements for
9 the active service subfunction (see 3.6.4.1.2.2).
- 10 • The base station may send a *Service Option Control Message* or *Service Option Control*
11 *Order* to invoke a service option specific function in accordance with the
12 requirements for the active service subfunction (see 3.6.4.1.2.2).
- 13 • The base station may request a long code transition, as specified in 3.6.4.1.5,
14 either autonomously or in response to a request for voice privacy specified in the
15 *Origination Message* or *Page Response Message*.
- 16 • The base station may perform authentication procedures as specified in 3.3.1.
- 17 • The base station may perform TMSI assignment procedures (see 2.3.15).
- 18 • For the first call, if the call is mobile-station-originated and the PACA_REORIG field
19 of the *Origination Message* is equal to ‘1’, the layer 3 shall send a “paca reorig
20 indication” to the Call Control instance.
- 21 • The base station may control operation of the Forward or Reverse Supplemental
22 Code Channels by including Supplemental Code Channel assignment information
23 in the *Supplemental Channel Assignment Message*, or the *General Handoff Direction*
24 *Message*.
- 25 • The base station may control operation of the Forward or Reverse Supplemental
26 Channels by including Supplemental Channel assignment information in the
27 *Extended Supplemental Channel Assignment Message*, the *Forward Supplemental*
28 *Channel Assignment Mini Message*, or the *Reverse Supplemental Channel Assignment*
29 *Mini Message*.
- 30 • The base station may assign a new call by sending a *Call Assignment Message*,
31 *Service Connect Message*, *General Handoff Direction Message* (with the Service
32 Configuration information record included), or *Universal Handoff Direction Message*
33 (with the Service Configuration information record included) to assign the call:

34 If the base station sends a *Call Assignment Message* to assign the call, the base station
35 shall perform the following:

36 The base station shall set the RESPONSE_IND field to ‘0’, and the TAG field to the
37 identifier for this transaction.

38 The base station shall set the CON_REF_INCL field of the message to ‘1’ and the
39 CON_REF field of the message to the value of the connection reference of the

1 service option connection corresponding to this call.

2 The base station shall establish the service option connection corresponding to this
3 call (if not already established) by performing service negotiation.

4 At the action time corresponding to this message, the layer 3 shall instantiate a
5 Call Control instance (as specified in 3.6.8). The layer 3 shall identify this Call
6 Control instance by the value of the CON_REF field included in the *Call*
7 *Assignment Message*.

8 If the base station sends a *Service Connect Message*, *General Handoff Direction Message* (with
9 the Service Configuration information record included), or *Universal Handoff Direction*
10 *Message* (with the Service Configuration information record included) to assign the
11 call, the base station shall perform the following:

12 The base station shall set the call control parameters corresponding to this call
13 included in the message as follows: The base station shall set the
14 RESPONSE_IND field to '0', the TAG field to the identifier for this transaction,
15 and the BYPASS_ALERT_ANSWER field as required.

16 At the action time corresponding to this message, the layer 3 shall instantiate a
17 Call Control instance (as specified in 3.6.8). The layer 3 shall identify this Call
18 Control instance by the value of the CON_REF assigned to the service option
19 connection corresponding to this call.

- 20 • If the layer 3 receives a 'call release request' from a Call Control instance, the
21 layer 3 shall perform the following:

22 If the service option connection corresponding to this call is the only one connected, the
23 base station should send the mobile station a *Release Order* and enter the *Release*
24 *Substate*.

25 If the service option connection corresponding to this call is not the only one connected,
26 the base station should release this service option connection. At the action time of
27 the message, the layer 3 shall terminate this Call Control instance.

- 28 • The base station may send the following messages. Some of these messages are
29 generated by the Call Control Instance. If the base station sends a message, the
30 base station shall comply with the specified requirements for sending the message,
31 if any:

32 *Alert With Information Message*:

33 *Analog Handoff Direction Message*: The base station shall perform the following:

If the CON_REF_INCL field was set to '0', the lower layer shall terminate all Call Control instances (if there are any) except the one identified by NULL; otherwise, the layer 3 shall terminate all Call Control instances (if there are any) except the one identified by CON_REF field set in the message. The base station shall perform the following (see [6] for handoff to a wide analog channel and [22] for handoff to an 800 MHz narrow analog channel):

- + If this Call Control instance is in the *Waiting for Order Substate*, the base station shall enter the Waiting for Order Task.
- + If this Call Control instance is in the *Waiting for Answer Substate*, the base station shall enter the Waiting for Answer Task.
- + If this Call Control instance is in the *Conversation Substate*, the base station shall enter the Conversation Task.

Audit Order

Authentication Challenge Message

Base Station Challenge Confirmation Order

Call Assignment Message

Candidate Frequency Search Request Message

Candidate Frequency Search Control Message

Continuous DTMF Tone Order

Data Burst Message

Extended Alert With Information Message

Extended Flash With Information Message

Extended Handoff Direction Message

Extended Neighbor List Update Message

Extended Release Message: If the physical channels indicated in CH_IND field of this message includes all the physical channels currently being processed by the mobile station, the layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate*.

Extended Release Mini Message

Extended Supplemental Channel Assignment Message

Forward Supplemental Channel Assignment Mini Message

General Handoff Direction Message

Flash With Information Message

In-Traffic System Parameters Message

1 *Local Control Order*

2 *Lock Until Power-Cycled Order*: The base station should send this order in unassured
3 mode.

4 *Long Code Transition Request Order*

5 *Maintenance Order*:

6 *Maintenance Required Order*

7 *Message Encryption Mode Order*

8 *Mobile Assisted Burst Operation Parameters Message*

9 *Mobile Station Registered Message*

10 *Neighbor List Update Message*

11 *Parameter Update Order* (see 2.3.12.1.3).

12 *Periodic Pilot Measurement Request Order*

13 *Pilot Measurement Request Order*

14 *Power Control Message*

15 *Power Control Parameters Message*

16 *Power Up Function Message*

17 *Power Up Function Completion Message*

18 *Resource Allocation Message*

19 *Resource Allocation Mini Message*

20 *Release Order*: The layer 3 shall send a “release indication” to all Call Control
21 instances, and shall enter the *Release Substate*.

22 *Retrieve Parameters Message*

23 *Retry Order*

24 *Reverse Supplemental Channel Assignment Mini Message*

25 *Security Mode Command Message*

26 *Send Burst DTMF Message*

27 *Service Connect Message*: The base station shall send the message in accordance
28 with the requirements for the active service subfunction (see 3.6.4.1.2.2).

29 *Service Option Control Message*: The base station shall send the message in
30 accordance with the requirements for the active service subfunction (see
31 3.6.4.1.2.2).

32 *Service Option Control Order*

33 *Service Option Request Order*

1 *Service Option Response Order*

2 *Service Redirection Message:* The layer 3 shall send a “release indication” to all Call
3 Control instances, and shall enter the *Release Substate*.

4 *Service Request Message:* The base station shall send the message in accordance
5 with the requirements for the active service subfunction (see 3.6.4.1.2.2).

6 *Service Response Message:* The base station shall send the message in accordance
7 with the requirements for the active service subfunction (see 3.6.4.1.2.2).

8 *Set Parameters Message*

9 *SSD Update Message*

10 *Status Request Message*

11 *Status Request Order*

12 *Supplemental Channel Assignment Message*

13 *TMSI Assignment Message*

14 *Universal Handoff Direction Message*

15 *User Zone Reject Message*

16 *User Zone Update Message*

- 17 • If the base station receives one of the following messages from the mobile station,
18 the base station shall process the message according to the specified
19 requirements, if any:

20 *Base Station Challenge Order:* The base station shall process the message as
21 described in 2.3.12.1.5.

22 *Call Cancel Message*

23 *Candidate Frequency Search Report Message:* The base station shall process the
24 message as described in 3.6.6.2.2.6.

25 *Candidate Frequency Search Response Message:* The base station shall process the
26 message as described in 3.6.6.2.2.4.

27 *Connect Order:* If the CON_REF_INCL field is not included in this message or if the
28 CON_REF_INCL field equals ‘0’, the layer 3 shall deliver this message to the Call
29 Control instance identified by NULL; otherwise, the layer 3 shall deliver this
30 message to the Call Control instance identified by CON_REF.

31 *Continuous DTMF Tone Order:* If the CON_REF_INCL field is not included in this
32 message or if the CON_REF_INCL field equals ‘0’, the layer 3 shall deliver this
33 message to the Call Control instance identified by NULL; otherwise, the layer 3
34 shall deliver this message to the Call Control instance identified by CON_REF.

35 *Data Burst Message*

36 *Enhanced Origination Message:* The base station shall process the message as

described in 3.6.4.1.7.

Extended Flash With Information Message: If CON_REF_INCL equals '0', the layer 3 shall deliver this message to the Call Control instance identified by NULL; otherwise, the layer 3 shall deliver this message to the Call Control instance identified by CON_REF.

Extended Handoff Completion Message: The base station shall process the message as described in 3.6.6.2.2.7.

Extended Pilot Strength Measurement Message: The base station shall process the message as described in 3.6.6.2.2.1.

Extended Release Response Message.

Extended Release Response Mini Message.

Flash With Information Message: The layer 3 shall deliver this message to the Call Control instance identified by NULL.

Handoff Completion Message: The base station shall process the message as described in 3.6.6.2.2.7.

Local Control Response Order

Long Code Transition Request Order: The base station shall process the message as described in 3.6.4.1.5.

Long Code Transition Response Order

Mobile Station Reject Order

Origination Continuation Message: The layer 3 shall deliver this message to the Call Control instance identified by NULL.

Outer Loop Report Message

Parameters Response Message

Parameter Update Confirmation Order

Periodic Pilot Strength Measurement Message

Pilot Strength Measurement Message: The base station shall process the message as described in 3.6.6.2.2.1.

Pilot Strength Measurement Mini Message

Power Measurement Report Message: The base station may process the message as described in 3.6.4.1.1.

Release Order: The base station shall send the mobile station a *Release Order* within T2b seconds, and the layer 3 shall send a "release indication" to all Call Control instances, and enter the *Release Substate*; otherwise, the layer 3 shall send a "send alert with info message indication" to all Call Control instances.

Resource Release Request Message: The base station shall process the message as

described in 3.6.4.1.8.

Resource Release Request Mini Message: The base station shall process the message as described in 3.6.4.1.8.

Resource Request Message: The base station shall process the message as described in 3.6.4.1.6.

Resource Request Mini Message: The base station shall process the message as described in 3.6.4.1.6.

Request Analog Service Order: The base station may respond with an *Analog Handoff Direction Message*.

Request Narrow Analog Service Order: The base station may respond with an *Analog Handoff Direction Message*.

Request Wide Analog Service Order: The base station may respond with an *Analog Handoff Direction Message*.

Send Burst DTMF Message: If the CON_REF_INCL field is not included in this message or if the CON_REF_INCL field equals '0', the layer 3 shall deliver this message to the Call Control instance identified by NULL; otherwise, the layer 3 shall deliver this message to the Call Control instance identified by CON_REF.

Service Connect Completion Message: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Control Message: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Control Order: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Request Order: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Response Order: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Request Message: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Response Message: The base station shall process the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

SSD Update Confirmation Order

1 *SSD Update Rejection Order*

2 *Status Response Message*

3 *Status Message*

4 *Supplemental Channel Request Message*: The base station may respond with a
 5 *Supplemental Channel Assignment Message*, an *Extended Supplemental Channel*
 6 *Assignment Message*, or a *Retry Order*.

7 *Supplemental Channel Request Mini Message*: The base station may respond with a
 8 *Forward Supplemental Channel Assignment Mini Message* or a *Reverse*
 9 *Supplemental Channel Assignment Mini Message*, or both. The base station may
 10 also respond with a *Retry Order*.

11 *TMSI Assignment Completion Message*

12 *User Zone Update Request Message*: The base station shall process this message as
 13 specified in 3.6.7.2.

14 3.6.4.4 Release Substate

15 In this substate, the base station disconnects all calls and physical channels.

16 While in the *Release Substate*, the base station shall perform the following:

- 17 • The base station shall transmit the power control subchannel as specified in [2].
- 18 • The base station shall transmit on the Forward Traffic Channel for at least T_{3b}
 19 seconds. The base station shall transmit null traffic and power control bits on the
 20 Forward Fundamental Channel, except when transmitting signaling traffic, if the
 21 Fundamental Channel is present or transmit power control bits on the Forward
 22 Dedicated Control Channel, if only the dedicated Control Channel is present. After
 23 T_{3b} seconds, the base station should stop transmitting on the Forward Traffic
 24 Channel.
- 25 • The base station shall process Reverse Traffic Channel signaling traffic and may
 26 discard other types of Reverse Traffic Channel traffic.
- 27 • The base station may perform TMSI assignment procedures (see 2.3.15).
- 28 • The base station may perform Forward Traffic Channel power control as specified in
 29 3.6.4.1.1.
- 30 • The base station may send a *Service Option Control Message* to invoke a service
 31 option specific function in accordance with the requirements for the active service
 32 subfunction (see 3.6.4.1.2.2).
- 33 • The base station may send the following messages. Some of these messages are
 34 generated by the Call Control Instance. If the base station sends a message, the
 35 base station shall comply with the specified requirements for sending the message,
 36 if any.

37 *Alert With Information Message*

1	<i>Audit Order</i>
2	<i>Candidate Frequency Search Request Message</i>
3	<i>Candidate Frequency Search Control Message</i>
4	<i>Data Burst Message</i>
5	<i>Extended Alert With Information Message</i>
6	<i>Extended Handoff Direction Message</i>
7	<i>Extended Neighbor List Update Message</i>
8	<i>Extended Release Message</i>
9	<i>Extended Supplemental Channel Assignment Message</i>
10	<i>Forward Supplemental Channel Assignment Mini Message</i>
11	<i>General Handoff Direction Message</i>
12	<i>In-Traffic System Parameters Message</i>
13	<i>Local Control Order</i>
14	<i>Lock Until Power-Cycled Order:</i> The base station should send this order in unassured
15	mode.
16	<i>Maintenance Order</i>
17	<i>Maintenance Required Order</i>
18	<i>Mobile Assisted Burst Operation Parameters Message</i>
19	<i>Mobile Station Registered Message</i>
20	<i>Neighbor List Update Message</i>
21	<i>Parameter Update Order</i> (see 2.3.12.1.3 or 3.7.4).
22	<i>Power Control Message</i>
23	<i>Power Control Parameters Message</i>
24	<i>Power Up Function Message</i>
25	<i>Power Up Function Completion Message</i>
26	<i>Release Order</i>
27	<i>Resource Allocation Message</i>
28	<i>Resource Allocation Mini Message</i>
29	<i>Resource Release Request Message</i>
30	<i>Resource Release Request Mini Message</i>
31	<i>Resource Request Message</i>
32	<i>Resource Request Mini Message</i>

1 *Retrieve Parameters Message*

2 *Reverse Supplemental Channel Assignment Mini Message*

3 *Service Option Control Message:* The base station shall send the message in
4 accordance with the requirements for the active service subfunction (see
5 3.6.4.1.2.2).

6 *Service Option Control Order*

7 *Status Request Message*

8 *Status Request Order*

9 *Supplemental Channel Assignment Message*

10 *TMSI Assignment Message*

11 *Universal Handoff Direction Message*

12 *User Zone Reject Message*

13 *User Zone Update Message*

- 14 • If the base station receives one of the following messages from the mobile station,
15 the base station shall process the message according to the specified
16 requirements, if any:

17 *Base Station Challenge Order:* The base station shall process the message as
18 described in 2.3.12.1.5.

19 *Call Cancel Message*

20 *Candidate Frequency Search Report Message:* The base station shall process the
21 message as described in 3.6.6.2.2.6.

22 *Candidate Frequency Search Response Message:* The base station shall process the
23 message as described in 3.6.6.2.2.4.

24 *Connect Order:* If the CON_REF_INCL field is not included in this message or if the
25 CON_REF_INCL field equals '0', the layer 3 shall deliver this message to the Call
26 Control instance identified by NULL; otherwise, the layer 3 shall deliver this
27 message to the Call Control instance identified by CON_REF.

28 *Continuous DTMF Tone Order:* If the CON_REF_INCL field is not included in this
29 message or if the CON_REF_INCL field equals '0', the layer 3 shall deliver this
30 message to the Call Control instance identified by NULL; otherwise, the layer 3
31 shall deliver this message to the Call Control instance identified by CON_REF.

32 *Data Burst Message*

33 *Enhanced Origination Message*

34 *Extended Flash With Information Message:* If CON_REF_INCL equals '0', the layer 3
35 shall deliver this message to the Call Control instance identified by NULL;
36 otherwise, the layer 3 shall deliver this message to the Call Control instance
37 identified by CON_REF.

1 *Extended Handoff Completion Message:* The base station shall process the message
2 as described in 3.6.6.2.2.7.

3 *Extended Pilot Strength Measurement Message:* The base station shall process the
4 message as described in 3.6.6.2.2.1.

5 *Extended Release Response Message:*

6 *Flash With Information Message:* The layer 3 shall deliver this message to the Call
7 Control instance identified by NULL.

8 *Handoff Completion Message:* The base station shall process the message as
9 described in 3.6.6.2.2.7.

10 *Local Control Response Order*

11 *Long Code Transition Request Order*

12 *Long Code Transition Response Order*

13 *Mobile Station Reject Order*

14 *Origination Continuation Message:* The layer 3 shall deliver this message to the Call
15 Control instance identified by NULL.

16 *Parameter Update Confirmation Order*

17 *Parameters Response Message*

18 *Periodic Pilot Strength Measurement Message*

19 *Pilot Strength Measurement Message:* The base station shall process the message as
20 described in 3.6.6.2.2.1.

21 *Power Measurement Report Message*

22 *Release Order*

23 *Request Analog Service Order*

24 *Request Narrow Analog Service Order*

25 *Request Wide Analog Service Order*

26 *Send Burst DTMF Message:* If the CON_REF_INCL field is not included in this
27 message or if the CON_REF_INCL field equals '0', the layer 3 shall deliver this
28 message to the Call Control instance identified by NULL; otherwise, the layer 3
29 shall deliver this message to the Call Control instance identified by CON_REF.

30 *Service Connect Completion Message*

31 *Service Option Control Message:* The base station shall process the message in
32 accordance with the requirements for the active service subfunction (see
33 3.6.4.1.2.2).

34 *Service Option Control Order*

35 *Service Option Request Order*

Service Option Response Order

Service Request Message

Service Response Message:

SSD Update Confirmation Order

SSD Update Rejection Order

Status Response Message

Status Message

TMSI Assignment Completion Message

User Zone Update Request Message: The base station shall process this message as specified in 3.6.7.2.

3.6.5 Registration

Registration is the process by which a mobile station notifies the base station of its location, status, identification, slot cycle, and other characteristics. The base station can make use of location information to efficiently page the mobile station when establishing a mobile station terminated call. Registration also provides the mobile station's SLOT_CYCLE_INDEX parameter so that the base station can determine which Paging Channel or Forward Common Control Channel slots a mobile station operating in the slotted mode is monitoring. Registration also provides the protocol revision number so that the base station knows the capabilities of the mobile station.

The CDMA system supports ten different forms of registration:

Power-up registration. The mobile station registers when it powers on, or switches from using the analog system.

Power-down registration. The mobile station registers when it powers off if previously registered in the current serving system.

Timer-based registration. The mobile station registers when a timer expires.

Distance-based registration. The mobile station registers when the distance between the current base station and the base station in which it last registered exceeds a threshold.

Zone-based registration. The mobile station registers when it enters a new zone.

Parameter-change registration. The mobile station registers when certain of its stored parameters change or when it enters a new system.

Ordered registration. The mobile station registers when the base station requests it.

Implicit registration. When a mobile station successfully sends an *Origination Message* or *Page Response Message*, the base station can infer the mobile station's location. This is considered an implicit registration.

Traffic Channel registration. Whenever the base station has registration information for a

mobile station that has been assigned to a Traffic Channel, the base station can notify the mobile station that it is registered.

User Zone Registration. The mobile station registers when it selects an active User Zone (see 2.6.9.1.2).

The first five forms of registration, as a group, are called autonomous registration and are conditioned, in part, by roaming status and by indicators contained in the *System Parameters Message* and *ANSI-41 System Parameters Message* (see 2.6.5.3). The base station may initiate ordered registration through the *Registration Request Order*.

The base station can obtain registration information by sending the *Status Request Message* to the mobile station on the Paging Channel, the Forward Common Control Channel, or the Forward Traffic Channel. If the base station is operating with the mobile station in Band Class 0, the base station can also obtain registration information by sending the *Status Request Order* to the mobile station on the Forward Traffic Channel. The base station may notify the mobile station that it is registered through the *Mobile Station Registered Message*.

3.6.5.1 Registration on the Common Channels

The base station shall specify the forms of registration that are enabled, the corresponding registration parameters, and the roaming status conditions for which registration is enabled in the *System Parameters Message* and *ANSI-41 System Parameters Message*. If any of the autonomous registration forms are enabled, the base station should also enable parameter-change registration.

The base station should process an *Origination Message* or *Page Response Message* sent on the r-csch as an implicit registration of the mobile station sending the message. The base station can obtain complete registration information about the mobile station at any time by sending a *Registration Request Order* to the mobile station.

3.6.5.2 Registration on the Traffic Channels

The base station can obtain registration information from a mobile station on the Traffic Channel by means of the *Status Request Message* or the *Status Request Order*. When the base station has registration information for a mobile station, the base station may send a *Mobile Station Registered Message* to the mobile station, specifying the base station's registration system, zone, and location information.

3.6.6 Handoff Procedures

3.6.6.1 Overview

3.6.6.1.1 Types of Handoff

The base station supports the following three handoff procedures:

- 1 • *Soft Handoff*: A handoff in which a new base station commences communications
2 with the mobile station without interrupting the communications with the old base
3 station. The base station²⁵ can direct the mobile station to perform a soft handoff
4 only when all Forward Traffic Channels assigned to the mobile station have
5 identical band classes, frequency assignments and frame offsets. Soft handoff
6 provides diversity of Forward Traffic Channels and Reverse Traffic Channel paths
7 on the boundaries between base stations.
- 8 • *CDMA-to-CDMA Hard Handoff*: A handoff in which the base station directs the
9 mobile station to transition between disjoint sets of base stations, different band
10 classes, different frequency assignments, different radio configuration, or different
11 frame offsets.
- 12 • *CDMA-to-Analog Handoff*: A handoff in which the base station directs the mobile
13 station from a Forward Traffic Channel to an analog voice channel.

14 Base station support of CDMA-to-CDMA hard handoff between different band classes and
15 support of CDMA-to-analog handoff is optional.

16 Section 2.6.6 describes the mobile station requirements during handoff.

17 3.6.6.1.2 Active Set

18 The Active Set contains the pilots (see 2.6.6.1.2) associated with the Forward Traffic
19 Channels assigned to the mobile station. Initially the base station informs the mobile
20 station of the contents of the Active Set using the *Channel Assignment Message* or the
21 *Extended Channel Assignment Message*; subsequent changes to the contents of the Active
22 Set are provided using the *Extended Handoff Direction Message*, *General Handoff Direction*
23 *Message*, or *Universal Handoff Direction Message*.

24 3.6.6.2 Requirements

25 3.6.6.2.1 Overhead Information

26 The base station sends the following messages governing the pilot search procedures
27 performed by the mobile station:

- 28 • *System Parameters Message*
- 29 • *In-Traffic System Parameters Message*
- 30 • *Neighbor List Message*
- 31 • *Extended Neighbor List Message*
- 32 • *Neighbor List Update Message*
- 33 • *Extended Neighbor List Update Message*

²⁵In this section the term base station may imply multiple cells or sectors.

- 1 • *General Neighbor List Message*
- 2 • *General Handoff Direction Message*
- 3 • *Extended Handoff Direction Message*
- 4 • *Candidate Frequency Search Request Message*
- 5 • *Candidate Frequency Search Control Message*
- 6 • *Universal Handoff Direction Message*
- 7 • *Universal Neighbor List Message*
- 8 • *MC-RR Parameters Message*

9 3.6.6.2.1.1 System Parameters

10 The base station sends handoff related parameters on the Paging Channel in the *System*
 11 *Parameters Message* and the *Extended System Parameters Message*, and on the Broadcast
 12 Control Channel in the *MC-RR Parameters Message*.

13 The base station may revise handoff related parameters for a mobile station operating on
 14 the Traffic Channel by sending the *In-Traffic System Parameters Message*.

15 The base station may modify the values of the parameters SRCH_WIN_A, T_ADD, T_DROP,
 16 T_COMP, and T_TDROD through the *Extended Handoff Direction Message*, the *General*
 17 *Handoff Direction Message*, or the *Universal Handoff Direction Message*. In addition, the base
 18 station may also modify the values of the parameters SRCH_WIN_N, SRCH_WIN_R,
 19 SOFT_SLOPE, ADD_INTERCEPT, and DROP_INTERCEPT through the *General Handoff*
 20 *Direction Message* or the *Universal Handoff Direction Message*.

21 3.6.6.2.1.2 Neighbor List

22 The base station sends a Neighbor List on the Paging Channel in the *Neighbor List*
 23 *Message*, the *Extended Neighbor List Message*, or the *General Neighbor List Message*. The
 24 base station should list the pilots in the *Neighbor List Message* in descending priority order
 25 (see 2.6.6.2.6.3).

26 The base station may revise the Neighbor List for a mobile station operating on the Traffic
 27 Channel by sending a *Neighbor List Update Message* or an *Extended Neighbor List Update*
 28 *Message*.

29 The base station shall not include a pilot that is a member of the mobile station's Active
 30 Set in a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*. The
 31 base station shall not specify more than N_{8m} pilots in the *Neighbor List Message*, *Extended*
 32 *Neighbor List Message*, *General Neighbor List Message*, or in the *Extended Neighbor List*
 33 *Update Message*. The base station shall not specify more than 20 pilots in the *Neighbor List*
 34 *Update Message*. The base station should list the pilots in the *Neighbor List Update Message*
 35 in descending priority order (see 2.6.6.2.6.3).

The base station may also indicate the availability of neighboring analog systems in the *General Neighbor List Message* to assist the mobile station in performing system reselection (see 2.6.2.1.6).

3.6.6.2.1.3 Candidate Frequency Neighbor List

The base station sends a Candidate Frequency Neighbor List and inter-frequency hard handoff related parameters in the *Candidate Frequency Search Request Message*. The base station shall not specify more than N_{8m} pilots in the *Candidate Frequency Search Request Message*.

3.6.6.2.1.4 Candidate Frequency Search List

The base station designates a subset of the Candidate Frequency Neighbor List included in the *Candidate Frequency Search Request Message* as the Candidate Frequency Search List. For each pilot belonging to the Candidate Frequency Search List, the base station shall set the corresponding SEARCH_SET field of the *Candidate Frequency Search Request Message* to '1'.

3.6.6.2.2 Call Processing During Handoff

3.6.6.2.2.1 Processing the Pilot Strength Measurement Message

The base station should use the pilot strength measurements in the *Pilot Strength Measurement Message* or the *Extended Pilot Strength Measurement Message* to determine a new Active Set.

The base station may also use the PN phase measurements in the *Pilot Strength Measurement Message* or the *Extended Pilot Strength Measurement Message* to estimate the propagation delay to the mobile station. This estimate can be used to reduce Reverse Traffic Channel acquisition time.

The base station may respond to a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* received from the mobile station by sending the *Extended Handoff Direction Message*, the *General Handoff Direction Message*, or the *Universal Handoff Direction Message*.

3.6.6.2.2.2 Processing the Extended Handoff Direction Message

The base station shall maintain a handoff message sequence number. If the base station specifies that the mobile station is to use service negotiation, the base station shall set the SERV_NEG variable (see 3.6.4.1.2.1.4) to be enabled at the action time of the message. The sequence number shall be initialized to zero prior to the transmission of the first *Extended Handoff Direction Message*, *General Handoff Direction Message* (see 3.6.6.2.2.10), or the *Universal Handoff Direction Message* to the mobile station. The base station shall increment the sequence number modulo 4 each time the base station modifies the pilot list (including the order in which pilots are specified within the list) or the code channels (including a change in the ordering such that the first code channel occurrence for any

pilot is changed) sent to the mobile station in an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*.

Following a hard handoff, the base station should set the handoff message sequence number to the value of the LAST_HDM_SEQ field of the *Handoff Completion Message* or *Extended Handoff Completion Message* and should use the pilot order contained in the *Handoff Completion Message* or *Extended Handoff Completion Message* to interpret the contents of subsequent *Power Measurement Report Messages*.

The base station shall set the contents of an *Extended Handoff Direction Message* according to the following rules:

- An *Extended Handoff Direction Message* shall list no more than N_{6m} pilots in the new Active Set.
- An *Extended Handoff Direction Message* shall identify the identical power control subchannels (i.e., those carrying identical power control bits).
- An *Extended Handoff Direction Message* may change the code channel associated with an Active Set pilot that remains in the new Active Set.
- The base station specifies the long code mask to be used on the new Forward Traffic Channel by using the PRIVATE_LCM field of the *Extended Handoff Direction Message*. The base station may change the long code mask to be used on the new Forward Traffic Channel via the PRIVATE_LCM field of the *Extended Handoff Direction Message* only for CDMA-to-CDMA hard handoffs. If a change of long code mask is specified and the base station does not specify an explicit action time in the *Extended Handoff Direction Message*, the base station shall begin using the new long code mask on the first 80 ms boundary (relative to System Time) occurring at least 80 ms after the end of the frame containing the last bit of the message.
- For CDMA-to-CDMA handoffs, the base station may require the mobile station to perform a reset of the acknowledgment procedures by using the RESET_L2 field of the *Extended Handoff Direction Message*. If the base station requires the mobile station to reset the acknowledgment procedures, Layer 3 shall send an indication to Layer 2 to reset the acknowledgment procedures (see 3.2.1.1 and 3.2.2.1 of [4]). The acknowledgment procedures shall be reset immediately after the action time of the *Extended Handoff Direction Message*.
- For CDMA-to-CDMA hard handoffs, the base station may alter the frame offset by setting the FRAME_OFFSET field to a new value. If the base station specifies a new frame offset and does not specify an explicit action time, the base station shall change its Forward and Reverse Traffic Channel frame offsets at the second 80 ms boundary (relative to System Time) after the end of transmission of the *Extended Handoff Direction Message*, unless the end of transmission of the message coincides with an 80 ms boundary, in which case the change in frame offsets shall occur 80 ms after the end of transmission.

- 1 • For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the
2 nominal transmit power offset after handoff by setting the NOM_PWR field to the
3 new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band
4 Class 1, the base station may alter the nominal transmit power offset after handoff
5 by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal
6 transmit power offset.
- 7 • The base station may specify a different band class by setting the BAND_CLASS and
8 CDMA_FREQ fields to the band class and CDMA frequency assignment respectively.
9 The base station shall not specify a band class not supported by the mobile station.
- 10 • If the base station sends the *Extended Handoff Direction Message* in assured mode,
11 the base station should set the action time of the message such that there is
12 sufficient time for the mobile station to transmit a message containing the
13 acknowledgment prior to the action time.
- 14 • For CDMA-to-CDMA hard handoffs, the base station may specify whether the mobile
15 station is to use service negotiation or service option negotiation by setting the
16 SERV_NEG_TYPE field of the *Extended Handoff Direction Message*. If the base station
17 specifies that the mobile station is to use service negotiation, the base station
18 shall set the SERV_NEG variable (see 3.6.4.1.2.1.4) to enabled at the action time of
19 message. If the base station specifies that the mobile station is to use service
20 option negotiation, the base station shall set SERV_NEG to disabled at the action
21 time of the message.

22 3.6.6.2.2.3 Processing the Candidate Frequency Search Request Message

23 The base station may send a *Candidate Frequency Search Request Message* to direct the
24 mobile station to perform a single or periodic search on the Candidate Frequency.

25 The base station shall maintain a search message sequence number. The sequence
26 number shall be initialized to zero prior to the transmission of the first *Candidate*
27 *Frequency Search Request Message* to the mobile station. Each time the base station sends
28 a new *Candidate Frequency Search Request Message* to the mobile station, it shall set the
29 CFSRM_SEQ field to the current value of the sequence number, and increment the
30 sequence number modulo 4.

31 3.6.6.2.2.4 Processing the Candidate Frequency Search Response Message

32 The base station should use the mobile station's search capabilities as reported in the
33 *Candidate Frequency Search Response Message* to determine an appropriate period for the
34 mobile station's periodic search on the Candidate Frequency.

35 3.6.6.2.2.5 Processing the Candidate Frequency Search Control Message

36 The base station may send a *Candidate Frequency Search Control Message* to direct the
37 mobile station to perform a single search, or to start or stop a periodic search on the
38 Candidate Frequency.

Each time the base station sends a new *Candidate Frequency Search Control Message* to the mobile station, it shall set the CFSCM_SEQ field to the current value of the sequence number, and increment the sequence number modulo 4.

3.6.6.2.2.6 Processing the Candidate Frequency Search Report Message

The base station should use the value of the LAST_SRCH_MSG field and of the LAST_SRCH_MSG_SEQ field of the *Candidate Frequency Search Report Message* to interpret the contents of the message.

If the SEARCH_MODE field of the *Candidate Frequency Search Report Message* is equal to '0000', the base station should use the pilot strength measurements in the message to determine whether to direct the mobile station to perform a CDMA-to-CDMA inter-frequency handoff, and to determine the new Active Set. If the SEARCH_MODE field of the *Candidate Frequency Search Report Message* is equal to '0001', the base station should use the analog frequency strength measurements in the message to determine whether to direct the mobile station to perform a CDMA-to-Analog handoff.

3.6.6.2.2.7 Transmitting During Handoff

The base station shall continue transmission to the mobile station on the Fundamental Channel or the Dedicated Control Channel of a Forward Traffic Channel removed from the Active Set until it receives the *Handoff Completion Message* or *Extended Handoff Completion Message* from the mobile station or determines that the call has been released.

The base station should discontinue transmission to the mobile station on the Fundamental Channel or the Dedicated Control Channel of a Forward Traffic Channel removed from the Active Set after it receives the *Handoff Completion Message* or *Extended Handoff Completion Message*.

For Forward Multiplex Options 3 through 16, the base station should discontinue transmission of Forward Supplemental Code Channels removed from the Code Channel List according to the following rules:

- If a *General Handoff Direction Message* is used to remove one or more Forward Supplemental Code Channels, the base station should discontinue transmission on those code channels no later than the action time of the *General Handoff Direction Message*.
- If a *Supplemental Channel Assignment Message* is used to remove one or more Forward Supplemental Code Channels, the base station should discontinue transmission on those Forward Supplemental Code Channels no later than the implicit action time of the *Supplemental Channel Assignment Message*.

3.6.6.2.2.8 Ordering Pilot Measurements From the Mobile Station

The base station may direct the mobile station to send a *Pilot Strength Measurement Message* by sending a *Pilot Measurement Request Order*.

The base station may send a *Periodic Pilot Measurement Request Order* to direct the mobile station to send pilot strength measurements one time or periodically. In response to the

order, the mobile station reports the pilot strength measurements using the *Periodic Pilot Strength Measurement Message*.

3.6.6.2.2.9 Processing the Supplemental Channel Assignment Message

The base station may use this message to specify Supplemental Code Channel assignment parameters for the mobile station's Forward Traffic Channel, Reverse Traffic Channel, or both. This information includes the parameters that control the timing of the Supplemental Code Channel assignment (e.g., starting time and duration), and parameters that control the number of Supplemental Code Channels which will be used during the assignment (e.g., the number of Reverse Supplemental Code Channels on which the mobile station may transmit and the set of Walsh codes on which the mobile station receives Forward Supplemental Code Channels for each pilot in the mobile station's Active Set). The *Supplemental Channel Assignment Message* shall be used only with Multiplex Options 3 through 16.

The base station shall set the content of a *Supplemental Channel Assignment Message* according to the following rules:

- The base station may set USE_RETRY_DELAY to '1' and RETRY_DELAY to a delay in 320 ms units starting at the next 80 ms system time boundary during which the mobile station is to refrain from sending subsequent *Supplemental Channel Request Messages*. The base station may set RETRY_DELAY to '11111111' to indicate that the mobile station is to refrain from transmitting *Supplemental Channel Request Messages* indefinitely. Otherwise, the base station shall set USE_RETRY_DELAY to '0' and omit RETRY_DELAY in which case the mobile station is to reset any previously set RETRY_DELAY indication.
- The base station shall set REV_DTX_DURATION to the maximum duration of time in units of 20 ms that the mobile station is allowed to stop transmission on a Reverse Supplemental Code Channel before resuming transmission on the Reverse Supplemental Code Channel within the reverse assignment duration. The base station shall set this field to '0000' if the mobile station is to stop using a Reverse Supplemental Code Channel once it has stopped transmitting on that Reverse Supplemental Channel. The base station shall set this field to '1111' if the mobile station is allowed to resume transmission on a Reverse Supplemental Code Channel at any time within the reverse assignment duration.
- A *Supplemental Channel Assignment Message* may specify Reverse Supplemental Code Channel assignments. If Reverse Supplemental Code Channel assignment information is included, the base station shall set REV_INCLUDED to '1' and include the appropriate Reverse Supplemental Code Channel assignment information. Otherwise, the base station shall set REV_INCLUDED to '0'.
- The base station shall indicate the implicit, explicit, or linked start time for a Reverse Supplemental Code Channel assignment as follows:

- 1 – The base station may set EXPL_REV_START_TIME to '1' and set
2 REV_START_TIME to the System Time, in units of 80 ms (modulo 64), at which
3 the mobile station is to start transmitting on the Reverse Supplemental Code
4 Channels.
- 5 – The base station may set USE_REV_HDM_SEQ to '1' and set
6 REV_LINKED_HDM_SEQ to the sequence number of the *General Handoff Direction*
7 *Message* (HDM_SEQ) with which this message is linked to indicate that the
8 mobile station is to start processing the Reverse Supplemental Code Channels
9 at the action time of the linked *General Handoff Direction Message*.
- 10 – The base station may set EXPL_REV_START_TIME to '0' and USE_REV_HDM_SEQ
11 to '0' to indicate that the mobile station is to start processing Reverse
12 Supplemental Code Channels at the implicit action time of this message.
- 13 – The base station shall not set both EXPL_REV_START_TIME and
14 USE_REV_HDM_SEQ to '1'.
- 15 • The base station may set USE_REV_DURATION to '1' and REV_DURATION to the
16 time interval, in units of 80 ms, after the implicit, explicit, or linked action time for
17 the message (as specified in 2.6.6.2.5.1), during which the mobile station is to
18 transmit on the specified Reverse Supplemental Code Channels. The base station
19 may set USE_REV_DURATION to '0' to indicate an infinite duration for the
20 assignment of Reverse Supplemental Code Channels. If NUM_REV_CODES is '000',
21 then the base station shall set USE_REV_DURATION to '0'.
- 22 • If Reverse Supplemental Code Channel assignment information is included, the
23 base station shall set NUM_REV_CODES to the number of Reverse Supplemental
24 Code Channels to be used in this Reverse Supplemental Code Channel
25 assignment. The base station shall not set NUM_REV_CODES to be greater than
26 the number of codes supported by the currently negotiated multiplex option.
- 27 • The base station may set USE_T_ADD_ABORT, the Reverse Supplemental Code
28 Channel assignment T_ADD abort indicator, to '1' to indicate that the mobile
29 station is to abort Reverse Supplemental Code Channel assignments implicitly
30 when a T_ADD trigger occurs. Otherwise, the base station shall set
31 USE_T_ADD_ABORT to '0'. If NUM_REV_CODES is set to '000', the base station shall
32 set USE_T_ADD_ABORT to '0'.
- 33 • If the base station is sending this message in response to a *Supplemental Channel*
34 *Request Message* which includes a *Supplemental Channel Request Message* sequence
35 number, the base station may set USE_SCRM_SEQ_NUM to '1' and include and set
36 SCRM_SEQ_NUM to the sequence number corresponding to the SCRM_SEQ_NUM
37 field in a *Supplemental Channel Request Message* to which the mobile station is to
38 match this message. Otherwise, the base station shall set USE_SCRM_SEQ_NUM
39 to '0' and omit SCRM_SEQ_NUM.

- 1 • A *Supplemental Channel Assignment Message* may specify Forward Supplemental
2 Code Channel assignments. If Forward Supplemental Code Channel assignment
3 information is included, the base station shall set FOR_INCLUDED to '1' and include
4 the appropriate Forward Supplemental Code Channel assignment information.
5 Otherwise, the base station shall set FOR_INCLUDED to '0'.
- 6 • The base station shall set FOR_SUP_CONFIG to '00' if the mobile station is to stop
7 processing the forward supplemental code after the action time of the *Supplemental*
8 *Channel Assignment Message*. The base station should not transmit to the mobile
9 station on the Forward Supplemental Code Channels after the message takes
10 effect.
- 11 • The base station shall set FOR_SUP_CONFIG to '01' if the mobile station is to start
12 processing the Forward Supplemental Code Channels in the Code Channel List at
13 the implicit, explicit, or linked action time for the message as specified in
14 2.6.6.2.5.1.
- 15 • The base station shall set FOR_SUP_CONFIG to '10' if the Forward Supplemental
16 Code Channels associated with the pilots in the Active set are specified in the
17 *Supplemental Channel Assignment Message* and is to stop processing Forward
18 Supplemental Code Channels at the implicit action time of the message. The base
19 station should not transmit to the mobile station on the Forward Supplemental
20 Code Channels after the message takes effect.
- 21 • The base station shall set FOR_SUP_CONFIG to '11' if the Forward Supplemental
22 Code Channels associated with the pilots in the Active set are specified in the
23 *Supplemental Channel Assignment Message* and the mobile station is to start
24 processing the Forward Supplemental Code Channels at the implicit, explicit, or
25 linked action time for the message as specified in 2.6.6.2.5.1.
- 26 • The base station shall set FOR_DURATION to the time interval, in units of 80 ms,
27 after the implicit, explicit, or linked action time for the message (as specified in
28 2.6.6.2.5.1), during which the mobile station is to process the specified Forward
29 Supplemental Code Channels. The base station may set USE_FOR_DURATION to '0'
30 to indicate an infinite duration for the allocation of Forward Supplemental Code
31 Channels. The base station should not transmit to the mobile station on the
32 Forward Supplemental Code Channels outside the time interval specified by
33 FOR_DURATION.
- 34 • The base station may set EXPL_FOR_START_TIME to '1' and set FOR_START_TIME
35 to the System Time, in units of 80 ms (modulo 64), at which the mobile station is to
36 start processing the Forward Supplemental Code Channels.
- 37 • The base station may set USE_FOR_HDM_SEQ to '1' and set FOR_LINKED_HDM_SEQ
38 to the sequence number of the *General Handoff Direction Message* (HDM_SEQ) with
39 which this message is linked to indicate that the mobile station is to start
40 processing the Forward Supplemental Code Channels at the action time of the
41 linked *General Handoff Direction Message*.

- 1 • The base station shall not set both USE_FOR_HDM_SEQ and
2 EXPL_FOR_START_TIME within a *Supplemental Channel Assignment Message* to '1'.
- 3 • The number of Supplemental Code Channels assigned by *Supplemental Channel*
4 *Assignment Message* shall not exceed the maximum number of Supplemental Code
5 Channels for the negotiated Forward Multiplex Option.
- 6 • The base station may set EXPL_FOR_START_TIME to '0' and USE_FOR_HDM_SEQ to
7 '0' to indicate that the mobile station is to start processing Forward Supplemental
8 Code Channels at the implicit action time of this message.

9 3.6.6.2.2.10 Processing the General Handoff Direction Message

10 The base station shall maintain a handoff message sequence number. The sequence
11 number shall be initialized to zero prior to the transmission of the first *Extended Handoff*
12 *Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message*
13 (see 3.6.6.2.2.11) to the mobile station (see 2.6.6.2.2.2). The base station shall increment
14 the sequence number modulo 4 each time the base station modifies the pilot list
15 (including the order in which pilots are specified within the list) or the code channels
16 (including a change in the ordering such that the first code channel occurrence for any
17 pilot is changed) sent to the mobile station in an *Extended Handoff Direction Message* or a
18 *General Handoff Direction Message*, or a *Universal Handoff Direction Message*.

19 Following a hard handoff, the base station should set the handoff message sequence
20 number to the value of the LAST_HDM_SEQ field of the *Handoff Completion Message* or
21 *Extended Handoff Completion Message* and should use the pilot order contained in the
22 *Handoff Completion Message* or *Extended Handoff Completion Message* to interpret the
23 contents of subsequent *Power Measurement Report Messages*.

24 The base station shall set the contents of a *General Handoff Direction Message* according to
25 the following rules:

- 26 • A *General Handoff Direction Message* shall list no more than N_{6m} pilots in the new
27 Active Set.
- 28 • The base station may include a Service Configuration Information Record in the
29 *General Handoff Direction Message* to accept a service configuration proposed in a
30 *Service Request Message* or *Service Response Message*, and instruct the mobile
31 station to begin using the service configuration.
- 32 • A *General Handoff Direction Message* shall identify the identical power control
33 subchannels (i.e., those carrying identical power control bits).
- 34 • A *General Handoff Direction Message* shall identify the transmit power level of the
35 power control subchannels to the transmit power level of 20 ms frames at a 9600
36 bps or 14400 bps rate on their respective associated channels (Forward
37 Fundamental Channel or Forward Dedicated Control Channel).

- 1 • For CDMA-to-CDMA handoffs, the base station may specify Power Control
2 Subchannel Gain action time (PC_ACTION_TIME]. If PC_ACTION_TIME is included
3 in this message, the base station shall apply the new FPC_SUBCHAN_GAIN at the
4 time specified by PC_ACTION_TIME. If the PC_ACTION_TIME is not included in
5 this message but the explicit action time is included, the base station shall apply
6 the new FPC_SUBCHAN_GAIN at the action time of the *General Handoff Direction*
7 *Message*. If the implicit action time is used, the base station should gradually apply
8 any change in FPC_SUBCHAN_GAIN.
- 9 • A *General Handoff Direction Message* may change the code channel associated with
10 an Active Set pilot that remains in the new Active Set.
- 11 • The base station specifies the long code mask to be used on the new Forward
12 Traffic Channel by using the PRIVATE_LCM field of the *General Handoff Direction*
13 *Message*. The base station may change the long code mask to be used on the new
14 Forward Traffic Channel via the PRIVATE_LCM field of the *General Handoff Direction*
15 *Message* only for CDMA-to-CDMA hard handoffs. If a change of long code mask is
16 specified and the base station does not specify an explicit action time in the
17 *General Handoff Direction Message*, the base station shall begin using the new long
18 code mask on the first 80 ms boundary (relative to System Time) occurring at least
19 80 ms after the end of the frame containing the last bit of the message.
- 20 • For CDMA-to-CDMA handoffs, the base station may require the mobile station to
21 perform a reset of the acknowledgment procedures by using the RESET_L2 field of
22 the *General Handoff Direction Message*. If the base station requires the mobile
23 station to reset the acknowledgment procedures, Layer 3 shall send an indication
24 to Layer 2 to reset the acknowledgment procedures (see 3.2.1.1 and 3.2.2.1 of [4]).
25 The acknowledgment procedures of the base station that the mobile station is to
26 handoff to shall be reset immediately after the action time of the *General Handoff*
27 *Direction Message*.
- 28 • For CDMA-to-CDMA hard handoffs, the base station may alter the frame offset by
29 setting the FRAME_OFFSET field to a new value. If the base station specifies a new
30 frame offset and does not specify an explicit action time, the base station shall
31 change its Forward and Reverse Traffic Channel frame offsets at the second 80 ms
32 boundary (relative to System Time) after the end of transmission of the *General*
33 *Handoff Direction Message*, unless the end of transmission of the message coincides
34 with an 80 ms boundary, in which case the change in frame offsets shall occur 80
35 ms after the end of transmission.
- 36 • For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the
37 nominal transmit power offset after handoff by setting the NOM_PWR field to the
38 new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band
39 Class 1, the base station may alter the nominal transmit power offset after handoff
40 by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal
41 transmit power offset.

- 1 • The base station may specify a different band class by setting the BAND_CLASS and
2 CDMA_FREQ fields to the band class and CDMA frequency assignment respectively.
3 The base station shall not specify a band class not supported by the mobile station.
- 4 • If the base station sends the *General Handoff Direction Message* in assured mode,
5 the base station should set the action time of the message such that there is
6 sufficient time for the mobile station to transmit a message containing the
7 acknowledgment prior to the action time.
- 8 • For CDMA-to-CDMA hard handoffs, the base station may specify whether the mobile
9 station is to use service negotiation or service option negotiation by setting the
10 SERV_NEG_TYPE field of the *General Handoff Direction Message*. If the base station
11 specifies that the mobile station is to use service negotiation, the base station
12 shall set the SERV_NEG variable (see 3.6.4.1.2.1.4) to enabled at the action time of
13 message. If the base station specifies that the mobile station is to use service
14 option negotiation, the base station shall set SERV_NEG to disabled at the action
15 time of the message.
- 16 • The base station may specify whether the mobile station is to restore its
17 configuration to what it was before the handoff attempt, if it fails in the handoff
18 attempt using criteria specified in the *Candidate Frequency Search Request Message*,
19 by using the RETURN_IF_HANDOFF_FAIL field of the *General Handoff Direction*
20 *Message*. The base station may specify whether the mobile station is to periodically
21 search a CDMA Candidate Frequency for useable pilots, using criteria specified in
22 the *Candidate Frequency Search Request Message*, by using the PERIODIC_SEARCH
23 field of the *General Handoff Direction Message*.
- 24 • The base station may include Forward Supplemental Code Channel assignment
25 information in the *General Handoff Direction Message* if the Forward Multiplex
26 Option for the currently connected service option is 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13,
27 14, 15, or 16. If Forward Supplemental Code Channel assignment information is
28 included, the base station shall include FOR_INCLUDED, set FOR_INCLUDED to '1',
29 and include the appropriate Forward Supplemental Code Channel assignment
30 information.
- 31 • The number of Forward Supplemental Code Channels assigned by the *General*
32 *Handoff Direction Message* shall not exceed the maximum number of Forward
33 Supplemental Code Channels for the negotiated Forward Multiplex Option.
- 34 • The base station shall set FOR_SUP_CONFIG to '00' if the mobile station is to stop
35 processing the Forward Supplemental Code Channel after the action time of
36 *General Handoff Direction Message*. The base station should not transmit to the
37 mobile station on the Forward Supplemental Code Channels after the message
38 takes effect.
- 39 • The base station shall set FOR_SUP_CONFIG to '01' if the mobile station is to start
40 processing the Forward Supplemental Code Channels in the Code Channel List at
41 the action time of the message.

- 1 • The base station shall set FOR_SUP_CONFIG to '10' if the Forward Supplemental
2 Code Channels associated with the pilots in the Active set are specified in the
3 *General Handoff Direction Message* and the mobile station is to stop processing
4 Forward Supplemental Code Channels at the implicit action time of the message.
5 The base station should not transmit to the mobile station on the Forward
6 Supplemental Code Channels after the message takes effect.
- 7 • The base station shall set FOR_SUP_CONFIG to '11' if the Forward Supplemental
8 Code Channels associated with the pilots in the Active set are specified in the
9 *General Handoff Direction Message* and the mobile station is to start processing the
10 Forward Supplemental Code Channels at the action time of the message.
- 11 • The base station shall set FOR_DURATION to the time interval after the action
12 time of the message, in units of 80 ms, during which the mobile station is to
13 process the specified Forward Supplemental Code Channels. The base station may
14 set USE_FOR_DURATION to '0' to indicate an infinite duration for the allocation of
15 Forward Supplemental Code Channels. The base station should not transmit to the
16 mobile station on the Forward Supplemental Code Channels outside the time
17 interval specified by FOR_DURATION.
- 18 • If FOR_INCLUDED is included in the message, the base station shall include
19 EXPL_CODE_CHAN for each pilot included in the message. If EXPL_CODE_CHAN is
20 included and set to '1' for a pilot, the code channels associated with the pilot in the
21 *General Handoff Direction Message* shall be ordered such that the first code channel
22 occurrence is associated with the Forward Fundamental Channel and the
23 successive occurrences are associated with Forward Supplemental Code Channels.
24 If EXPL_CODE_CHAN is included and is set to '0', for each pilot in the new Active
25 Set, the base station shall include BASE_CODE_CHAN and set it to the base code
26 channel index in the range of 1 to (63 - NUM_FOR_SUP + 1), inclusive, that the
27 mobile station is to use as the first Forward Supplemental Code Channel associated
28 with this pilot. The mobile station is to use NUM_FOR_SUP adjacent code channels
29 beginning with index BASE_CODE_CHAN (i.e., BASE_CODE_CHAN through
30 BASE_CODE_CHAN + NUM_FOR_SUP - 1) for the Forward Supplemental Code
31 Channels associated with this pilot.
- 32 • The base station may include Reverse Supplemental Code Channel assignment
33 information in the *General Handoff Direction Message* if the Reverse Multiplex
34 Option is 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or 16. If Reverse Supplemental
35 Code Channel assignment information is included, the base station shall include
36 REV_INCLUDED, set REV_INCLUDED to '1', and include the appropriate Reverse
37 Supplemental Code Channel assignment information in the additional fields.
- 38 • If Reverse Supplemental Code Channel assignment information is included, the
39 base station shall set NUM_REV_CODES to the number of Reverse Supplemental
40 Code Channels to be used by the mobile station. The base station shall not set
41 NUM_REV_CODES to be greater than the number of codes supported by the
42 currently negotiated multiplex option.

- 1 • The base station may set USE_T_ADD_ABORT, the Reverse Supplemental Code
2 Channel assignment T_ADD abort indicator, to '1' to indicate that the mobile
3 station is to abort Reverse Supplemental Code Channel assignments implicitly
4 when a T_ADD trigger occurs. Otherwise, the base station shall set
5 USE_T_ADD_ABORT to '0'. If NUM_REV_CODES is set to '000', the base station shall
6 set USE_T_ADD_ABORT to '0'.
- 7 • The base station shall set REV_DTX_DURATION to the maximum duration of time
8 in units of 20 ms that the mobile station is allowed to stop transmission on a
9 Reverse Supplemental Code Channel before resuming transmission on the Reverse
10 Supplemental Code Channel. The base station shall set this field to '0000' if the
11 mobile station is to stop using a Reverse Supplemental Code Channel once it has
12 stopped transmitting on that Reverse Supplemental Channel. The base station
13 shall set this field to '1111' if the mobile station is allowed to resume transmission
14 on a Reverse Supplemental Code Channel at any time within the reverse
15 assignment duration.
- 16 • The base station may set CLEAR_RETRY_DELAY to '1' to indicate that the mobile
17 station is to cancel any previously stored retry delay. Otherwise, the base station
18 shall set CLEAR_RETRY_DELAY to '0' to indicate that the mobile station is to
19 continue to honor any previously stored retry delay (see 2.6.6.2.5.1).
- 20 • The base station may indicate a duration for the Reverse Supplemental Code
21 Channel assignment (in 80 ms superframes) by setting USE_REV_DURATION to '1'
22 and indicating the desired duration in the REV_DURATION field. If
23 USE_REV_DURATION is set to '0', a duration of infinity is indicated, and the base
24 station shall set the REV_DURATION to '00000000'. If NUM_REV_CODES is '000',
25 then the base station shall set USE_REV_DURATION to '0' and shall set
26 REV_DURATION to '00000000'.
- 27 • The base station may set USE_REV_DURATION to '1' and REV_DURATION to the
28 time interval after the action time of the message, in units of 80 ms, during which
29 the mobile station may transmit on the assigned Reverse Supplemental Code
30 Channels. The base station may set USE_REV_DURATION to '0' to indicate an
31 infinite duration for the allocation of Forward Supplemental Code Channels.
- 32 • The base station may specify a closed loop power control step size by setting
33 USE_PWR_CNTL_STEP to '1' and indicating the desired power control step size in
34 the PWR_CNTL_STEP field (see 2.1.2.3.2). Otherwise, the base station shall set
35 USE_PWR_CNTL_STEP to '0'. The base station shall not specify a power control step
36 size not supported by the mobile station.

37 3.6.6.2.2.11 Processing the Universal Handoff Direction Message

38 The base station shall maintain a handoff message sequence number. The sequence
39 number shall be initialized to zero prior to the transmission of the first *Extended Handoff*
40 *Direction Message* (see 3.6.6.2.2.2), *General Handoff Direction Message* (see 3.6.6.2.2.10), or
41 *Universal Handoff Direction Message* to the mobile station. The base station shall
42 increment the sequence number modulo 4 each time the base station modifies the pilot

list (including the order in which pilots are specified within the list) or the code channels (including a change in the ordering such that the first code channel occurrence for any pilot is changed) sent to the mobile station in an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or an *Universal Direction Message*.

Following a hard handoff, the base station should set the handoff message sequence number to the value of the LAST_HDM_SEQ field of the *Handoff Completion Message* or *Extended Handoff Completion Message* and should use the pilot order contained in the *Handoff Completion Message* or *Extended Handoff Completion Message* to interpret the contents of subsequent *Power Measurement Report Messages*.

The base station shall set the contents of a *Universal Handoff Direction Message* according to the following rules:

- A *Universal Handoff Direction Message* shall list no more than N_{6m} pilots in the new Active Set.
- The base station may include a Service Configuration Information Record in the *Universal Handoff Direction Message* to accept a service configuration proposed in a *Service Request Message* or *Service Response Message*, and instruct the mobile station to begin using the service configuration.
- A *Universal Handoff Direction Message* shall identify the identical power control subchannels (i.e., those carrying identical power control bits).
- A *Universal Handoff Direction Message* shall identify the transmit power level of the power control subchannels to the transmit power level of 20 ms frames at a 9600 bps or 14400 bps rate on their respective associated channels (Forward Fundamental Channel or Forward Dedicated Control Channel).
- For CDMA-to-CDMA handoffs, the base station may specify Power Control Subchannel Gain action time (PC_ACTION_TIME]. If PC_ACTION_TIME is included in this message, the base station shall apply the new FPC_SUBCHAN_GAIN at the time specified by PC_ACTION_TIME. If the PC_ACTION_TIME is not included in this message but the explicit action time is included, the base station shall apply the new FPC_SUBCHAN_GAIN at the action time of the *Universal Handoff Direction Message*. If the implicit action time is used, the base station should gradually apply any change in FPC_SUBCHAN_GAIN.
- A *Universal Handoff Direction Message* may change the code channel associated with an Active Set pilot that remains in the new Active Set.
- A *Universal Handoff Direction Message* may delete the code channel associated with an Active Set pilot that remains in the new Active Set.
- A *Universal Handoff Direction Message* may add the code channel associated with an Active Set pilot that remains in the new Active Set.

- 1 • The base station specifies the long code mask to be used on the new Forward
2 Traffic Channel by using the PRIVATE_LCM field of the *Universal Handoff Direction*
3 *Message*. The base station may change the contents of this field only for CDMA-to-
4 CDMA hard handoffs. If a change of long code mask is specified and the base
5 station does not specify an explicit action time in the *Universal Handoff Direction*
6 *Message*, the base station shall begin using the new long code mask on the first 80
7 ms boundary (relative to System Time) occurring at least 80 ms after the end of the
8 frame containing the last bit of the message.
- 9 • For CDMA-to-CDMA handoffs, the base station may require the mobile station to
10 perform a reset of the acknowledgment procedures by using the RESET_L2 field of
11 the *Universal Handoff Direction Message*. If the base station requires the mobile
12 station to reset the acknowledgment procedures, Layer 3 shall send an indication
13 to Layer 2 to reset the acknowledgment procedures (see 3.2.1.1 and 3.2.2.1 of [4]).
14 The acknowledgment procedures of the base station that the mobile station is to
15 handoff to shall be reset immediately after the action time of the *General Handoff*
16 *Direction Message*.
- 17 • For CDMA-to-CDMA hard handoffs, the base station may alter the frame offset by
18 setting the FRAME_OFFSET field to a new value. If the base station specifies a new
19 frame offset and does not specify an explicit action time, the base station shall
20 change its Forward and Reverse Traffic Channel frame offsets at the second 80 ms
21 boundary (relative to System Time) after the end of transmission of the *Universal*
22 *Handoff Direction Message*, unless the end of transmission of the message coincides
23 with an 80 ms boundary, in which case the change in frame offsets shall occur 80
24 ms after the end of transmission.
- 25 • For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the
26 nominal transmit power offset after handoff by setting the NOM_PWR field to the
27 new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band
28 Class 1, the base station may alter the nominal transmit power offset after handoff
29 by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal
30 transmit power offset.
- 31 • The base station may specify a different band class by setting the BAND_CLASS and
32 CDMA_FREQ fields to the band class and CDMA frequency assignment respectively.
33 The base station shall not specify a band class not supported by the mobile station.
- 34 • If the base station sends the *Universal Handoff Direction Message* in assured mode,
35 the base station should set the action time of the message such that there is
36 sufficient time for the mobile station to transmit a message containing the
37 acknowledgment prior to the action time.

- 1 • For CDMA-to-CDMA handoffs, the base station may specify whether the mobile
2 station is to use service negotiation or service option negotiation by setting the
3 SERV_NEG_TYPE field of the *Universal Handoff Direction Message*. If the base station
4 specifies that the mobile station is to use service negotiation, the base station
5 shall set the SERV_NEG variable (see 3.6.4.1.2.1.4) to enabled at the action time of
6 message. If the base station specifies that the mobile station is to use service
7 option negotiation, the base station shall set SERV_NEG to disabled at the action
8 time of the message.
- 9 • The base station may specify whether the mobile station is to restore its
10 configuration to what it was before the handoff attempt, if it fails in the handoff
11 attempt using criteria specified in the *Candidate Frequency Search Request Message*,
12 by using the RETURN_IF_HANDOFF_FAIL field of the *Universal Handoff Direction*
13 *Message*. The base station may specify whether the mobile station is to periodically
14 search a CDMA Candidate Frequency for useable pilots, using criteria specified in
15 the *Candidate Frequency Search Request Message*, by using the PERIODIC_SEARCH
16 field of the *Universal Handoff Direction Message*.
- 17 • The base station specifies Active Set for the Fundamental Channel only, the
18 Dedicated Control Channel only, or both. The Active Set of the Dedicated Control
19 Channel shall be the same as the Active Set of the Fundamental Channel when
20 both the Fundamental Channel and Dedicated Control Channel are assigned.
- 21 • The base station shall set RESET_SCH to '1' if the mobile station is to delete the
22 Active Set of Supplemental Channels.
- 23 • The base station may specify the Active Set of the Supplemental Channels. The
24 Active Set of the Supplemental Channels shall be a subset of the Active Set of the
25 Fundamental Channel or the Dedicated Control Channel.
- 26 • A *Universal Handoff Direction Message* may specify a Reverse Supplemental Channel
27 assignment. If Reverse Supplemental Channel assignment information is
28 included, this message contains information that specifies the start time, duration,
29 and the data transfer rate associated with this Reverse Supplemental Channel
30 assignment.
- 31 • A *Universal Handoff Direction Message* may specify a Forward Supplemental Channel
32 assignment. If Forward Supplemental Channel assignment information is
33 included, this message contains the start time, duration, and SCCL_INDEX
34 associated with this Forward Supplemental Channel assignment.
- 35 • A *Universal Handoff Direction Message* may update the mapping between a particular
36 SCCL_INDEX and a set of fields that specifies the data transfer rate, QOF index,
37 Forward Supplemental Channel Walsh code for each PILOT_PN, and the active set
38 for the Forward Supplemental Channel associated with FOR_SCH_ID.
- 39 • A *Universal Handoff Direction Message* may update REV_WALSH_ID field which
40 specifies the Reverse Supplemental Walsh cover.
- 41 • The base station may set CLEAR_RETRY_DELAY to '1' to indicate that the mobile

1 station is to cancel any previously stored retry delay. Otherwise, the base station
 2 shall set CLEAR_RETRY_DELAY to '0' to indicate that the mobile station is to
 3 continue to honor any previously stored retry delay (see 2.6.6.2.5.1).

4 3.6.6.2.2.12 Processing of Extended Supplemental Channel Assignment Message

5 The base station may use this message to carry Forward Supplemental Channel
 6 assignment information or Reverse Supplemental Channel assignment information.

7 If Forward Supplemental Channel assignment information is included, this message
 8 contains the start time, duration, and SCCL_INDEX associated with this Forward
 9 Supplemental Channel assignment. If Reverse Supplemental Channel assignment
 10 information is included, this message contains information that specifies the start time,
 11 duration, and the number of information bits per frame (or set of number of bits per frame
 12 if RSCH_VAR_TABLE_ID_S[REV_SCH_ID_T] is not equal to '000') associated with this Reverse
 13 Supplemental Channel assignment.

14 This message may specify the mapping between a particular SCCL_INDEX and a set of
 15 fields that specifies the number of information bits per frame (or set of number of bits per
 16 frame if FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_T] is not equal to '000'), QOF index, Forward
 17 Supplemental Channel Walsh code for each PILOT_PN, and the active set for the Forward
 18 Supplemental Channel associated with FOR_SCH_ID.

19 This message may also include REV_WALSH_ID field which specifies the Reverse
 20 Supplemental Walsh cover.

21 This message also includes START_TIME_UNIT for this message, *Forward Supplemental*
 22 *Channel Assignment Mini Messages*, or *Reverse Supplemental Channel Assignment Mini*
 23 *Messages*, or *Universal Handoff Direction Message*.

24 The base station shall set the contents of an *Extended Supplemental Channel Assignment*
 25 *Message* according to the following rules:

26 An *Extended Supplemental Channel Assignment Message* may specify a Reverse
 27 Supplemental Channel assignment. The base station shall set NUM_REV_SCH to
 28 the number of Reverse Supplemental Channels to be assigned.

29 An *Extended Supplemental Channel Assignment Message* may specify a Forward
 30 Supplemental Channel assignment. The base station shall set NUM_FOR_SCH to
 31 the number of Forward Supplemental Channels to be assigned..

32 The base station shall set the START_TIME_UNIT field to indicate the unit of the
 33 FOR_SCH_START_TIME included in this message and the *Forward Supplemental*
 34 *Channel Assignment Mini Messages* and REV_SCH_START_TIME included in this
 35 message and the *Reverse Supplemental Channel Assignment Mini Messages*. The
 36 base station shall set this field to one less than the number of 20 ms intervals that
 37 is to be used by the mobile station for calculating the start time included in
 38 Forward Supplemental Channel assignments or Reverse Supplemental Channel
 39 assignments.

1 An *Extended Supplemental Channel Assignment Message* may specify Forward
 2 Supplemental Channel configuration information. The base station shall set
 3 NUM_FOR_SCH_CFG to the number of Forward Supplemental Channel to be
 4 configured.

5 The base station shall set the NUM_REC field to the number of instances of the
 6 following record minus one included in this message. The base station shall set
 7 the fields within each record as follows:

- 8 – The base station shall set the SCCL_INDEX field to the index of the
 9 Supplemental Channel Code Information Record in the Supplemental
 10 Channel Code List Table.
- 11 – The base station shall set the FOR_SCH_NUM_BITS_IDX field to the Forward
 12 Supplemental Channel number of information bits index associated with
 13 SCCL_INDEX.
- 14 – The base station shall set the NUM_SUP_SHO field to the number of Forward
 15 Supplemental Channels minus one, corresponding to the FOR_SCH_ID and
 16 the SCCL_INDEX, for which the frames are to be soft-combined by the
 17 mobile station. The base station shall set the fields within each record as
 18 follows:
 - 19 + The base station shall set the PILOT_PN field to the pilot PN sequence
 20 offset for this pilot in units of 64 PN chips.
 - 21 + The base station shall set the QOF_MASK_ID_SCH field to the ID of the
 22 Quasi Orthogonal Function mask ID corresponding to the Forward
 23 Supplemental Channel Code index.
 - 24 + The base station shall set the CODE_CHAN_SCH field to the code
 25 channel on the Supplemental Channel corresponding to the PILOT_PN.

26 REV_DTX_DURATION: The base station shall set REV_DTX_DURATION to the maximum
 27 duration of time in units of 20 ms that the mobile station is allowed to stop
 28 transmission on a Reverse Supplemental Channel before resuming transmission
 29 on the Reverse Supplemental Channel within the reverse assignment duration.
 30 The base station shall set this field to '0000' if the mobile station is to stop using a
 31 Reverse Supplemental Channel once it has stopped transmitting on that Reverse
 32 Supplemental Channel. The base station shall set this field to '1111' if the mobile
 33 station is allowed to resume transmission on a Reverse Supplemental Channel at
 34 any time within the reverse assignment duration.

35 An *Extended Supplemental Channel Assignment Message* may specify Resource Control
 36 information. If Resource Control information is included, the base station shall set
 37 RES_INFO_INCL field to '1' and include FPC_PRI_CHAN, CH_IND and BLOB fields;
 38 otherwise, the base station shall set the RES_INFO_INCL field to '0'.

39 3.6.6.2.2.13 Processing of Forward Supplemental Channel Assignment Mini Message

40 The base station may use this message to specify Forward Supplemental Channel

assignment parameters for the mobile station's Forward Supplemental Channel. This information includes the FOR_SCH_ID, duration, start time, and the index to the previously specified Forward Supplemental Channel Code List, which determines number of information bits per frame (or set of number of bits per frame if FSCH_VAR_TABLE_ID_S[FOR_SCH_ID_r] is not equal to '000'), code channel index, and the identifier of the Quasi Orthogonal Function corresponding to the assignment.

The base station shall set the content of a *Forward Supplemental Channel Assignment Mini Message* according to the following rules:

The base station shall set the FOR_SCH_ID to Forward Supplemental Channel identifier of the burst assignment that this message carries.

The base station shall set the FOR_SCH_DURATION field to '0000' to indicate that the mobile station should stop processing the Forward Supplemental Channel starting at the explicit start time of the message specified by FOR_SCH_START_TIME. The base station shall set the FOR_SCH_DURATION field to '1111' to indicate that the mobile station should process the Forward Supplemental Channel, starting at the explicit start time of the message specified by FOR_SCH_START_TIME, until a subsequent *Forward Supplemental Channel Assignment Mini Message* or an *Extended Supplemental Channel Assignment Message* with the same FOR_SCH_ID field is received. The base station shall set the FOR_SCH_DURATION field to the duration in units of 20 ms (see Table 3.7.3.3.2.37-3), starting at the explicit start time of the message specified by FOR_SCH_START_TIME, during which the mobile station is to process the Forward Supplemental Channel.

The base station shall set the FOR_SCH_START_TIME field to the System Time, in units of time specified by START_TIME_UNIT, (modulo 32) at which the mobile station is to start processing the Forward Supplemental Channel specified in this message. The explicit start time for processing Forward Supplemental Channels is the time for which:

$$\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{FOR_SCH_START_TIME} \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

The base station shall set the SCCL_INDEX field to the index of the record in the Forward Supplemental Channel Code list corresponding to the FOR_SCH_ID.

If the PILOT_GATING_USE_RATE to equal to '1', the base station shall set PILOT_GATING_USE_RATE to '0' and start transmitting the Forward Power Control Subchannel with the maximum rate at the action time of the message.

3.6.6.2.2.14 Processing of Reverse Supplemental Channel Assignment Mini Message

The base station may use this message to specify Reverse Supplemental Channel assignment parameters for the mobile station Reverse Supplemental Channel. This information includes the reverse supplemental channel identifier (REV_SCH_ID), the duration of transmission on the Reverse Supplemental Channel, the start time for the

burst assignment, and the number of information bits per frame that the mobile station may transmit.

The base station shall set the content of the *Reverse Supplemental Channel Assignment Mini Message* according to the following rules:

The base station shall set the REV_SCH_DURATION field to '0000' to indicate that the mobile station should stop transmitting on the Reverse Supplemental Channel specified by REV_SCH_ID at the start time specified by REV_SCH_START_TIME. The base station shall set this field to '1111' to indicate that the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID, starting at the start time specified by REV_SCH_START_TIME. The base station shall set the REV_SCH_DURATION field to the allocated duration (see Table 3.7.3.3.2.37-3), starting at the start time specified by REV_SCH_START_TIME, during which the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID.

The base station shall set the REV_SCH_START_TIME field to the System Time, in units of time specified by START_TIME_UNIT, (modulo 32) at which the mobile station may start transmitting on the Reverse Supplemental Channel specified in this message. The explicit start time for transmitting on the Reverse Supplemental Channel is the time for which:

$$(\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{REV_SCH_START_TIME}) \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

The base station shall set the REV_SCH_BITS_IDX (see Table 3.7.3.3.2.37-1) to indicate the Reverse Supplemental Channel number of information bits per frame index.

If the PILOT_GATING_USE_RATE is equal to '1', the base station shall set PILOT_GATING_USE_RATE to '0' and start transmitting the Forward Power Control Subchannel with the maximum rate at the action time of the message.

3.6.6.2.2.15 Processing of the Mobile Assisted Burst Operation Parameters Message

The base station may use this message to specify the operating parameters in the mobile station for Mobile Assisted Burst Operation procedures.

A *Mobile Assisted Burst Operation Parameters Message* may specify pilot strength order change reporting information. If order change reporting information is included, the base station shall set ORDER_FLAG to '1' and include the appropriate order change reporting fields. Otherwise, the base station shall set ORDER_FLAG to '0'. If ORDER_FLAG is set to '1', the base station shall perform the following procedures:

- The base station shall set PS_MIN_DELTA to the minimum pilot strength measurement difference between any two pilots in the Active Set (in units of 0.5 dB) that must be measured in order for the mobile station to send a *Pilot Strength Measurement Mini Message*.

- The base station shall set ORDER_INTERVAL to the minimum interval (in 20 ms units) during which the indicated pilot strength measurement difference (greater than or equal to PS_MIN_DELTA) must be measured by the mobile station in order for the mobile station to send a *Pilot Strength Measurement Mini Message*.

A *Mobile Assisted Burst Operation Parameters Message* may specify periodic pilot strength reporting. If periodic reporting information is included, the base station shall set PERIODIC_FLAG to '1' and include the appropriate periodic reporting fields. Otherwise, the base station shall set PERIODIC_FLAG to '0'. If PERIODIC_FLAG is set to '1', the base station shall perform the following procedures:

- The base station shall set NUM_PILOTS to the number of pilots for which the mobile station is to send *Pilot Strength Measurement Mini Messages*.
- The base station shall set PERIODIC_INTERVAL to the interval (in 20 ms units) between *Pilot Strength Measurement Mini Messages*.

A *Mobile Assisted Burst Operation Parameters Message* may specify threshold based pilot strength reporting. If threshold based reporting information is included, the base station shall set THRESHOLD_FLAG to '1' and include the appropriate threshold based reporting fields. Otherwise, the base station shall set THRESHOLD_FLAG to '0'. If THRESHOLD_FLAG is set to '1', the base station shall perform the following procedures:

- The base station shall set PS_FLOOR_HIGH to the high water mark for lower limit threshold for which the mobile station is to send *Pilot Strength Measurement Mini Messages*.
- The base station shall set PS_FLOOR_LOW to the low water mark for lower limit threshold for which the mobile station is to send *Pilot Strength Measurement Mini Messages*.
- The base station shall set PS_CEILING_HIGH to the high water mark for upper limit threshold for which the mobile station is to send *Pilot Strength Measurement Mini Messages*.
- The base station shall set PS_CEILING_LOW to the low water mark for upper limit threshold for which the mobile station is to send *Pilot Strength Measurement Mini Messages*.
- The base station shall set THRESHOLD_INTERVAL to the interval (in 20 ms units) between *Pilot Strength Measurement Mini Messages*.

3.6.6.2.3 Active Set Maintenance

The base station shall maintain an Active Set for each mobile station under its control as follows:

- When the base station sends the *Channel Assignment Message*, it shall initialize the Active Set to contain only the pilot associated with the assigned Forward Traffic Channel.

- 1 • When the base station sends the *Extended Channel Assignment Message*, it shall
2 initialize the Active Set to contain all pilots included in the message.
- 3 • When the base station sends an *Extended Handoff Direction Message*, *General*
4 *Handoff Direction Message*, or *Universal Handoff Direction Message*, it shall add to the
5 Active Set, before the action time of the message, all pilots included in the
6 message, if they are not already in the Active Set.
- 7 • The base station shall delete the pilots that were not included in the most recent
8 *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal*
9 *Handoff Direction Message*, from the Active Set upon receipt of the *Handoff*
10 *Completion Message* or *Extended Handoff Completion Message*.

11 3.6.6.2.4 Soft Handoff

12 The base station should use soft handoff when directing a mobile station from one Forward
13 Traffic Channel to another Forward Traffic Channel having the same frequency
14 assignment.

15 3.6.6.2.4.1 Receiving During Soft Handoff

16 Each base station in the Active Set shall demodulate the Reverse Traffic Channel. The
17 base station should provide diversity combining of the demodulated signals obtained by
18 each base station in the Active Set.

19 3.6.6.2.4.2 Transmitting During Soft Handoff

20 The base station shall begin transmitting identical modulation symbols on all Forward
21 Traffic Channels specified in an *Extended Handoff Direction Message* or *General Handoff*
22 *Direction Message*, or *Universal Handoff Direction Message* (with the possible exception of the
23 power control subchannel) by the action time of the message.

24 The base station shall transmit identical power control bits on all identical power control
25 subchannels that were identified as such in the last *Extended Handoff Direction Message*, or
26 *General Handoff Direction Message*, or *Universal Handoff Direction Message*.

27 The base station shall use the same long code mask on all Forward Traffic Channels
28 whose associated pilots are in the Active Set.

29 3.6.6.2.5 CDMA-to-Analog Hard Handoff

30 The base station may direct the mobile station to perform a handoff from the CDMA system
31 to an analog system in a band class that the mobile station supports by sending an *Analog*
32 *Handoff Direction Message*.

33 3.6.7 CDMA Tiered Services

34 3.6.7.1 Overview

35 3.6.7.1.1 Definition

36 The base station may support Tiered Services to provide individual users or groups of users

with custom services and special features based upon their location. The base station may also support Tiered Services to provide private network support. Important to the operation of CDMA Tiered Services is the concept of User Zones. It is via User Zones by which the base station offers custom services based upon the mobile station location.

User Zones are associated with a set of features and services, plus a geographic area in which the User Zone features/services are made available to the customers that have subscribed to that User Zone. The boundary of the User Zone Geographic area may be established based on the coverage area of a public or private base station, or it may be established independent of RF topology.

User Zones may be supported by the public system on the same frequency as the serving base station, or they may be supported on a private system operating on a different frequency.

3.6.7.1.2 Types of User Zones

User Zones may be of two basic types:

- *Broadcast User Zones*: Broadcast User Zones are identified to the mobile station using the Paging Channel or the Broadcast Control Channel. In this case, the base station broadcasts messages on the Paging Channel or the Broadcast Control Channel identifying the User Zones that fall within the coverage area of the particular cell/sector. A mobile stations, as part of its monitoring of the Paging Channel or the Broadcast Control Channel, will identify the presence of a particular User Zone.
- *Mobile Specific User Zones*: Mobile Specific User Zones are not broadcast by the base station. A mobile station may use other overhead message parameters and compare them with internally stored User Zone parameters to identify the presence of a particular User Zone. These parameters may include: SID, NID, BASE_ID, BASE_LAT, and BASE_LONG.

3.6.7.2 Requirements

If the base station supports CDMA Tiered Services, the base station sends the following messages to assist the mobile station in identifying the presence of User Zones and to validate the User Zone requested by a mobile station:

- *User Zone Identification Message*
- *Private Neighbor List Message*
- *User Zone Reject Message*
- *User Zone Update Message*

3.6.7.2.1 User Zone Identification Message

The base station identifies Broadcast User Zones supported by the base station by sending the *User Zone Identification Message* on the Paging Channel or the Broadcast Control

Channel. The base station should list the UZID of each Broadcast User Zone supported by the base station.

3.6.7.2.2 Private Neighbor List Message

The base station sends a Private Neighbor List and identifies the User Zones supported by its private neighbor base stations by sending the *Private Neighbor List Message* on the Paging Channel or the Broadcast Control Channel. The *Private Neighbor List Message* shall list no more than N_{8m} private neighbors.

3.6.7.2.3 User Zone Update Message and User Zone Reject Message on f-dsch

For a mobile station operating in the *Traffic Channel Substate* or *Release Substate* of the *Mobile Station Control on the Traffic Channel State*, the base station may update the User Zone associated with the mobile station by sending a *User Zone Update Message*. The base station may also send a *User Zone Reject Message* to reject the User Zone requested by the mobile station in the *Origination Message*, *Page Response Message*, or *User Zone Update Request Message*. The base station may include the ASSIGN_UZID field in the *User Zone Reject Message* to assign a User Zone to the mobile station to replace the rejected User Zone.

3.6.7.2.4 User Zone Reject Message on f-csch

The base station may send the *User Zone Reject Message* on the Paging Channel or the Forward Common Control Channel to reject the User Zone requested by the mobile station in the *Registration Message*, *Origination Message*, or *Page Response Message*. The base station may include the ASSIGN_UZID field in the *User Zone Reject Message* record to assign a User Zone to the mobile station to replace the rejected User Zone.

3.6.8 Call Control Processing

The Call Control consists of the following states:

- *Waiting for Order Substate* - In this substate, the Call Control instance sends the *Alert With Information Message* or the *Extended Alert With Information Message* to the mobile station.
- *Waiting for Answer Substate* - In this substate, the Call Control instance waits for the *Connect Order* from the mobile station.
- *Conversation Substate* - In this substate, the parties involved in this call exchanges Traffic Channel frames in accordance with the current service configuration.
- *Call Release Substate* - In this substate, the Call Control instance waits for the call to be disconnected.

The following messages are processed by the Call Control:

- *Alert With Information Message*

- 1 • *Extended Alert with Information Message:*
- 2 • *Flash With Information Message*
- 3 • *Extended Flash With Information Message*
- 4 • *Send Burst DTMF Message*
- 5 • *Origination Continuation Message*

6 The following orders are processed by the Call Control:

- 7 • *Continuous DTMF Tone Order*
- 8 • *Maintenance Order*
- 9 • *Connect Order*

10 Upon instantiation, the Call Control instance shall perform the following:

- 11 • If the call is a mobile station terminated call and the base station set
12 BYPASS_ALERT_ANSWER to '1', the Call Control instance shall enter the
13 *Conversation Substate* (see 3.6.8.2). If the call is a mobile station terminated call
14 and the base station set BYPASS_ALERT_ANSWER to '0', the Call Control instance
15 shall enter the *Waiting for Order Substate* (see 3.6.8.1.1).
- 16 • If the call is a mobile-station-originated call, the Call Control instance shall enter
17 the *Conversation Substate* (see 3.6.8.2).

18 3.6.8.1 Alerting

19 3.6.8.1.1 Waiting for Order Substate

20 In this substate, the Call Control instance sends an *Alert With Information Message* or an
21 *Extended Alert With Information Message* to the mobile station.

22 While in the *Waiting for Order Substate*, the Call Control instance shall perform the
23 following:

- 24 • If the Call Control instance receives a "release indication" from the layer 3, the
25 Call Control instance shall enter the *Call Release Substate*.
- 26 • If the Call Control instance receives a "send alert with info message indication"
27 from the layer 3, the Call Control instance shall send an *Alert with Information*
28 *Message* or an *Extended Alert With Information Message* to the mobile station within
29 T2b seconds, and enter the *Waiting for Answer Substate*.
- 30 • The Call Control instance may send the following messages:

Alert With Information Message: The Call Control instance shall enter the *Waiting for Answer Substate*.

Extended Alert With Information Message: The Call Control instance shall enter the *Waiting for Answer Substate*.

Maintenance Order: The Call Control instance shall enter the *Waiting for Answer Substate*.

3.6.8.1.2 Waiting for Answer Substate

In this substate, the Call Control instance waits for a *Connect Order* from the mobile station.

While in the *Waiting for Answer Substate*, the Call Control instance shall perform the following:

- If the Call Control instance receives a “release indication” from the layer 3, the Call Control instance shall enter the *Call Release Substate*.
- If the Call Control instance receives a “send alert with info message indication” from the layer 3, the Call Control instance shall send an *Alert with Information Message* or an *Extended Alert with Information Message* to the mobile station, within T2b seconds, and enter the *Waiting for Answer Substate*.
- The Call Control instance may send the following messages:

Alert With Information Message

Extended Alert With Information Message

Maintenance Order

- If the Call Control instance receives one of the following messages from the layer 3, the Call Control instance shall process the message according to the specified requirements, if any:

Connect Order: The Call Control instance shall enter the *Conversation Substate*.

Flash With Information Message: If the message contains a Feature Indicator record with FEATURE = ‘00000000’, ‘00010000’, ‘00010001’, the Call Control instance may send a ‘call release request’ to the layer 3.

Extended Flash With Information Message: If the message contains a Feature Indicator record with FEATURE = ‘00000000’, ‘00010000’, ‘00010001’, the Call Control instance may send a ‘call release request’ to the layer 3.

Origination Continuation Message

3.6.8.2 Conversation Substate

While in the *Conversation Substate*, the Call Control instance shall perform the following:

- If the Call Control instance receives a “release indication” from the layer 3, the Call Control instance shall enter the *Call Release Substate*.
- If the Call Control instance receives a “paca reorig indication” from the layer 3, the Call Control instance should send either an *Alert With Information Message/Extended Alert With Information Message* which contains a signal information record with the SIGNAL_TYPE field set to ‘01’ or ‘10’, or an *Alert With Information Message/Extended Alert With Information Message* which does not contain a signal information record.
- If the Call Control instance receives a “send alert with info message indication” from layer 3, the Call Control instance shall send an *Alert with Information Message* or an *Extended Alert With Information Message* to the mobile station within T2b seconds, and enter the *Waiting for Answer Substate*.
- The Call Control instance may send the following messages:

Alert With Information Message: If the message contains a signal information record with the SIGNAL_TYPE field set to ‘01’ or ‘10’, or if the message does not contain a signal information record, the Call Control instance shall enter the *Waiting for Answer Substate*.

Extended Alert With Information Message: If the message contains a signal information record with the SIGNAL_TYPE field set to ‘01’ or ‘10’, or if the message does not contain a signal information record, the Call Control instance shall enter the *Waiting for Answer Substate*.

Continuous DTMF Tone Order

Flash With Information Message

Extended Flash With Information Message

Maintenance Order: The Call Control instance shall enter the *Waiting for Answer Substate*.

Send Burst DTMF Message

- If the Call Control instance receives one of the following messages from layer 3, the Call Control instance shall process the message according to the specified requirements, if any:

Continuous DTMF Tone Order

Flash With Information Message

1 *Extended Flash With Information Message*

2 *Origination Continuation Message*

3 *Send Burst DTMF Message*

4 3.6.8.3 Call Release Substate

- 5 • The Call Control instance may send the following messages:

6 *Alert With Information Message:* If the message contains a signal information record with
7 the SIGNAL_TYPE field set to '01' or '10', or if the message does not contain a signal
8 information record, the base station shall enter the *Waiting for Answer Substate*.

9 *Extended Alert With Information Message:* If the message contains a signal information
10 record with the SIGNAL_TYPE field set to '01' or '10', or if the message does not contain
11 a signal information record, the base station shall enter the *Waiting for Answer*
12 *Substate*.

13 *Maintenance Order:* The Call Control instance shall enter the *Waiting for Answer Substate*.

- 14 • If the Call Control instance receives one of the following messages from layer 3, the
15 Call Control instance shall process the message according to the specified
16 requirements, if any:

17 *Connect Order*

18 *Continuous DTMF Tone Order*

19 *Flash With Information Message*

20 *Extended Flash With Information Message*

21 *Origination Continuation Message*

22 *Send Burst DTMF Message*

23

- 1 No text.
- 2

3.7 PDU Formats for Messages

The following sections specify the requirements on the PDU formats transmitted on the f_csch, and the f-dsch.

In any multi-bit field in the following messages, the most significant bit (MSB) shall be transmitted first.

3.7.1 Reserved

3.7.2 f-csch

The fcsch is used to send control information to mobile stations that have not been assigned to a Traffic Channel.

3.7.2.1 Reserved

3.7.2.2 Reserved

3.7.2.3 PDU Formats for Messages on the f-csch

The messages sent on the f-csch are summarized in Table 3.7.2.3-1.

Table 3.7.2.3-1. f_csch Messages (Part 1 of 2)

Message Name	MSG_TAG	Section Number	BCCH	F-CCCH	PCH
<i>System Parameters Message</i>	SPM	3.7.2.3.2.1	N	N	Y
<i>Access Parameters Message</i>	APM	3.7.2.3.2.2	N	N	Y
<i>Neighbor List Message (Band Class 0 only)</i>	NLM	3.7.2.3.2.3	N	N	Y
<i>CDMA Channel List Message</i>	CCLM	3.7.2.3.2.4	N	N	Y
<i>Order Message</i>	ORDM	3.7.2.3.2.7	N	Y	Y
<i>Channel Assignment Message</i>	CAM	3.7.2.3.2.8	N	N	Y
<i>Data Burst Message</i>	DBM	3.7.2.3.2.9	N	Y	Y
<i>Authentication Challenge Message</i>	AUCM	3.7.2.3.2.10	N	Y	Y
<i>SSD Update Message</i>	SSDUM	3.7.2.3.2.11	N	Y	Y
<i>Feature Notification Message</i>	FNM	3.7.2.3.2.12	N	Y	Y
<i>Extended System Parameters Message</i>	ESPM	3.7.2.3.2.13	N	N	Y
<i>Extended Neighbor List Message (Band Class 1 only)</i>	ENLM	3.7.2.3.2.14	N	N	Y
<i>Status Request Message</i>	STRQM	3.7.2.3.2.15	N	Y	Y
<i>Service Redirection Message</i>	SRDM	3.7.2.3.2.16	N	Y	Y
<i>General Page Message</i>	GPM	3.7.2.3.2.17	N	Y	Y
<i>Global Service Redirection Message</i>	GSRDM	3.7.2.3.2.18	N	N	Y
<i>TMSI Assignment Message</i>	TASM	3.7.2.3.2.19	N	Y	Y
<i>PACA Message</i>	PACAM	3.7.2.3.2.20	N	Y	Y
<i>Extended Channel Assignment Message</i>	ECAM	3.7.2.3.2.21	N	Y	Y
<i>General Neighbor List Message</i>	GNLM	3.7.2.3.2.22	N	N	Y
<i>User Zone Identification Message</i>	UZIM	3.7.2.3.2.23	Y	N	Y
<i>Private Neighbor List Message</i>	PNLM	3.7.2.3.2.24	Y	N	Y

Table 3.7.2.3-2. f_csch Messages (Part 2 of 2)

Message Name	MSG_TAG	Section Number	BCCH	F-CCCH	PCH
<i>Sync Channel Message</i>	SCHM	3.7.2.3.2.26	N	N	N
<i>Extended Global Service Redirection Message</i>	EGSRM	3.7.2.3.2.27	Y	N	Y
<i>Extended CDMA Channel List Message</i>	ECCLM	3.7.2.3.2.28	Y	N	Y
<i>User Zone Reject Message</i>	UZRM	3.7.2.3.2.29	N	Y	Y
<i>ANSI-41 System Parameters Message</i>	A41SPM	3.7.2.3.2.30	Y	N	N
<i>MC-RR Parameters Message</i>	MCRRPM	3.7.2.3.2.31	Y	N	N
<i>ANSI-41 RAND Message</i>	A41RANDM	3.7.2.3.2.32	Y	N	N
<i>Enhanced Access Parameters Message</i>	EAPM	3.7.2.3.2.33	Y	N	N
<i>Universal Neighbor List Message</i>	UNLM	3.7.2.3.2.34	Y	N	N
<i>Security Mode Command Message</i>	SMCM	3.7.2.3.2.35	N	Y	Y
<i>Universal Page Message</i>	UPM	3.7.2.3.2.36	N	Y	N

1 3.7.2.3.1 Reserved

2 3.7.2.3.2 Message Body Contents

3 The following sections specify the contents of message body for each message that may be
4 sent on the f-csch.

5

1 3.7.2.3.2.1 System Parameters Message

2 MSG_TAG: SPM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
SID	15
NID	16
REG_ZONE	12
TOTAL_ZONES	3
ZONE_TIMER	3
MULT_SIDS	1
MULT_NIDS	1
BASE_ID	16
BASE_CLASS	4
PAGE_CHAN	3
MAX_SLOT_CYCLE_INDEX	3
HOME_REG	1
FOR_SID_REG	1
FOR_NID_REG	1
POWER_UP_REG	1
POWER_DOWN_REG	1
PARAMETER_REG	1
REG_PRD	7
BASE_LAT	22
BASE_LONG	23
REG_DIST	11
SRCH_WIN_A	4

(continues on next page)

3

4

1

Field	Length (bits)
SRCH_WIN_N	4
SRCH_WIN_R	4
NGHBR_MAX_AGE	4
PWR_REP_THRESH	5
PWR_REP_FRAMES	4
PWR_THRESH_ENABLE	1
PWR_PERIOD_ENABLE	1
PWR_REP_DELAY	5
RESCAN	1
T_ADD	6
T_DROP	6
T_COMP	4
T_TDROP	4
EXT_SYS_PARAMETER	1
EXT_NGHBR_LIST	1
GEN_NGHBR_LIST	1
GLOBAL_REDIRECT	1
PRI_NGHBR_LIST	1
USER_ZONE_ID	1
EXT_GLOBAL_REDIRECT	1
EXT_CHAN_LIST	1

2

3 PILOT_PN - Pilot PN sequence offset index.

4 The base station shall set this field to the pilot PN sequence
5 offset for this base station, in units of 64 PN chips.

6 CONFIG_MSG_SEQ - Configuration message sequence number.

7 The base station shall set this field to CONFIG_SEQ
8 (see 3.6.2.2).

9 SID - System identification.

10 The base station shall set this field to the system
11 identification number for this system (see 2.6.5.2).

NID - Network identification.

This field serves as a sub-identifier of a system as defined by the owner of the SID.

The base station shall set this field to the network identification number for this network (see 2.6.5.2).

REG_ZONE - Registration zone.

The base station shall set this field to its registration zone number (see 2.6.5.1.5).

TOTAL_ZONES - Number of registration zones to be retained.

The base station shall set this field to the number of registration zones the mobile station is to retain for purposes of zone-based registration (see 2.6.5.1.5).

If zone-based registration is to be disabled, the base station shall set this field to '000'.

ZONE_TIMER - Zone timer length.

The base station shall set this field to the ZONE_TIMER value shown in Table 3.7.2.3.2.1-1 corresponding to the length of the zone registration timer to be used by mobile stations.

Table 3.7.2.3.2.1-1. Value of Zone Timer

ZONE_TIMER Value (binary)	Timer Length (Minutes)
000	1
001	2
010	5
011	10
100	20
101	30
110	45
111	60

MULT_SIDS - Multiple SID storage indicator.

If mobile stations may store entries of SID_NID_LIST containing different SIDs, the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

MULT_NIDS - Multiple NID storage indicator.

If mobile stations may store multiple entries of SID_NID_LIST having the same SID (with different NIDs), the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

BASE_ID - Base station identification.

The base station shall set this field to its identification number.

BASE_CLASS - Base station class.

The base station shall set this field to the value shown in Table 3.7.2.3.2.1-2 corresponding to the class of service provided by this base station.

Table 3.7.2.3.2.1-2. Base Station Classes

Value (binary)	Class of Service Provided
0000	Public Macrocellular System
0001	Public PCS System
All other values are reserved.	

PAGE_CHAN - Number of Paging Channels.

The base station shall set this field to the number of Paging Channels on this CDMA Channel. The base station shall not set this field to '000'.

MAX_SLOT_CYCLE- - Maximum slot cycle index.

_INDEX The base station shall set this field to the SLOT_CYCLE_INDEX value corresponding to the maximum slot cycle length permitted (see 2.6.2.1.1).

HOME_REG - Home registration indicator.

If mobile stations that are not roaming (see 2.6.5.3) and have MOB_TERM_HOME equal to '1' are to be enabled for autonomous registrations, the base station shall set this field to '1'. If such mobile stations are not to be enabled for autonomous registration, the base station shall set this field to '0'.

FOR_SID_REG - SID roamer registration indicator.

1			If mobile stations that are foreign SID roamers (see 2.6.5.3)
2			and have MOB_TERM_FOR_SID equal to '1' are to be enabled
3			for autonomous registration, the base station shall set this
4			field to '1'. If such mobile stations are not to be enabled for
5			autonomous registration, the base station shall set this field
6			to '0'.
7	FOR_NID_REG	-	NID roamer registration indicator.
8			If mobile stations that are foreign NID roamers (see 2.6.5.3)
9			and have MOB_TERM_FOR_NID equal to '1' are to be enabled
10			for autonomous registration, the base station shall set this
11			field to '1'. If such mobile stations are not to be enabled for
12			autonomous registration, the base station shall set this field
13			to '0'.
14	POWER_UP_REG	-	Power-up registration indicator.
15			If mobile stations enabled for autonomous registration are to
16			register immediately after powering on and receiving the
17			system overhead messages, the base station shall set this
18			field to '1'; otherwise, the base station shall set this field to
19			'0'.
20	POWER_DOWN_REG	-	Power-down registration indicator.
21			If mobile stations enabled for autonomous registration are to
22			register immediately before powering down, the base station
23			shall set this field to '1'; otherwise, the base station shall set
24			this field to '0'.
25	PARAMETER_REG	-	Parameter-change registration indicator.
26			If mobile stations are to register on parameter change events
27			as specified in 2.6.5.1.6, the base station shall set this field to
28			'1'. If not, the base station shall set this field to '0'.
29	REG_PRD	-	Registration period.
30			If mobile stations are not to perform timer-based registration,
31			the base station shall set this field to '0000000'. If mobile
32			stations are to perform timer-based registration, the base
33			station shall set this field to the value in the range 29 to 85
34			inclusive, such that the desired timer value is
35			$\lfloor 2^{\text{REG_PRD}/4} \rfloor \times 0.08 \text{ seconds.}$

1	BASE_LAT	-	Base station latitude.
2			The base station shall set this field to its latitude in units of
3			0.25 second, expressed as a two's complement signed number
4			with positive numbers signifying North latitudes. The base
5			station shall set this field to a value in the range -1296000 to
6			1296000 inclusive (corresponding to a range of -90° to +90°).
7	BASE_LONG	-	Base station longitude.
8			The base station shall set this field to its longitude in units of
9			0.25 second, expressed as a two's complement signed number
10			with positive numbers signifying East longitude. The base
11			station shall set this field to a value in the range -2592000 to
12			2592000 inclusive (corresponding to a range of -180° to
13			+180°).
14	REG_DIST	-	Registration distance.
15			If mobile stations are to perform distance-based registration,
16			the base station shall set this field to the non-zero "distance"
17			beyond which the mobile station is to re-register (see
18			2.6.5.1.4). If mobile stations are not to perform distance-
19			based registration, the base station shall set this field to 0.
20	SRCH_WIN_A	-	Search window size for the Active Set and Candidate Set.
21			The base station shall set this field to the value shown in
22			Table 2.6.6.2.1-1 corresponding to the search window size to
23			be used by mobile stations for the Active Set and Candidate
24			Set.
25	SRCH_WIN_N	-	Search window size for the Neighbor Set.
26			The base station shall set this field to the value shown in
27			Table 2.6.6.2.1-1 corresponding to the search window size to
28			be used by mobile stations for the Neighbor Set.
29	SRCH_WIN_R	-	Search window size for the Remaining Set.
30			The base station shall set this field to the value shown in
31			Table 2.6.6.2.1-1 corresponding to the search window size to
32			be used by mobile stations for the Remaining Set.
33	NGHBR_MAX_AGE	-	Neighbor Set maximum AGE.
34			The base station shall set this field to the maximum AGE
35			value beyond which mobile stations are to drop members from
36			the Neighbor Set (see 2.6.6.2.6.3).
37	PWR_REP_THRESH	-	Power control reporting threshold.

1		The base station shall set this field to the number of bad
2		frames (see [2]) to be received in a measurement period on
3		the channel which carries the Power Control Subchannel
4		before mobile stations are to generate a <i>Power Measurement</i>
5		<i>Report Message</i> (see 2.6.4.1.1). If the base station sets
6		PWR_THRESH_ENABLE to '1', it shall not set this field to
7		'00000'.
8	PWR_REP_FRAMES	- Power control reporting frame count.
9		The base station shall set this field to the value such that the
10		number given by
11		$\lfloor 2^{(PWR_REP_FRAMES/2)} \times 5 \rfloor \text{ frames}$
12		is the number of frames over which mobile stations are to
13		count frame errors.
14	PWR_THRESH-	- Threshold report mode indicator.
15	_ENABLE	If mobile stations are to generate threshold <i>Power</i>
16		<i>Measurement Report Messages</i> , the base station shall set this
17		field to '1'. If mobile stations are not to generate threshold
18		<i>Power Measurement Report Messages</i> , the base station shall set
19		this field to '0'.
20	PWR_PERIOD-	- Periodic report mode indicator.
21	_ENABLE	If mobile stations are to generate periodic <i>Power Measurement</i>
22		<i>Report Messages</i> , the base station shall set this field to '1'. If
23		mobile stations are not to generate periodic <i>Power</i>
24		<i>Measurement Report Messages</i> , the base station shall set this
25		field to '0'.
26	PWR_REP_DELAY	- Power report delay.
27		The period that mobile stations wait following a <i>Power</i>
28		<i>Measurement Report Message</i> before restarting frame counting
29		for power control purposes.
30		The base station shall set this field to the power report delay
31		value, in units of 4 frames (see 2.6.4.1.1).
32	RESCAN	- Rescan indicator.
33		If mobile stations are to re-initialize and re-acquire the
34		system upon receiving this message, the base station shall
35		set this field to '1'; otherwise, the base station shall set this
36		field to '0'.
37	T_ADD	- Pilot detection threshold.

1		This value is used by the mobile station to trigger the
2		transfer of a pilot from the Neighbor Set or Remaining Set to
3		the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
4		the <i>Pilot Strength Measurement Message</i> or <i>Extended Pilot</i>
5		<i>Strength Measurement Message</i> initiating the handoff process
6		(see 2.6.6.2.5.2).
7		The base station shall set this field to the pilot detection
8		threshold, expressed as an unsigned binary number equal to
9		$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.
10	T_DROP	- Pilot drop threshold.
11		This value is used by mobile stations to start a handoff drop
12		timer for pilots in the Active Set and the Candidate Set (see
13		2.6.6.2.3).
14		The base station shall set this field to the pilot drop threshold,
15		expressed as an unsigned binary number equal to
16		$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.
17	T_COMP	- Active Set versus Candidate Set comparison threshold.
18		Mobile stations transmit a <i>Pilot Strength Measurement Message</i>
19		or an <i>Extended Pilot Strength Measurement Message</i> when the
20		strength of a pilot in the Candidate Set exceeds that of a pilot
21		in the Active Set by this margin (see 2.6.6.2.5.2).
22		The base station shall set this field to the threshold
23		Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.
24	T_TDROP	- Drop timer value.
25		Timer value after which an action is taken by mobile stations
26		for a pilot that is a member of the Active Set or Candidate
27		Set, and whose strength has not become greater than
28		T_DROP. If the pilot is a member of the Active Set, a <i>Pilot</i>
29		<i>Strength Measurement Message</i> or an <i>Extended Pilot Strength</i>
30		<i>Measurement Message</i> is issued. If the pilot is a member of
31		the Candidate Set, it will be moved to the Neighbor Set.
32		The base station shall set this field to the T_TDROP value
33		shown in Table 2.6.6.2.3-1 corresponding to the drop timer
34		value to be used by mobile stations.
35	EXT_SYS_PARAMETER	- <i>Extended System Parameters Message</i> indicator.
36		The base station shall set this field to '1'.
37	EXT_NGHBR_LIST	- <i>Extended Neighbor List Message</i> indicator.
38		The base station sets this field to '1' when it sends the
39		<i>Extended Neighbor List Message</i> on the Paging Channel.

1		If the base station is operating in Band Class 1 with
2		MIN_P_REV less than six, it shall set this field to '1'. If the
3		base station is operating in Band Class 0, it shall set this
4		field to '0'.
5	GEN_NGHR_LIST	- <i>General Neighbor List Message</i> indicator.
6		If the base station is sending the <i>General Neighbor List</i>
7		<i>Message</i> on the Paging Channel, it shall set this field to '1';
8		otherwise, it shall set this field to '0'.
9		If the base station is operating in Band Class 1 with
10		MIN_P_REV greater than or equal to six, and if
11		EXT_NGHR_LIST is set to '0', the base station shall set this
12		field to '1'.
13	GLOBAL_REDIRECT	- <i>Global Service Redirection Message</i> indicator.
14		If the base station is sending the <i>Global Service Redirection</i>
15		<i>Message</i> on the Paging Channel, it shall set this field to '1';
16		otherwise, it shall set this field to '0'.
17	PRI_NGHR_LIST	- <i>Private Neighbor List Message</i> indicator.
18		If the base station is sending the <i>Private Neighbor List Message</i>
19		on the Paging Channel, it shall set this field to '1'; otherwise,
20		it shall set this field to '0'.
21	USER_ZONE_ID	- <i>User Zone Identification Message</i> indicator.
22		If the base station is sending the <i>User Zone Identification</i>
23		<i>Message</i> on the Paging Channel, it shall set this field to '1';
24		otherwise, it shall set this field to '0'.
25	EXT_GLOBAL-	
26	_REDIRECT	- <i>Extended Global Service Redirection Message</i> indicator.
27		If the base station is sending the <i>Extended Global Service</i>
28		<i>Redirection Message</i> on the Paging Channel, it shall set this
29		field to '1'; otherwise, the base station shall set this field to
30		'0'.
31	EXT_CHAN_LIST	- <i>Extended CDMA Channel List Message</i> indicator.
32		The base station shall set this field to '1', if the <i>Extended</i>
33		<i>Channel List Message</i> is sent on the Paging Channel,
34		otherwise, it shall set this field to '0'.
35		

1 3.7.2.3.2.2 Access Parameters Message

2 MSG_TAG: APM

3

Field	Length (bits)
PILOT_PN	9
ACC_MSG_SEQ	6
ACC_CHAN	5
NOM_PWR	4
INIT_PWR	5
PWR_STEP	3
NUM_STEP	4
MAX_CAP_SZ	3
PAM_SZ	4
PSIST(0-9)	6
PSIST(10)	3
PSIST(11)	3
PSIST(12)	3
PSIST(13)	3
PSIST(14)	3
PSIST(15)	3
MSG_PSIST	3
REG_PSIST	3
PROBE_PN_RAN	4
ACC_TMO	4
PROBE_BKOFF	4
BKOFF	4

(continues on next page)

4

5

Field	Length (bits)
MAX_REQ_SEQ	4
MAX_RSP_SEQ	4
AUTH	2
RAND	0 or 32
NOM_PWR_EXT	1
PSIST_EMG_INCL	1
PSIST_EMG	0 or 3

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

ACC_MSG_SEQ - Access parameters message sequence number.

The base station shall set this field to ACC_CONFIG_SEQ (see 3.6.2.2).

ACC_CHAN - Number of Access Channels.

The base station shall set this field to one less than the number of Access Channels associated with this Paging Channel.

NOM_PWR - Nominal transmit power offset.

The base station shall set this field to the correction factor to be used by mobile stations in the open loop power estimate, expressed as a two's complement value in units of 1 dB (see [2]).

INIT_PWR - Initial power offset for access.

The base station shall set this field to the correction factor to be used by mobile stations in the open loop power estimate for the initial transmission on an Access Channel, expressed as a two's complement value in units of 1 dB (see [2]).

PWR_STEP - Power increment.

The base station shall set this field to the value by which mobile stations are to increase their transmit power between successive access probes in an access probe sequence, in units of 1 dB.

NUM_STEP - Number of access probes.

1		The base station shall set this field to one less than the
2		maximum number of access probes mobile stations are to
3		transmit in a single access probe sequence.
4	MAX_CAP_SZ	- Maximum Access Channel message capsule size.
5		The base station shall set this field to the value in the range
6		0 to 7, three less than the maximum number of Access
7		Channel frames in an Access Channel message capsule.
8	PAM_SZ	- Access Channel preamble length.
9		The base station shall set this field to one less than the
10		number of Access Channel frames that mobile stations are to
11		transmit in each Access Channel preamble.
12	PSIST(0-9)	- Persistence value for access overload classes 0 through 9.
13		If mobile stations in access overload classes 0 through 9 are
14		permitted to transmit requests on the Access Channel, the
15		base station shall set this field to the persistence value to be
16		used. If such mobile stations are not permitted to transmit
17		requests on the Access Channel, the base station shall set
18		this field to '11111'.
19	PSIST(10)	- Persistence value for access overload class 10 (test mobile
20		stations).
21		If mobile stations in access overload class 10 are permitted to
22		transmit requests on the Access Channel, the base station
23		shall set this field to the persistence value to be used. If such
24		mobile stations are not permitted to transmit requests on the
25		Access Channel, the base station shall set this field to '111'.
26	PSIST(11)	- Persistence value for access overload class 11 (emergency
27		mobile stations).
28		If mobile stations in access overload class 11 are permitted to
29		transmit requests on the Access Channel, the base station
30		shall set this field to the persistence value to be used. If such
31		mobile stations are not permitted to transmit requests on the
32		Access Channel, the base station shall set this field to '111'.
33	PSIST(12)	- Persistence value for access overload class 12.
34		If mobile stations in access overload class 12 are permitted to
35		transmit requests on the Access Channel, the base station
36		shall set this field to the persistence value to be used. If such
37		mobile stations are not permitted to transmit requests on the
38		Access Channel, the base station shall set this field to '111'.
39	PSIST(13)	- Persistence value for access overload class 13.

1			If mobile stations in access overload class 13 are permitted to
2			transmit requests on the Access Channel, the base station
3			shall set this field to the persistence value to be used. If such
4			mobile stations are not permitted to transmit requests on the
5			Access Channel, the base station shall set this field to '111'.
6	PSIST(14)	-	Persistence value for access overload class 14.
7			If mobile stations in access overload class 14 are permitted to
8			transmit requests on the Access Channel, the base station
9			shall set this field to the persistence value to be used. If such
10			mobile stations are not permitted to transmit requests on the
11			Access Channel, the base station shall set this field to '111'.
12	PSIST(15)	-	Persistence value for access overload class 15.
13			If mobile stations in access overload class 15 are permitted to
14			transmit requests on the Access Channel, the base station
15			shall set this field to the persistence value to be used. If such
16			mobile stations are not permitted to transmit requests on the
17			Access Channel, the base station shall set this field to '111'.
18	MSG_PSIST	-	Persistence modifier for Access Channel attempts for
19			message transmissions.
20			A mobile station multiplies its transmission probability by
21			$2^{\text{MSG_PSIST}}$ for such attempts.
22			The base station shall set this field to the persistence
23			modifier for Access Channel attempts for message
24			transmissions.
25	REG_PSIST	-	Persistence modifier for Access Channel attempts for
26			registrations which are not responses to the <i>Registration</i>
27			<i>Request Order</i> .
28			A mobile station multiplies its transmission probability by
29			$2^{\text{REG_PSIST}}$ for such attempts.
30			The base station shall set this field to the persistence
31			modifier for Access Channel attempts for registrations which
32			are not responses to the <i>Registration Request Order</i> .
33	PROBE_PN_RAN	-	Time randomization for Access Channel probes.
34			A mobile station delays its transmission from System Time
35			by RN PN chips, where RN is a number determined by
36			hashing between 0 and $2^{\text{PROBE_PN_RAN}} - 1$ PN chips.
37			The base station shall set this field to the value in the range
38			0 to 9 inclusive such that the time randomization range is
39			$2^{\text{PROBE_PN_RAN}} - 1$ PN chips.

1	ACC_TMO	-	Acknowledgment timeout.
2			The base station shall set this field to two less than the
3			length of time mobile stations are to wait after the end of an
4			Access Channel transmission before determining that the
5			base station did not receive the transmission, in units of 80
6			ms.
7	PROBE_BKOFF	-	Access Channel probe backoff range.
8			The base station shall set this field to one less than the
9			maximum number of slots mobile stations are to delay due to
10			random backoff between consecutive access probes.
11	BKOFF	-	Access Channel probe sequence backoff range.
12			The base station shall set this field to one less than the
13			maximum number of slots mobile stations are to delay due to
14			random backoff between successive access probe sequences
15			and before the first access probe sequence of a response
16			access.
17	MAX_REQ_SEQ	-	Maximum number of access probe sequences for an Access
18			Channel request.
19			The base station shall set this field to the maximum number
20			of access probe sequences mobile stations are to transmit for
21			an Access Channel request. The base station shall set this
22			field to a value greater than 0.
23	MAX_RSP_SEQ	-	Maximum number of access probe sequences for an Access
24			Channel response.
25			The base station shall set this field to the maximum number
26			of access probe sequences mobile stations are to transmit for
27			an Access Channel response. The base station shall set this
28			field to a value greater than 0.
29	AUTH	-	Authentication mode.
30			If mobile stations are to include standard authentication data
31			in Access Channel messages, the base station shall set this
32			field to '01'. If mobile stations are not to include
33			authentication data in Access Channel messages, the base
34			station shall set this field to '00'. All other values are
35			reserved.
36	RAND	-	Random challenge value.
37			If the AUTH field is set to '01', the base station shall set this
38			field to the random challenge value to be used by mobile
39			stations for authentication. If the AUTH field is set to any
40			other value, the base station shall omit this field.

1	NOM_PWR_EXT	-	Extended nominal transmit power.
2			If the base station is operating in Band Class 0, it shall set
3			this field to '0'.
4			If the base station is operating in Band Class 1, then it shall
5			set this field as follows:
6			If the correction factor to be used by mobile stations in the
7			open loop power estimate is between -24 dB and -9 dB
8			inclusive, the base station shall set this field to '1'; otherwise
9			(the correction factor is in the range -8 dB to 7 dB inclusive),
10			the base station shall set this field to '0'.
11	PSIST_EMG_INCL	-	Emergency persistence included indicator.
12			If PSIST_EMG is included in this message, the base station
13			shall set this field to '1'; otherwise, the base station shall set
14			this field to '0'.
15			If the base station does not support Common Channel
16			operation and if the base station includes PSISIT_EMG, which
17			is applicable to mobile stations with MOB_P_REV equal to or
18			greater than 7, the base station shall set this field to '1'.
19	PSIST_EMG	-	Persistence value for emergency call for access overload
20			classes 0 through 9.
21			If PSIST_EMG_INCL is set to '0', the base station shall omit
22			this field; otherwise, the base station shall set this field as
23			follows:
24			If a mobile station in access overload classes 0 through 9 is
25			permitted to transmit emergency requests on the Access
26			Channel, the base station shall set this field to the
27			persistence value to be used for the emergency calls. If such
28			a mobile station is not permitted to transmit emergency
29			requests on the Access Channel, the base station shall set
30			this field to '111'.
31			

3.7.2.3.2.3 Neighbor List Message

MSG_TAG: NLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
PILOT_INC	4

Zero or more occurrences of the following record:

NGHBR_CONFIG	3
NGHBR_PN	9

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

PILOT_INC - Pilot PN sequence offset index increment.

A mobile station searches for Remaining Set pilots at pilot PN sequence index values that are multiples of this value.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that mobile stations are to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

The base station shall set this field to a value in the range 1 to 15 inclusive.

1 The base station shall include one occurrence of the following two-field record for each
2 member mobile stations are to place in their Neighbor Sets. The base station may include
3 zero or more occurrences of the following record.

4 NGHBR_CONFIG - Neighbor configuration.

5 The base station shall set this field to the value shown in
6 Table 3.7.2.3.2.3-1 corresponding to the configuration of this
7 neighbor.
8

1

Table 3.7.2.3.2.3-1. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the same Paging Channel on the CDMA channel assignment on the neighbor base station.
001	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.

010	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, if processing of the <i>Extended CDMA Channel List Message</i> is supported and the <i>Extended CDMA Channel List Message</i> is being sent by the current base station, use the first CDMA Channel listed in the <i>Extended CDMA Channel List Message</i> transmitted by the current base station; otherwise, use the first CDMA Channel listed in the <i>CDMA Channel List Message</i> transmitted by the current base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.
011	<p>The base station shall set the neighbor configuration to this value if the mobile station is to enter the <i>System Determination Substate</i> of the <i>Mobile Station Initialization State</i> with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2).</p>
100-111	Reserved.

1

2

NGHBR_PN - Neighbor pilot PN sequence offset index.

3

The base station shall set this field to the pilot PN sequence offset for this neighbor, in units of 64 PN chips.

4

5

3.7.2.3.2.4 CDMA Channel List Message

MSG_TAG: CCLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6

One or more occurrences of the following field:

CDMA_FREQ	11
-----------	----

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

CDMA_FREQ - CDMA Channel frequency assignment.

The order in which occurrences of this field are included gives the designations of the supported CDMA Channels as CDMA Channel 1 through CDMA Channel N.

The base station shall include one occurrence of this field for each CDMA Channel containing a Paging Channel that is supported by this base station. If the supported CDMA Channels are in the preferred set of CDMA frequency assignments (see [2]), the base station shall include their occurrences of this field first.

The base station shall set each occurrence of this field to the CDMA channel number corresponding to the CDMA frequency assignment for that CDMA Channel (see [2]).

1 3.7.2.3.2.5 Reserved

2 No text.

3

1 3.7.2.3.2.6 Reserved

2 No text.

3

3.7.2.3.2.7 Order Message

MSG_TAG: ORDM

Field	Length (bits)
ORDER	6
ADD_RECORD_LEN	3
Order-specific fields (if used)	8 × ADD_RECORD_LEN

ORDER - Order code.

The base station shall set this field to the ORDER code (see 3.7.4) for this type of order.

ADD_RECORD_LEN - Additional record length.

The base station shall set this field to the number of octets in the order-specific fields included in this order record.

Order-specific fields - Order-specific fields.

The base station shall include order-specific fields as specified in 3.7.4 for this type of order.

1 3.7.2.3.2.8 Channel Assignment Message

2 MSG_TAG: CAM

Field	Length (bits)
ASSIGN_MODE	3
ADD_RECORD_LEN	3
Additional record fields	8 × ADD_RECORD_LEN

3

4 If ASSIGN_MODE = '000', the additional record fields shall be:

5

FREQ_INCL	1
CODE_CHAN	8
CDMA_FREQ	0 or 11
FRAME_OFFSET	4
ENCRYPT_MODE	2
SIG_ENCRYPT_MODE	0 or 3
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
RESERVED	0 - 7 (as needed)

6

7 If ASSIGN_MODE = '001', the additional record fields shall be:

8

RESPOND	1
FREQ_INCL	1
CDMA_FREQ	0 or 11

One or more occurrences of the following field:

PILOT_PN	9
----------	---

RESERVED	0 - 7 (as needed)
----------	-------------------

9

10

If ASSIGN_MODE = '010', the additional record fields shall be:

RESPOND	1
ANALOG_SYS	1
USE_ANALOG_SYS	1
BAND_CLASS	5

If ASSIGN_MODE = '011', the additional record fields shall be:

SID	15
VMAC	3
ANALOG_CHAN	11
SCC	2
MEM	1
AN_CHAN_TYPE	2
DSCC_MSB	1
BAND_CLASS	5

1 If ASSIGN_MODE = '100', the additional record fields shall be:

2

FREQ_INCL	1
RESERVED	3
BYPASS_ALERT_ANSWER	1
DEFAULT_CONFIG	3
GRANTED_MODE	2
CODE_CHAN	8
FRAME_OFFSET	4
ENCRYPT_MODE	2
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11
SIG_ENCRYPT_MODE	0 or 3
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4

3

4 If ASSIGN_MODE = '101', the additional record fields shall be:

5

RESPOND	1
FREQ_INCL	1
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11

One or more occurrences of the following field:

PILOT_PN	9
----------	---

6

7 ASSIGN_MODE - Assignment mode.

8

9 The base station shall set this field to the value shown in
10 Table 3.7.2.3.2.8-1 corresponding to the assignment mode for
11 this assignment.

Table 3.7.2.3.2.8-1. Assignment Mode

Value (binary)	Assignment Mode
000	Traffic Channel Assignment (Band Class 0 only)
001	Paging Channel Assignment (Band Class 0 only)
010	Acquire Analog System
011	Analog Voice Channel Assignment
100	Extended Traffic Channel Assignment
101	Extended Paging Channel Assignment
All other values are reserved.	

ADD_RECORD_LEN - Additional record length.

The base station shall set this field to the number of octets in the additional record fields included in this assignment record.

Additional record fields - Additional record fields.

The additional record fields are determined by the value of ASSIGN_MODE, as described below.

If the ASSIGN_MODE field is set to '000', the base station shall include the following fields:

FREQ_INCL - Frequency included indicator.

If the CDMA_FREQ field is included in this assignment record, the base station shall set this bit to '1'. If the CDMA_FREQ field is not included in this assignment record, the base station shall set this bit to '0'.

CODE_CHAN - Code channel.

The base station shall set this field to the code channel index (see [2]) in the range 1 to 63 inclusive that the mobile station is to use on the Fundamental Channel of the Forward Traffic Channel.

CDMA_FREQ - Frequency assignment.

If the FREQ_INCL bit is set to '1', the base station shall set this field to the CDMA Channel number corresponding to the CDMA frequency assignment for the CDMA Channel containing the Forward Traffic Channel the mobile station is to use. If the FREQ_INCL bit is set to '0', the base station shall omit this field.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed $\text{FRAME_OFFSET} \times 1.25$ ms relative to system timing (see [2]).

The base station shall set this field to the Forward and Reverse Traffic Channel frame offset.

ENCRYPT_MODE - Message encryption mode.

The base station shall set this field to the ENCRYPT_MODE value shown in Table 3.7.2.3.2.8-2 corresponding to the encrypting mode that is to be used for signaling messages, as specified in 2.3.12.2.

Table 3.7.2.3.2.8-2. Message Encryption Modes

ENCRYPT_MODE Field (binary)	Encryption Mode Used
00	Encryption disabled
01	Basic encryption of call control messages
10	Enhanced encryption of call control messages
11	Extended encryption of call control messages

SIG_ENCRYPT-

_MODE - General encryption mode indicator.

If ENCRYPT_MODE is set to '11', the base station shall include this field and shall set it to signaling message encryption mode, as shown in Table 3.7.4.5-1; otherwise the base station shall omit this field.

KEY_SIZE - Encryption key size indication.

If ENCRYPT_MODE is set to '10' or '11', the base station shall include this field and shall set it to the encryption key size, as shown in Table 3.7.4.5-2; otherwise the base station shall omit this field.

USE_NEW_KEY - Use new encryption key indication

If ENCRYPT_MODE is set to '10' or '11', the base station shall include this field. If this field is included, the base station shall set this field to '0' to indicate that the stored encryption key to be used by the mobile station. Otherwise, the base station shall set this field to '1' to indicate that the new encryption key to be used by the mobile station.

KEY_SEQ - Encryption key sequence number.

If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to '0', the base station shall include this field and shall set it to the encryption key sequence number to be used by the mobile station. If ENCRYPT_MODE is set to a value other than '10' or '11' or USE_NEW_KEY is set to '1', the base station shall omit this field.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the total length of the fields after the preceding ADD_RECORD_LEN field through this RESERVED field equal to an integer number of octets. The base station shall set these bits to '0'.

If the ASSIGN_MODE field is set to '001', the base station shall include the following fields:

RESPOND - Respond on new Access Channel indicator.

If the mobile station is to retransmit an *Origination Message* or *Page Response Message* after processing this channel assignment, the base station shall set this field to '1'. The base station may set this field to '0' only in response to a *Page Response Message*.

FREQ_INCL - Frequency included indicator.

If the CDMA_FREQ field is included in this assignment record, the base station shall set this bit to '1'. If the CDMA_FREQ field is not included in this assignment record, the base station shall set this bit to '0'.

1	CDMA_FREQ	-	Frequency assignment.
2			If the FREQ_INCL bit is set to '1', the base station shall set
3			this field to the CDMA Channel number corresponding to the
4			CDMA frequency assignment for the CDMA Channel
5			containing the Paging Channel the mobile station is to use.
6			If the FREQ_INCL bit is set to '0', the base station shall omit
7			this field.
8	PILOT_PN	-	Pilot PN sequence offset index.
9			The base station shall include one occurrence of this field for
10			each base station whose Paging Channel may be monitored
11			by the mobile station. For each occurrence, the base station
12			shall set this field to the pilot PN sequence offset for a base
13			station, in units of 64 PN chips. The base station having this
14			pilot PN sequence offset should support a Primary Paging
15			Channel with the same Paging Channel rate as the current
16			base station.
17	RESERVED	-	Reserved bits.
18			The base station shall add reserved bits as needed in order to
19			make the total length of the fields, after the preceding
20			ADD_RECORD_LEN field through this RESERVED field, equal
21			to an integer number of octets. The base station shall set
22			these bits to '0'.
23			
24	If the ASSIGN_MODE field is set to '010', the base station shall include the following fields:		
25	RESPOND	-	Respond on analog control channel indicator.
26			If the mobile station is to retransmit an <i>Origination Message</i>
27			or <i>Page Response Message</i> on the analog control channel (see
28			[6]) after processing this channel assignment, the base
29			station shall set this field to '1'. The base station may set
30			this field to '0' only in response to a <i>Page Response Message</i> .
31	ANALOG_SYS	-	System indicator.
32			If USE_ANALOG_SYS is equal to '0', the base station shall set
33			this field to '0'. Otherwise, the base station shall set this field
34			to '0' if the mobile station is to use analog system A, or to '1' if
35			the mobile station is to use analog system B.
36	USE_ANALOG_SYS	-	Use analog system indicator.
37			The base station shall set this field to '1' to direct the mobile
38			station to the analog system specified by ANALOG_SYS;
39			otherwise, the base station shall set this field to '0'.

1 BAND_CLASS - Band class.

2 The base station shall set this field according to values
3 defined in [30].

4
5 If the ASSIGN_MODE field is set to '011', the base station shall include the following fields:

6 SID - System identification of the analog system.

7 The base station shall set this field to the system
8 identification of the analog system supporting the assigned
9 voice channel for this assignment (see [6]).

10 VMAC - Voice mobile station attenuation code.

11 The base station shall set this field to the mobile station
12 power level associated with the assigned voice channel for
13 this assignment (see [6]).

14 ANALOG_CHAN - Voice channel number.

15 The base station shall set this field to the voice channel
16 number for this assignment (see [6]).

17 SCC - SAT color code.

18 The base station shall set this field to the supervisory audio
19 tone color code associated with the assigned voice channel. If
20 the assignment is to a narrow analog channel, the base
21 station shall set this field to the two least significant bits of
22 the DSCC.

23 MEM - Message encryption mode indicator.

24 If analog control message encryption is to be enabled on the
25 assigned forward and reverse analog voice channels, the base
26 station shall set this bit to '1'; otherwise, the base station
27 shall set this bit to '0'.

28 AN_CHAN_TYPE - Analog voice channel type.

29 The base station shall set this field to the analog channel
30 type as specified in Table 3.7.3.3.2.6-1. If the mobile station
31 does not have narrow analog capability, the base station shall
32 set this field to '00'.

33 DSCC_MSB - Digital supervisory audio tone color code most significant bit.

34 The base station shall set this field to '0' when directing
35 handoff to a wide analog channel. The base station shall set
36 this field to the most significant bit of the DSCC when
37 directing handoff to a narrow analog channel.

1	BAND_CLASS	-	Band class.
2			The base station shall set this field according to values
3			defined in [30].
4			
5	If the ASSIGN_MODE field is set to '100', the base station shall include the following fields:		
6	FREQ_INCL	-	Frequency included indicator.
7			If the BAND_CLASS and CDMA_FREQ fields are included in
8			this assignment record, the base station shall set this bit to
9			'1'. If the BAND_CLASS and CDMA_FREQ fields are not
10			included in this assignment record, the base station shall set
11			this bit to '0'.
12	RESERVED	-	Reserved bits.
13			The base station shall set this field to '000'.
14	BYPASS_ALERT-		
15	_ANSWER	-	Bypass alert indicator.
16			If the MOB_P_REV of the current band class of the mobile
17			station is less than or equal to three, the base station shall
18			set this field to '0'; otherwise, the base station shall set this
19			field as follows.
20			If the base station has received a <i>Page Response Message</i> that
21			specifies a packet data service option, and the mobile station
22			is to bypass the <i>Waiting for Order Substate</i> and the <i>Waiting for</i>
23			<i>Mobile Station Answer Substate</i> , the base station shall set this
24			field to '1'; otherwise, the base station shall set this field to
25			'0'.
26	DEFAULT_CONFIG	-	Default Configuration.
27			If the GRANTED_MODE field is set to '00', the base station
28			shall set this field as specified in Table 3.7.2.3.2.8-3 to
29			indicate an initial multiplex option and radio configuration for
30			the Forward and Reverse Traffic Channels.

Table 3.7.2.3.2.8-3. Default Configuration

Value (binary)	Default Configuration
000	Multiplex Option 1 and Radio Configuration 1 for both the Forward Traffic Channel and the Reverse Traffic Channel
001	Multiplex Option 2 and Radio Configuration 2 for both the Forward Traffic Channel and the Reverse Traffic Channel
010	Multiplex Option 1 and Radio Configuration for the Forward Traffic channel; Multiplex Option 2 and Radio Configuration for the Reverse Traffic channel
011	Multiplex Option 2 and Radio Configuration 2 for the Forward Traffic channel; Multiplex Option 1 and Radio Configuration 1 for the Reverse Traffic channel
All other values are reserved.	

GRANTED_MODE - Granted mode.

The base station shall set this field to '00' to indicate that the mobile station is to use an initial service configuration consisting of the multiplex option and radio configuration defined by the DEFAULT_CONFIG field for the Forward and Reverse Traffic Channels, and to indicate that service negotiation is to take place before the base station sends the first *Service Connect Message*.

The base station shall set this field to '01' to indicate that the mobile station is to use an initial service configuration consisting of the default multiplex option and transmission rates corresponding to the service option requested by the mobile station either in the *Origination Message* or *Page Response Message*, and to indicate that service negotiation is to take place before the base station sends the first *Service Connect Message*.

1			The base station shall set this field to '10' to indicate that the
2			mobile station is to use an initial service configuration
3			consisting of the default multiplex option and transmission
4			rates corresponding to the service option requested by the
5			mobile station either in the <i>Origination Message</i> or <i>Page</i>
6			<i>Response Message</i> , and to indicate that service negotiation is
7			not to take place before the base station sends the first
8			<i>Service Connect Message</i> .
9	CODE_CHAN	-	Code channel.
10			The base station shall set this field to the code channel index
11			(see [2]) in the range 1 to 63 inclusive that the mobile station
12			is to use on the Fundamental Channel of the Forward Traffic
13			Channel.
14	FRAME_OFFSET	-	Frame offset.
15			The Forward and Reverse Traffic Channel frames are delayed
16			FRAME_OFFSET × 1.25 ms relative to system timing (see [2]).
17			The base station shall set this field to the Forward and
18			Reverse Traffic Channel frame offset.
19	ENCRYPT_MODE	-	Message encryption mode.
20			The base station shall set this field to the ENCRYPT_MODE
21			value shown in Table 3.7.2.3.2.8-2 corresponding to the
22			encrypting mode that is to be used for signaling messages, as
23			specified in 2.3.12.2.
24	BAND_CLASS	-	Band class.
25			If the FREQ_INCL bit is set to '1', the base station shall set
26			this field to the CDMA band class, as specified in [30],
27			corresponding to the CDMA frequency assignment for the
28			CDMA Channel containing the Forward Traffic Channel the
29			mobile station is to use. If the FREQ_INCL bit is set to '0', the
30			base station shall omit this field.
31	CDMA_FREQ	-	Frequency assignment.
32			If the FREQ_INCL bit is set to '1', the base station shall set
33			this field to the CDMA Channel number, in the specified
34			CDMA band class, corresponding to the CDMA frequency
35			assignment for the CDMA Channel containing the Forward
36			Traffic Channel the mobile station is to use. If the
37			FREQ_INCL bit is set to '0', the base station shall omit this
38			field.
39	SIG_ENCRYPT_MODE	-	General encryption mode indicator.

If ENCRYPT_MODE is set to '11', the base station shall include this field and shall set it to signaling message encryption mode, as shown in Table 3.7.4.5-1; otherwise the base station shall omit this field.

KEY_SIZE - Encryption key size indication.

If ENCRYPT_MODE is set to '10' or '11', the base station shall include this field and shall set it to the encryption key size, as shown in Table 3.7.4.5-2; otherwise the base station shall omit this field.

USE_NEW_KEY - Use new encryption key indication

If ENCRYPT_MODE is set to '10' or '11', the base station shall include this field. If this field is included, the base station shall set this field to '0' to indicate that the stored encryption key to be used by the mobile station. Otherwise, the base station shall set this field to '1' to indicate that the new encryption key to be used by the mobile station.

KEY_SEQ - Encryption key sequence number.

If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to '0', the base station shall include this field and shall set it to the encryption key sequence number to be used by the mobile station. If ENCRYPT_MODE is set to a value other than '10' or '11' or USE_NEW_KEY is set to '1', the base station shall omit this field.

If the ASSIGN_MODE field is set to '101', the base station shall include the following fields:

RESPOND - Respond on new Access Channel indicator.

If the mobile station is to retransmit an *Origination Message* or *Page Response Message* after processing this channel assignment, the base station shall set this field to '1'. The base station may set this field to '0' only in response to a *Page Response Message*.

FREQ_INCL - Frequency included indicator.

If the BAND_CLASS and CDMA_FREQ fields are included in this assignment record, the base station shall set this bit to '1'. If the BAND_CLASS and CDMA_FREQ fields are not included in this assignment record, the base station shall set this bit to '0'.

BAND_CLASS - Band class.

1			If the FREQ_INCL bit is set to '1', the base station shall set
2			this field to the CDMA band class, as specified in [30],
3			corresponding to the CDMA frequency assignment for the
4			CDMA Channel containing the Paging Channel the mobile
5			station is to use. If the FREQ_INCL bit is set to '0', the base
6			station shall omit this field.
7	CDMA_FREQ	-	Frequency assignment.
8			If the FREQ_INCL bit is set to '1', the base station shall set
9			this field to the CDMA Channel number, in the specified
10			CDMA band class, corresponding to the CDMA frequency
11			assignment for the CDMA Channel containing the Paging
12			Channel the mobile station is to use. If the FREQ_INCL bit is
13			set to '0', the base station shall omit this field.
14	PILOT_PN	-	Pilot PN sequence offset index.
15			The base station shall include one occurrence of this field for
16			each base station whose Paging Channel may be monitored
17			by the mobile station. For each occurrence, the base station
18			shall set this field to the pilot PN sequence offset for a base
19			station, in units of 64 PN chips. The base station having this
20			pilot PN sequence offset should support a Primary Paging
21			Channel with the same Paging Channel rate as the current
22			base station.
23	RESERVED	-	Reserved bits.
24			The base station shall add reserved bits as needed in order to
25			make the total length of the fields after the preceding
26			ADD_RECORD_LEN field through this RESERVED field equal to
27			an integer number of octets. The base station shall set these
28			bits to '0'.
29			

3.7.2.3.2.9 Data Burst Message

MSG_TAG: DBM

Field	Length (bits)
MSG_NUMBER	8
BURST_TYPE	6
NUM_MSGS	8
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHAR _i	8
-------------------	---

MSG_NUMBER - Message number.

The base station shall set this field to the number of this message within the data burst stream.

BURST_TYPE - Data burst type.

The base station shall set the value of this field for the type of this data burst as defined in [30]. If the mobile station sets this field equal to '111110', it shall set the first two CHAR_i fields of this message equal to EXTENDED_BURST_TYPE_INTERNATIONAL as described in the definition of CHAR_i below. If the base station sets this field equal to '111111', it shall set the first two CHAR_i fields of this message equal to the EXTENDED_BURST_TYPE as described in the definition of CHAR_i below.

NUM_MSGS - Number of messages in the data burst stream.

The base station shall set this field to the number of messages in this data burst stream.

NUM_FIELDS - Number of characters in this message.

The base station shall set this field to the number of occurrences of the CHAR_i field included in this message.

CHAR_i - Character.

The base station shall include NUM_FIELDS occurrences of this field. The base station shall set these fields to the corresponding octet of the data burst stream.

If the BURST_TYPE field of this message is equal to '111110', the first two CHARi octets shall represent a 16 bit EXTENDED_BURST_TYPE_INTERNATIONAL field, which is encoded as shown below. The first ten bits of this field contain a binary mapping of the Mobile Country Code (MCC) associated with the national standards organization administering the use of the remaining octets of the message. Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the EXTENDED_BURST_TYPE_INTERNATIONAL field shall specify the COUNTRY_BURST_TYPE. The base station shall set the value of the COUNTRY_BURST_TYPE according to the type of this data burst as defined in standards governed by the country where this data burst type is to be used.

Field	Length (bits)
Mobile Country Code	10
COUNTRY_BURST_TYPE	6
Remaining CHARi fields	8 × (NUM_FIELDS - 2)

If the BURST_TYPE field of this message is equal to '111111', the first two CHARi octets shall represent a single, 16 bit, EXTENDED_BURST_TYPE field, as shown below. The base station shall set the value of the EXTENDED_BURST_TYPE according to the type of this data burst as defined in [30].

Field	Length (bits)
EXTENDED_BURST_TYPE (first two CHARi fields)	16
Remaining CHARi fields	8 × (NUM_FIELDS - 2)

1 3.7.2.3.2.10 Authentication Challenge Message

2 MSG_TAG: AUCM

Field	Length (bits)
RANDU	24

3

4 RANDU - Random challenge data.

5 The base station shall set this field to the random challenge
6 data (see 2.3.12.1.4).

7

1 3.7.2.3.2.11 SSD Update Message

2 MSG_TAG: SSDUM

Field	Length (bits)
RANDSSD	56

3

4 RANDSSD - Random data for the computation of SSD.

5 The base station shall set this field as specified in 2.3.12.1.5.

6

3.7.2.3.2.12 Feature Notification Message

MSG_TAG: FNM

Field	Length (bits)
RELEASE	1
One or more occurrences of the following record:	
RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

RELEASE - Origination completion indicator.

The base station shall set this field to '1' if this message is used to complete an origination request from the mobile station (see 2.6.3.5); otherwise, the base station shall set this field to '0'.

The base station shall include occurrences of the following three-field record as specified in 3.7.5.

RECORD_TYPE - Information record type.

The base station shall set this field as specified in 3.7.5.

RECORD_LEN - Information record length.

The base station shall set this field to the number of octets in the type-specific fields included in this record.

Type-specific fields - Type-specific fields.

The base station shall include type-specific fields as specified in 3.7.5.

1 3.7.2.3.2.13 Extended System Parameters Message

2 MSG_TAG: ESPM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
DELETE_FOR_TMSI	1
USE_TMSI	1
PREF_MSID_TYPE	2
MCC	10
IMSI_11_12	7
TMSI_ZONE_LEN	4
TMSI_ZONE	$8 \times \text{TMSI_ZONE_LEN}$
BCAST_INDEX	3
IMSI_T_SUPPORTED	1
P_REV	8
MIN_P_REV	8
SOFT_SLOPE	6
ADD_INTERCEPT	6
DROP_INTERCEPT	6
PACKET_ZONE_ID	8
MAX_NUM_ALT_SO	3
RESELECT_INCLUDED	1
EC_THRESH	0 or 5
EC_IO_THRESH	0 or 5
PILOT_REPORT	1
NGHBR_SET_ENTRY_INFO	1
ACC_ENT_HO_ORDER	0 or 1
NGHBR_SET_ACCESS_INFO	1
ACCESS_HO	0 or 1
ACCESS_HO_MSG_RSP	0 or 1

(continues on next page)

1

Field	Length (bits)
ACCESS_PROBE_HO	0 or 1
ACC_HO_LIST_UPD	0 or 1
ACC_PROBE_HO_OTHER_MSG	0 or 1
MAX_NUM_PROBE_HO	0 or 3
NGHBR_SET_SIZE	0 or 6

If NGHBR_SET_ENTRY_INFO = 1, NGHBR_SET_SIZE occurrences of the following field; otherwise, no occurrence of the following field:

ACCESS_ENTRY_HO	1
-----------------	---

If NGHBR_SET_ACCESS_INFO = 1, NGHBR_SET_SIZE occurrences of the following field; otherwise, no occurrence of the following field:

ACCESS_HO_ALLOWED	1
-------------------	---

BROADCAST_GPS_ASST	1
QPCH_SUPPORTED	1
NUM_QPCH	0 or 2
QPCH_RATE	0 or 1
QPCH_POWER_LEVEL_PAGE	0 or 3
QPCH_CCI_SUPPORTED	0 or 1
QPCH_POWER_LEVEL_CONFIG	0 or 3
SDB_SUPPORTED	1
RLGAIN_TRAFFIC_PILOT	6
REV_PWR_CNTL_DELAY_INCL	1
REV_PWR_CNTL_DELAY	0 or 2
AUTO_MSG_SUPPORTED	1
AUTO_MSG_INTERVAL	0 or 3

(continues on next page)

2

3

1

Field	Length (bits)
MOB_QOS	1
ENC_SUPPORTED	1
SIG_ENCRYPT_SUP	0 or 8
UI_ENCRYPT_SUP	0 or 8
STORE_KEY	0 or 1

2

3

PILOT_PN - Pilot PN sequence offset index.

4

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

5

6

CONFIG_MSG_SEQ - Configuration message sequence number.

7

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

8

9

DELETE_FOR_TMSI - Delete foreign TMSI.

10

The base station shall set this field to '1' to cause the mobile station to delete its TMSI if the TMSI was assigned in a different TMSI zone from that specified by the TMSI_ZONE field of this message; otherwise, the base station shall set this field to '0'.

11

12

13

14

15

USE_TMSI - Use TMSI indicator.

16

The base station shall set this field to the value shown in Table 3.7.2.3.2.13-1 corresponding to the type of MSID that the mobile station is to use on the Access Channel.

17

18

19

PREF_MSID_TYPE - Preferred Access Channel Mobile Station Identifier Type.

20

The base station shall set this field to the value shown in Table 3.7.2.3.2.13-1 corresponding to the type of MSID that the mobile station is to use on the Access Channel.

21

22

23

Table 3.7.2.3.2.13-1. Preferred MSID Types

USE_TMSI (binary)	PREF_MSID_TYP E (binary)	Description
0	00	IMSI_S and ESN
0	10	IMSI
0	11	IMSI and ESN
1	10	TMSI (valid TMSI is assigned); IMSI (TMSI not assigned)
1	11	TMSI (valid TMSI is assigned); IMSI and ESN (TMSI not assigned)
All other values are reserved.		

- MCC - Mobile Country Code.
The base station shall set this field to the MCC (see 2.3.1)
- IMSI_11_12 - 11th and 12th digits of the IMSI.
The base station shall set this field to the IMSI_11_12 (see 2.3.1).
- TMSI_ZONE_LEN - TMSI zone length.
The base station shall set this field to the number of octets included in the TMSI_ZONE. The base station shall set this field to a value in the range 1 to 8 inclusive.
- TMSI_ZONE - TMSI zone.
The base station shall set this field to the TMSI zone number as specified in [27].
- BCAST_INDEX - Broadcast slot cycle index.
To enable periodic broadcast paging, the base station shall set this field to an unsigned 3-bit number in the range 1-7, equal to the broadcast slot cycle index as defined in 2.6.2.1.1.3.3. To disable periodic broadcast paging, the base station shall set this field to '000'.
- IMSI_T_SUPPORTED - IMSI_T support indicator.
The base station shall set this field to '1' to indicate support for a 15-digit IMSI_T addressing according to [18].

1	P_REV	-	Protocol revision level.
2			The base station shall set this field to '00000111'.
3	MIN_P_REV	-	Minimum protocol revision level.
4			The base station sets this field to prevent mobile stations
5			which cannot be supported by the base station from accessing
6			the system.
7			The base station shall set this field to the minimum protocol
8			revision level that it supports. For Band Class 0 operation,
9			the base station should set this field to a value of '00000010'
10			or greater. For Band Class 1 operation, the base station
11			should set this field to a value of '00000001' or greater.
12	SOFT_SLOPE	-	The slope in the inequality criterion for adding a pilot to the
13			Active Set, or dropping a pilot from the Active Set (see
14			2.6.6.2.3 and 2.6.6.2.5.2).
15			The base station shall set this field as an unsigned binary
16			number.
17	ADD_INTERCEPT	-	The intercept in the inequality criterion for adding a pilot to
18			the Active Set (see 2.6.6.2.5.2).
19			The base station shall set this field as a two's complement
20			signed binary number, in units of dB.
21	DROP_INTERCEPT	-	The intercept in the inequality criterion for dropping a pilot
22			from the Active Set (see 2.6.6.2.3).
23			The base station shall set this field as a two's complement
24			signed binary number, in units of dB.
25	PACKET_ZONE_ID	-	Packet data services zone identifier.
26			If the base station supports a packet data service zone, the
27			base station shall set this field to its non-zero packet data
28			services zone identifier.
29			If the base station does not support a packet data service
30			zone, the base station shall set this field to '00000000'.
31	MAX_NUM_ALT_SO	-	Maximum number of alternative service options.
32			The base station shall set this field to the maximum number
33			of alternative service option numbers that the mobile station
34			is allowed to include in the <i>Origination Message</i> or the <i>Page</i>
35			<i>Response Message</i> .
36			For mobile stations with MOB_P_REV _s less than seven, the
37			alternative service options are those service options defined
38			in [30] and related to SERVICE_OPTION in <i>Origination Message</i>
39			and the <i>Page Response Message</i> .

For mobile stations with $MOB_P_REV_S$ equal to or greater than seven, the alternative service options are those service options defined in [30] without service group number assigned and related to $SERVICE_OPTION$ in *Origination Message* and the *Page Response Message*.

If the base station sets this field to a value greater than zero, in addition, the base station shall allow the mobile station with $MOB_P_REV_S$ equal to or greater than 7 to include

- a 4 or 8-bit service option bitmap in the *Origination Message* and the *Page Response Message*;
- alternate service option numbers, not limited to $MAX_ALT_SO_NUM$, in the *Enhanced Origination Message*.

RESELECT_INCLUDED - System reselection parameters included.

If the base station is including system reselection parameters, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

EC_THRESH - Pilot power threshold.

If RESELECT_INCLUDED is set to '1', the base station shall include the field EC_THRESH and set this field to:

$$\lceil (pilot_power_threshold + 115) \rceil$$

where $pilot_power_threshold$ is the pilot power, E_c , in dBm/1.23 MHz, below which the mobile station is to perform system reselection; otherwise, the base station shall omit this field.

EC_IO_THRESH - Pilot E_c/I_0 threshold.

If RESELECT_INCLUDED is set to '1', the base station shall include the field EC_IO_THRESH and set this field to:

$$\lfloor -20 \times \log_{10}(pilot_threshold) \rfloor$$

where $pilot_threshold$ is the pilot E_c/I_0 below which the mobile station is to perform system reselection; otherwise, the base station shall omit this field.

PILOT_REPORT - Pilot reporting indicator.

The base station shall set this field to '1' if the mobile station is to report the additional pilots which have pilot strengths exceeding T_ADD in all Access Channel messages. The base station shall set this field to '0' if the mobile station is to report the additional pilots which have pilot strengths exceeding T_ADD only in the *Origination Message* and the *Page Response Message*.

1	NGHBR_SET -	
2	_ENTRY_INFO	- Neighbor Set access entry handoff information included
3		indicator.
4		If the base station is including information on the Neighbor
5		Set access entry handoff, the base station shall set this field
6		to '1'; otherwise, the base station shall set this field to '0'.
7	ACC_ENT_HO_ORDER	- Access entry handoff permitted indicator.
8		If NGHBR_SET_ENTRY_INFO is set to '1', the base station
9		shall include this field and set it as described below;
10		otherwise, the base station shall omit this field.
11		The base station shall set this field to '1' if the mobile station
12		is permitted to perform an access entry handoff after
13		receiving a message while performing the <i>Mobile Station</i>
14		<i>Order and Message Processing Operation</i> in the <i>Mobile Station</i>
15		<i>Idle State</i> (see 2.6.2.4); otherwise, the base station shall set
16		this field to '0'.
17	NGHBR_SET -	
18	_ACCESS_INFO	- Neighbor Set access handoff included indicator.
19		If the base station is including information on the Neighbor
20		Set access handoff or access probe handoff, the base station
21		shall set this field to '1', otherwise, the base station shall set
22		this field to '0'.
23	ACCESS_HO	- Access handoff permitted indicator.
24		If NGHBR_SET_ACCESS_INFO is set to '1', the base station
25		shall include this field and set it as described below;
26		otherwise, the base station shall omit this field.
27		The base station shall set this field to '1' if the mobile station
28		is permitted to perform an access handoff (see 2.6.3.1.3.2);
29		otherwise, the base station shall set this field to '0'.
30	ACCESS_HO_MSG_RSP	- Access handoff permitted for message response indicator.
31		If ACCESS_HO is set to '1', the base station shall include this
32		field and set it as described below; otherwise, the base station
33		shall omit this field.
34		The base station shall set this field to '1' if the mobile station
35		is permitted to perform an access handoff after receiving a
36		message and before responding to that message in the <i>System</i>
37		<i>Access State</i> ; otherwise, the base station shall set this field to
38		'0'.
39	ACCESS_PROBE_HO	- Access probe handoff permitted indicator.

1			If NGHBR_SET_ACCESS_INFO is set to '1', the base station
2			shall include this field and set it as described below;
3			otherwise, the base station shall omit this field.
4			The base station shall set this field to '1' if the mobile station
5			is permitted to perform an access probe handoff (see
6			2.6.3.1.3.3); otherwise, the base station shall set this field to
7			'0'.
8	ACC_HO_LIST_UPD	-	Access handoff list update permitted indicator.
9			If ACCESS_PROBE_HO is included and is set to '1', the base
10			station shall include this field and set it as described below;
11			otherwise, the base station shall omit this field.
12			The base station shall set this field to '1' if the mobile station
13			is permitted to update the access handoff list during an
14			access attempt (see 2.6.3.1.7.2); otherwise, the base station
15			shall set this field to '0'.
16	ACC_PROBE_HO-		
17	_OTHER_MSG	-	Access probe handoff permitted for messages other than the
18			<i>Origination Message</i> and the <i>Page Response Message</i> .
19			If ACCESS_PROBE_HO is set to '1', the base station shall
20			include this field and set it as described below; otherwise, the
21			base station shall omit this field.
22			The base station shall set this field to '1' if the mobile station
23			is permitted to perform an access probe handoff for messages
24			other than the <i>Origination Message</i> and the <i>Page Response</i>
25			<i>Message</i> . The base station shall set this field to '0' if the
26			mobile station is permitted to perform an access probe
27			handoff only for the <i>Origination Message</i> and the <i>Page</i>
28			<i>Response Message</i> . See 2.6.3.1.3.3.
29	MAX_NUM_PROBE_HO	-	Maximum number of times that the mobile station is
30			permitted to perform an access probe handoff.
31			If ACCESS_PROBE_HO is set to '1', the base station shall
32			include this field and set it as described below; otherwise, the
33			base station shall omit this field.
34			The base station shall set this field to the maximum number
35			of times the mobile station is allowed to perform an access
36			probe handoff within an access attempt minus one.
37	NGHBR_SET_SIZE	-	Size of the Neighbor Set.

1 If NGHBR_SET_ENTRY_INFO or NGHBR_SET_ACCESS_INFO is
 2 equal to '1', the base station shall set this field to the number
 3 of pilots included in the *Neighbor List Message, Extended*
 4 *Neighbor List Message*, or *General Neighbor List Message*;
 5 otherwise, the base station shall omit this field.

6 If NGHBR_SET_ENTRY_INFO is equal to '1', the base station shall include NGHBR_SET_SIZE
 7 occurrences of the following field:

8 ACCESS_ENTRY_HO - Access entry handoff permitted when entering the System
 9 Access State.

10 The base station shall set this field to '1' if the mobile station
 11 is permitted to perform an access entry handoff to the base
 12 station associated with the corresponding pilot between the
 13 time it receives a message on the Paging Channel when in
 14 the *Mobile Station Idle State* and it enters the *System Access*
 15 *State* to respond to the message; otherwise, the base station
 16 shall set this field to '0'. The base station shall use the same
 17 order for the ACCESS_ENTRY_HO fields in this message as is
 18 used for pilots which are listed in the *Neighbor List Message*,
 19 *Extended Neighbor List Message*, or *General Neighbor List*
 20 *Message*. Specifically, the i^{th} occurrence of the
 21 ACCESS_ENTRY_HO field shall correspond the i^{th} pilot in the
 22 *Neighbor List Message, Extended Neighbor List Message*, or
 23 *General Neighbor List Message*.

24 If NGHBR_SET_ACCESS_INFO is equal to '1', the base station shall include
 25 NGHBR_SET_SIZE occurrences of the following field:

26 ACCESS_HO_ALLOWED - Access handoff and access probe handoff permitted for the
 27 corresponding pilot while in the *System Access State*.

28 The base station shall set this field to '1' if the mobile station
 29 is permitted to perform an access handoff or access probe
 30 handoff to the base station associated with the corresponding
 31 pilot when the mobile station is in the *System Access State*
 32 (see 2.6.3.1.8 and 2.6.3.1.9); otherwise, the base station shall
 33 set this field to '0'. The base station shall use the same order
 34 for the ACCESS_HO_ALLOWED fields in this message as is
 35 used for pilots which are listed in the *Neighbor List Message*,
 36 *Extended Neighbor List Message*, or *General Neighbor List*
 37 *Message*. Specifically, the i^{th} occurrence of the
 38 ACCESS_HO_ALLOWED field shall correspond the i^{th} pilot in
 39 the *Neighbor List Message, Extended Neighbor List Message*, or
 40 *General Neighbor List Message*.

41 BROADCAST_GPS_ASST - Broadcast GPS Assist Indicator.

The base station shall set this field to '1' if it supports Broadcast GPS Assist capability; otherwise, the base station shall set this field to '0'.

QPCH_SUPPORTED - Quick Paging Channel Supported Indication.

If the base station supports Quick Paging Channel operation, the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

NUM_QPCH - Number of Quick Paging Channels.

If the base station sets QPCH_SUPPORTED to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the number of Quick Paging Channels on this CDMA Channel. The base station shall not set this field to '00'.

QPCH_RATE - Quick Paging Channel indicator rate.

If the base station sets QPCH_SUPPORTED to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the QPCH_RATE field value shown in Table 3.7.2.3.2.13-2 corresponding to the indicator rate used by the Quick Paging Channel in the system.

Table 3.7.2.3.2.13-2. QPCH Indicator Data Rate

QPCH_RATE Field (binary)	QPCH indicator data rate
0	4800 bps
1	9600 bps

QPCH_POWER-

_LEVEL_PAGE - Quick Paging Channel paging indicator transmit power level.

If the base station sets QPCH_SUPPORTED to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the Quick Paging Channel paging indicator transmit power level relative to that of the Pilot Channel as specified in Table 3.7.2.3.2.13-3.

Table 3.7.2.3.2.13-3 Quick Paging Channel Transmit Power Level

QPCH_POWER_LEVEL_PAGE QPCH_POWER_LEVEL_CONFI G (binary)	Transmit Power Level
000	5 dB below the Pilot Channel Transmit Power
001	4 dB below the Pilot Channel Transmit Power
010	3 dB below the Pilot Channel Transmit Power
011	2 dB below the Pilot Channel Transmit Power
100	1 dB below the Pilot Channel Transmit Power
101	Same as the Pilot Channel Transmit Power
110	1 dB above the Pilot Channel Transmit Power
111	2 dB above the Pilot Channel Transmit Power

1	QPCH_CCI_SUPPORTED	-	Quick Paging Channel configuration change indicator supported.
2			
3			If QPCH_SUPPORTED is set to '1', the base station shall
4			include this field and set it as described below; otherwise, the
5			base station shall omit this field.
6			If the base station supports configuration change indicators
7			on the Quick Paging Channel, the base station shall set this
8			field to '1'; otherwise the base station shall set this field to '0'.
9	QPCH_POWER_LEVEL -	-	Quick Paging Channel configuration change indicator
10	_CONFIG		transmit power level.
11			If the base station includes the QPCH_CCI_SUPPORTED field
12			and sets it to '1', the base station shall include this field and
13			set it as described below; otherwise, the base station shall
14			omit this field.
15			The base station shall set this field to the Quick Paging
16			Channel configuration change indicator transmit power level
17			relative to that of the Pilot Channel as specified in Table
18			3.7.2.3.2.13-3.
19	SDB_SUPPORTED	-	Short Data Burst supported indicator.
20			The base station shall set this field to '1' if the mobile station
21			is permitted to send a Short Data Burst; otherwise, the base
22			station shall set this field to '0'.
23	RLGAIN_TRAFFIC_PILOT	-	Gain adjustment of the Reverse Traffic Channel relative to
24			the Reverse Pilot Channel for Radio Configurations greater
25			than 2.
26			The base station shall set this field to the correction factor to
27			be used by mobile stations in setting the power of a reverse
28			traffic channel, expressed as a two's complement value in
29			units of 0.125 dB (see 2.1.2.3.3 of [2]).
30	REV_PWR-		
31	_CNTL_DELAY_INCL	-	Reverse Power Control Delay included indicator.
32			The base station shall set this field to '1' if the base station
33			includes the REV_PWR_CNTL_DELAY field in this message;
34			otherwise, the base station shall set this field to '0'.
35	REV_PWR-		
36	_CNTL_DELAY	-	The reverse power control delay.
37			If REV_PWR_CNTL_INCL is set to '0', the base station shall
38			omit this field; otherwise, the base station shall include this
39			field and set it as follows:

The base station shall set this field to the closed-loop reverse power control delay minus one (the closed-loop reverse power control delay is the time between the end of a gated-on reverse PCG and the beginning of the reverse PCG where the corresponding feedback is sent on the Forward Power Control Subchannel, see 2.1.2.3.2 of [2]), in units of 1.25 ms.

AUTO_MSG-

_SUPPORTED - Autonomous message supported indicator.

If the base station allows the autonomous delivery of the *Device Information Message* on the r-csch, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

AUTO_MSG-

_INTERVAL - Autonomous message interval.

If AUTO_MSG_SUPPORTED is set to '1', the base station shall set this field to the AUTO_MSG_INTERVAL value shown in Table 3.7.2.3.2.13-4 to indicate the minimum time interval between autonomous messages sent by a mobile station to the infrastructure. This parameter is intended to allow the infrastructure to limit the frequency of autonomous messages sent by a mobile station on the r-csch.

Table 3.7.2.3.2.13-4. AUTO_MSG_INTERVAL Values

AUTO_MSG_INTERVAL (binary)	Interval Length (milliseconds)
000	200
001	500
010	1000
011	1500
100	2000
101	5000
110	10000
111	15000

MOB_QOS - Indicator granting permission to the mobile station to request QoS parameter settings in the *Origination Message*.

1			The base station shall set this field to '1', if the mobile station
2			is allowed to include a QoS record in the <i>Origination Message</i> ,
3			or to '0', otherwise.
4	ENC_SUPPORTED	–	Encryption fields included.
5			The base station shall set this field to '1' if the encryption
6			related fields are included; otherwise the base station shall
7			set this field to '0'.
8	SIG_ENCRYPT_SUP	–	Signaling Encryption supported indicator.
9			The base station shall include this field only if
10			ENC_SUPPORTED is equal to '1'. If this field is included, this
11			field indicates which signaling encryption algorithms are
12			supported by the mobile station.
13			This field consists of the subfields shown in Table 2.7.1.3.2.1-
14			5.
15	UI_ENCRYPT_SUP	–	User information Encryption supported indicator.
16			The base station shall include this field only if
17			ENC_SUPPORTED is equal to '1'. If this field is included, the
18			base station shall set this field to indicate the supported user
19			information encryption algorithms.
20			This field consists of the subfields shown in Table 2.7.1.3.2.4-
21			7.
22			The base station shall set each subfield to '1' if the
23			corresponding user information encryption algorithm is
24			supported by the base station; otherwise, the base station
25			shall set the subfield to '0'.
26	STORE_KEY	–	Store session key indicator
27			The base station shall include this field only if
28			ENC_SUPPORTED is equal to '1'. If this field is included, the
29			base station shall set this field to '1' to indicate that the
30			mobile station is to store the session key; otherwise the base
31			station shall set this field to '0'.
32			
33			

3.7.2.3.2.14 Extended Neighbor List Message

MSG_TAG: ENLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
PILOT_INC	4

Zero or more occurrences of the following record:

NGHBR_CONFIG	3
NGHBR_PN	9
SEARCH_PRIORITY	2
FREQ_INCL	1
NGHBR_BAND	0 or 5
NGHBR_FREQ	0 or 11

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

PILOT_INC - Pilot PN sequence offset index increment.

A mobile station searches for Remaining Set pilots at pilot PN sequence index values that are multiples of this value.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that mobile stations are to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

The base station shall set this field to a value in the range 1 to 15 inclusive.

The base station shall include one occurrence of the following record for each pilot that a mobile station is to place in its Neighbor Set.

NGHBR_CONFIG - Neighbor configuration.

The base station shall set this field to the value shown in Table 3.7.2.3.2.14-1 corresponding to the configuration of this neighbor.

Table 3.7.2.3.2.14-1. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the same Paging Channel on the CDMA channel assignment on the neighbor base station.
001	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.

010	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, if processing of the <i>Extended CDMA Channel List Message</i> is supported and the <i>Extended CDMA Channel List Message</i> is being sent by the current base station, use the first CDMA Channel listed in the <i>Extended CDMA Channel List Message</i> transmitted by the current base station; otherwise, use the first CDMA Channel listed in the <i>CDMA Channel List Message</i> transmitted by the current base station. Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.
011	<p>The base station shall set the neighbor configuration to this value if the mobile station is to enter the <i>System Determination Substate</i> of the <i>Mobile Station Initialization State</i> with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2).</p> <p>If FREQ_INCL equals '0' for this record, this CDMA frequency assignment has a Pilot Channel. If FREQ_INCL equals '1' for this record, the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ has a Pilot Channel.</p>
100-111	Reserved.

1

2

NGHBR_PN - Neighbor pilot PN sequence offset index.

3

4

The base station shall set this field to the pilot PN sequence offset for this neighbor, in units of 64 PN chips.

5

SEARCH_PRIORITY - Pilot Channel search priority.

6

7

8

9

The base station shall set this field to the search priority for the Pilot Channel corresponding to NGHBR_PN. The base station shall set the search priority as shown in Table 3.7.2.3.2.14-2.

Table 3.7.2.3.2.14-2. Search Priority Field

Value (binary)	Search Priority
00	Low
01	Medium
10	High
11	Very high

FREQ_INCL - Frequency included indicator.

If the NGHBR_BAND and NGHBR_FREQ fields are included for this neighbor base station, the base station shall set this bit to '1'. If the NGHBR_BAND and NGHBR_FREQ fields are not included for this neighbor base station, the base station shall set this bit to '0'.

NGHBR_BAND - Neighbor band class.

If the FREQ_INCL bit is set to '1', the base station shall set this field to the CDMA band class, as specified in [30], corresponding to the CDMA frequency assignment for the CDMA Channel containing the Paging Channel the mobile station is to search. If the FREQ_INCL bit is set to '0', the base station shall omit this field.

NGHBR_FREQ - Neighbor frequency assignment.

If the FREQ_INCL bit is set to '1', the base station shall set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA frequency assignment for the CDMA Channel containing the Paging Channel the mobile station is to search. If the FREQ_INCL bit is set to '0', the base station shall omit this field.

1 3.7.2.3.2.15 Status Request Message

2 MSG_TAG: STRQM

Field	Length (bits)
RESERVED	4
QUAL_INFO_TYPE	8
QUAL_INFO_LEN	3
Type -specific fields	8 × QUAL_INFO_LEN
NUM_FIELDS	4

NUM_FIELDS occurrences of the following field:

RECORD_TYPE	8
-------------	---

3

4 RESERVED - Reserved bits.

5 The base station shall set this field to '0000'.

6 QUAL_INFO_TYPE - Qualification information type.

7 The base station shall set this field to the value shown in
 8 Table 3.7.2.3.2.15-1 to show the inclusion of qualification
 9 information in the type -specific fields. The base station shall
 10 include the required qualification information in this
 11 message.

12

Table 3.7.2.3.2.15-1. Qualification Information Type

Value (binary)	Included Information
00000000	None
00000001	BAND_CLASS
00000010	BAND_CLASS and OP_MODE
All other values are reserved.	

13

1

Table 3.7.2.3.2.15-2. Status Information Record Types

Information Record Requested	Record Type (see Table 2.7.4-1) (binary)	QUAL_INFO_TYP E (binary)
Reserved for obsolete Identification	00000110	-
Call Mode	00000111	00000000
Terminal Information	00001000	00000010
Roaming Information	00001001	00000010
Security Status	00001010	00000000
IMSI	00001100	00000000
ESN	00001101	00000000
Band Class Information	00001110	00000000
Power Class Information	00001111	00000010
Operating Mode Information	00010000	00000001
Service Option Information	00010001	00000010
Multiplex Option Information	00010010	00000010
Service Configuration	00010011	00000000
Power Control Information	00010111	00000000
IMSI_M	00011000	00000000
IMSI_T	00011001	00000000
Capability Information	00011010	00000000
Channel Configuration Capability Information	00011100	00000000
Extended Multiplex Option Information	00011101	00000000
Geo-location Information	00011110	00000000
Band Subclass Information	00011111	00000001
Hook Status	00100000	00000000
Encryption Capability	00100001	00000000
All other record type values are reserved.		

2

1 QUAL_INFO_LEN - Qualification information length.
 2
 3 The base station shall set this field to the number of octets
 4 included in the type-specific fields of the qualification
 information.

5 Type-specific fields - Type-specific fields.
 6
 7 The base station shall set these fields to the qualification
 information according to the QUAL_INFO_TYPE field.
 8 If QUAL_INFO_TYPE is equal to '00000000', the type-specific
 9 fields are omitted.
 10 If QUAL_INFO_TYPE is equal to '00000001', the base station
 11 shall use the following fixed-length format for the type-
 12 specific fields:

Type-specific Field	Length (bits)
BAND_CLASS	5
RESERVED	3

14
 15 If QUAL_INFO_TYPE is equal to '00000010', the base station
 16 shall use the following fixed-length format for the type-
 17 specific fields:

Type-specific Field	Length (bits)
BAND_CLASS	5
OP_MODE	8
RESERVED	3

19
 20 BAND_CLASS - Band class.
 21 The base station shall set this field as defined in [30] to
 22 specify the band class qualification information.

23 OP_MODE - Operating mode.
 24 The base station shall set this field as shown in
 25 Table 3.7.2.3.2.15-3 to specify the operating mode
 26 qualification information if MOB_P_REV of the current band
 27 class is less than or equal to three. The base station shall
 28 set this field as shown in Table 3.7.2.3.2.15-4 to specify the
 29 operating mode qualification information if MOB_P_REV of the
 30 current band class is greater than three.

Table 3.7.2.3.2.15-3. Operating Mode for MOB_P_REV Less Than or Equal to Three

Description	Value (binary)
CDMA mode in Band Class 1 [24]	00000000
CDMA mode in Band Class 0 [24]	00000001
analog mode [24]	00000010
wide analog mode [22]	00000011
narrow analog mode [22]	00000100
All other values are reserved.	

Table 3.7.2.3.2.15-4. Operating Mode for MOB_P_REV Greater Than Three

Description	Standards for Band Class 0 and Band Class 1	Value (binary)
CDMA mode	[24]	00000000 or 00000001
Analog mode	[24]	00000010
Wide analog mode	[22]	00000011
Narrow analog mode	[22]	00000100
All other values are reserved.		

NUM_FIELDS - Number of requested fields in this message.

The base station shall set this field to the number of occurrences of RECORD_TYPE in this message.

The base station shall only request the status information records qualified by the included qualification information in this message. The base station shall include one occurrence of the following field for each information record that is requested:

RECORD_TYPE - Information record type.

The base station shall set this field to the record type value shown in Table 3.7.2.3.2.15-2 corresponding to the information record requested.

3.7.2.3.2.16 Service Redirection Message

MSG_TAG: SRDM

Field	Length (bits)
RETURN_IF_FAIL	1
DELETE_TMSI	1
REDIRECT_TYPE	1

One occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

RETURN_IF_FAIL - Return if fail indicator.

The base station shall set this field to '1' if the mobile station is required to return to the system from which it is being redirected upon failure to obtain service using the redirection criteria specified in this message; otherwise, the base station shall set this field to '0'.

DELETE_TMSI - Delete TMSI indicator.

The base station shall set this field to '1' if the mobile station is required to delete the TMSI assigned to the mobile station; otherwise, the base station shall set this field to '0'.

REDIRECT_TYPE - Redirect indicator.

The base station shall set this field to the REDIRECT_TYPE value shown in table 3.7.2.3.2.16-2 corresponding to the redirection type.

Table 3.7.2.3.2.16-1. Redirection Types

Description	REDIRECT_TYPE (binary)
Normal redirection	0
NDSS redirection	1

The base station shall include one occurrence of the following record:

RECORD_TYPE - Redirection record type.

The base station shall set this field to the RECORD_TYPE value shown in Table 3.7.2.3.2.16-2 corresponding to the type of redirection specified by this record.

Table 3.7.2.3.2.16-2. Redirection Record Types

Description	RECORD_TYPE (binary)
NDSS off indication	00000000
Redirection to an analog system as defined in [12], [21], [22], [25], [24], and [6]	00000001
Redirection to a CDMA system as defined in [24] and [2]	00000010
Redirection to a TACS analog system as defined in Department of Trade and Industry's TACS Mobile Station-Land Station Compatibility Specification, Issue 4, Amendment 1.	00000011
Redirection to a JTACS analog system as defined in ARIB's RCR STD-36.	00000100
All other RECORD_TYPE values are reserved	

RECORD_LEN - Redirection record length.

If RECORD_TYPE equals to '00000000', the base station shall set this field to '00000000'; otherwise, the base station shall set this field to the number of octets in the type-specific fields of this redirection record.

Type-specific fields - Redirection record type-specific fields.

The base station shall include type-specific fields based on the RECORD_TYPE of this redirection record.

If RECORD_TYPE is equal to '00000000', the base station shall not include the type-specific fields.

If RECORD_TYPE is equal to '00000001', the base station shall include the following fields:

Field	Length (bits)
EXPECTED_SID	15
IGNORE_CDMA	1
SYS_ORDERING	3
RESERVED	5

1

2

EXPECTED_SID - Expected SID.

3

4

5

6

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

7

IGNORE_CDMA - Ignore CDMA Available indicator.

8

9

10

11

12

13

14

15

The base station shall set this field to '1' to indicate that the mobile station is to ignore the *CDMA Capability Message* on the analog system to which it is being redirected. The base station shall set this field to '0' to indicate that the mobile station may discontinue service on the system to which it is being redirected if the mobile station receives a *CDMA Capability Message* with CDMA_AVAIL equal to '1', and the preferred mode of the mobile station is CDMA.

16

SYS_ORDERING - System ordering.

17

18

19

20

The base station shall set this field to the SYS_ORDERING value shown in Table 3.7.2.3.2.16-3 corresponding to the order in which the mobile station is to attempt to obtain service on an analog system.

21

Table 3.7.2.3.2.16-3. SYS_ORDERING

Description	SYS_ORDERING (binary)
Attempt to obtain service on either System A or B in accordance with the custom system selection process (see 2.6.1.1.1).	000
Attempt to obtain service on System A only.	001
Attempt to obtain service on System B only.	010
Attempt to obtain service on System A first. If unsuccessful, attempt to obtain service on System B.	011
Attempt to obtain service on System B first. If unsuccessful, attempt to obtain service on System A.	100
Attempt to obtain service on either System A or System B. If unsuccessful, attempt to obtain service on the alternate system (System A or System B).	101
All other SYS_ORDERING values are reserved	

RESERVED - Reserved bits.

The base station shall set this field to '00000'.

If RECORD_TYPE is equal to '00000010', the base station shall include the following fields:

1

Subfield	Length (bits)
BAND_CLASS	5
EXPECTED_SID	15
EXPECTED_NID	16
RESERVED	4
NUM_CHANS	4

NUM_CHANS occurrences of the following field:

CDMA_CHAN	11
-----------	----

RESERVED	0-7 (as needed)
----------	-----------------

2

3

BAND_CLASS - Band class.

4

The base station shall set this field to the CDMA band class, as specified in [30].

5

6

EXPECTED_SID - Expected SID.

7

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

8

9

10

11

EXPECTED_NID - Expected NID.

12

If the base station is redirecting the mobile station to a specific network, the base station shall set this field to the NID of that network; otherwise, the base station shall set this field to 65535.

13

14

15

16

RESERVED - Reserved bits.

17

The base station shall set this field to '0000'.

18

NUM_CHANS - Number of CDMA Channels.

19

The base station shall set this field to the number of occurrences of the CDMA_CHAN field in this record.

20

21

CDMA_CHAN - CDMA Channel number.

22

For each CDMA Channel on which the mobile station is to attempt to acquire a CDMA system, the base station shall include one occurrence of this field specifying the associated CDMA Channel number.

23

24

25

1 RESERVED - Reserved bits.

2 The base station shall add reserved bits as needed in order to

3 make the length of the record equal to an integer number of

4 octets. The base station shall set these bits to '0'.

5

3.7.2.3.2.17 General Page Message

MSG_TAG: GPM

When Layer 3 at the base station sends a PDU corresponding to the *General Page Message* to Layer 2, it also sends the GPM Common fields to Layer 2. These GPM Common fields and PDUs are used by Layer 2 to assemble a Layer 2 PDU corresponding to the *General Page Message* (see 3.1.2.3 of [4]).

GPM Common Fields:

Field	Length (bits)
CONFIG_MSG_SEQ	6
ACC_MSG_SEQ	6
CLASS_0_DONE	1
CLASS_1_DONE	1
TMSI_DONE	1
ORDERED_TMSIS	1
BROADCAST_DONE	1
RESERVED	4
ADD_LENGTH	3
ADD_PFIELD	$8 \times \text{ADD_LENGTH}$

PDU Format for a mobile station-addressed page:

Field	Length (bits)
SPECIAL_SERVICE	1
SERVICE_OPTION	0 or 16

PDU Format for a broadcast page:

Field	Length (bits)
-	0

PDU Format for an enhanced broadcast page:

Field	Length (bits)
BCCH_INDEX	3
TIME_OFFSET	10
REPEAT_INCL	1
REPEAT_TIME_OFFSET	0 or 5
ADD_FIELDS_INCL	1
ADD_LEN	0 or 4
ADD_RECORD	0 or $8 \times \text{ADD_LEN}$

- CONFIG_MSG_SEQ - Configuration message sequence number.
- The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).
- ACC_MSG_SEQ - Access parameters message sequence number.
- The base station shall set this field to ACC_CONFIG_SEQ (see 3.6.2.2).
- CLASS_0_DONE - Class 0 pages are done.
- If all messages and records directed to mobile stations operating in the slotted mode, active in this slot, and having an assigned class 0 IMSI have been sent by the end of this *General Page Message*, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.
- CLASS_1_DONE - Class 1 pages are done.
- If all messages and records directed to mobile stations operating in the slotted mode, active in this slot, and having an assigned class 1 IMSI have been sent by the end of this *General Page Message*, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.
- TMSI_DONE - TMSI pages are done.
- If all the page records having PAGE_CLASS equal to '10' or other directed messages for mobile stations operating in the slotted mode, active in this slot, and having an assigned TMSI have been sent by the end of this *General Page Message*, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

1	ORDERED_TMSIS	-	TMSIs sent in numerical order.
2			If all the page records of PAGE_CLASS equal to '10' are sent
3			such that the TMSI code values of the TMSI_CODE_ADDR
4			fields for the mobile stations operating in the slotted mode
5			are in ascending numerical order in all the <i>General Page</i>
6			<i>Messages</i> sent within this slot, the base station shall set this
7			field to '1'; otherwise, the base station shall set this field to
8			'0'.
9	BROADCAST_DONE	-	Broadcast pages are done.
10			If all broadcast page records (PAGE_CLASS equal to '11') have
11			been sent by the end of this <i>General Page Message</i> , the base
12			station shall set this field to '1'; otherwise, the base station
13			shall set this field to '0'.
14	RESERVED	-	Reserved bits.
15			The base station shall set this field to '0000'.
16	ADD_LENGTH	-	Number of octets in the page message specific fields.
17			If there are no additional page message specific fields, the
18			base station shall set this field to '000'.
19	ADD_PFIELD	-	Additional page message specific fields.
20			The base station shall not include any additional page
21			message specific fields, if ADD_LENGTH is '000'.
22	SPECIAL_SERVICE	-	Special service option indicator.
23			If this field is included in the page type-specific field, the base
24			station shall set this field to '1' to request a special service
25			option.
26	SERVICE_OPTION	-	Service option.
27			If the SPECIAL_SERVICE field is included in the page type-
28			specific fields, and is set to '1', the base station shall set this
29			field to the service option code shown in [30], corresponding to
30			the requested service option. If the SPECIAL_SERVICE field is
31			not included in the page type-specific fields, or is included
32			and is set to '0', the base station shall omit this field.
33	BCCH_INDEX	-	BCCH index.
34			The base station shall set this field to the index of the BCCH
35			to which the mobile station is being redirected.
36	TIME_OFFSET	-	BCCH offset.

1 The base station shall set this field to one less than the time
 2 offset, in units of 40 ms, from the beginning of the slot in
 3 which this message began to the beginning of the Broadcast
 4 Control Channel slot to which the mobile station is being
 5 directed.

6 REPEAT_TIME-

7 _OFFSET - BCCH offset of repeat.

8 The base station shall set this field to one less than the time
 9 offset, in units of 40 ms, from the time specified by
 10 TIME_OFFSET to the beginning of the Broadcast Control
 11 Channel slot to which the mobile station is being directed for
 12 a repeat of the broadcast message.

13 ADD_FIELDS_INCL - Additional Fields Included.

14 If additional fields are included, the base station shall set this
 15 field to '1'; otherwise, the base station shall set this field to
 16 '0'. The base station shall set this field to '0'.

17 ADD_LEN - Length of the additional record.

18 If ADD_FIELDS_INCL is set to '1', the base station shall set
 19 ADD_LEN to the length of the additional record in octets;
 20 otherwise the base station shall omit this field.

21 ADD_RECORD - Additional record.

22 If ADD_FIELDS_INCL is set to '1', the base station shall set
 23 this field to all zeroes such that the length is $8 \times \text{ADD_LEN}$
 24 bits.

25

26

1 3.7.2.3.2.18 Global Service Redirection Message

2 MSG_TAG: GSRDM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
REDIRECT_ACCOLC	16
RETURN_IF_FAIL	1
DELETE_TMSI	1
EXCL_P_REV_MS	1

One occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

3

4 PILOT_PN - Pilot PN sequence offset index.

5 The base station shall set this field to the pilot PN sequence
6 offset for this base station, in units of 64 PN chips.

7 CONFIG_MSG_SEQ - Configuration message sequence number.

8 The base station shall set this field to CONFIG_SEQ
9 (see 3.6.2.2).

10

REDIRECT_ACCOLC - Redirected access overload classes.

This field consists of the following subfields:

Subfield	Length (bits)	Subfield Description
ACCOLC_0	1	Access overload class 0
ACCOLC_1	1	Access overload class 1
ACCOLC_2	1	Access overload class 2
ACCOLC_3	1	Access overload class 3
ACCOLC_4	1	Access overload class 4
ACCOLC_5	1	Access overload class 5
ACCOLC_6	1	Access overload class 6
ACCOLC_7	1	Access overload class 7
ACCOLC_8	1	Access overload class 8
ACCOLC_9	1	Access overload class 9
ACCOLC_10	1	Access overload class 10
ACCOLC_11	1	Access overload class 11
ACCOLC_12	1	Access overload class 12
ACCOLC_13	1	Access overload class 13
ACCOLC_14	1	Access overload class 14
ACCOLC_15	1	Access overload class 15

The base station shall set the subfields corresponding to the access overload classes of mobile stations which are to be redirected to '1', and shall set the remaining subfields to '0'.

- 1 RETURN_IF_FAIL - Return if fail indicator.
- 2 The base station shall set this field to '1' if the mobile station
- 3 is required to return to the system from which it is being
- 4 redirected upon failure to obtain service using the redirection
- 5 criteria specified in this message; otherwise, the base
- 6 station shall set this field to '0'.
- 7 DELETE_TMSI - Delete TMSI indicator.
- 8 The base station shall set this field to '1' if the mobile station,
- 9 which the corresponding REDIRECT_ACCOLC subfield is set
- 10 to '1', is required to delete the TMSI assigned to the mobile
- 11 station; otherwise, the base station shall set this field to '0'.
- 12 EXCL_P_REV_MS - Exclude redirection indicator.
- 13 If this message does not apply to mobile stations with
- 14 MOB_P_REV greater than or equal to six, the base station
- 15 shall set this field to '1'; otherwise, the base station shall set
- 16 this field to '0'.

17

18 The base station shall include one occurrence of the following three-field record:

- 19 RECORD_TYPE - Redirection record type.
- 20 The base station shall set this field to the RECORD_TYPE
- 21 value shown in Table 3.7.2.3.2.16-2 corresponding to the type
- 22 of redirection specified by this record.
- 23 RECORD_LEN - Redirection record length.
- 24 The base station shall set this field to the number of octets in
- 25 the type-specific fields of this redirection record.
- 26 Type-specific fields - Redirection record type-specific fields.
- 27 The base station shall include type-specific fields based on
- 28 the RECORD_TYPE of this redirection record.

29 If RECORD_TYPE is equal to '00000001', the base station shall include the following fields:

30

Field	Length (bits)
EXPECTED_SID	15
IGNORE_CDMA	1
SYS_ORDERING	3
MAX_REDIRECT_DELAY	5

31

1	EXPECTED_SID	-	Expected SID.
2			If the base station is redirecting the mobile station to a
3			specific system, the base station shall set this field to the SID
4			of that system; otherwise, the base station shall set this field
5			to 0.
6	IGNORE_CDMA	-	Ignore CDMA Available indicator.
7			The base station shall set this field to '1' to indicate that the
8			mobile station is to ignore the <i>CDMA Capability Message</i> on
9			the analog system to which it is being redirected. The base
10			station shall set this field to '0' to indicate that the mobile
11			station may discontinue service on the system to which it is
12			being redirected if the mobile station receives a <i>CDMA</i>
13			<i>Capability Message</i> with CDMA_AVAIL equal to '1', and the
14			preferred mode of the mobile station is CDMA.
15	SYS_ORDERING	-	System ordering.
16			The base station shall set this field to the SYS_ORDERING
17			value shown in Table 3.7.2.3.2.16-3 corresponding to the
18			order in which the mobile station is to attempt to obtain
19			service on an analog system.
20	MAX_REDIRECT_DELAY	-	Maximum delay upon redirection.
21			The base station shall set this field to the maximum delay
22			time, in units of 8 second increments, to be used by mobile
23			stations in the event of a global redirection to analog mode.
24			This operation can be invoked to avoid overloading an
25			underlying analog cell's reverse control channel.

26

If RECORD_TYPE is equal to '00000010', the base station shall include the following fields:

Subfield	Length (bits)
BAND_CLASS	5
EXPECTED_SID	15
EXPECTED_NID	16
RESERVED	4
NUM_CHANS	4

NUM_CHANS occurrences of the following field:

CDMA_CHAN	11
-----------	----

RESERVED	0-7 (as needed)
----------	-----------------

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

EXPECTED_SID - Expected SID.

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

EXPECTED_NID - Expected NID.

If the base station is redirecting the mobile station to a specific network, the base station shall set this field to the NID of that network; otherwise, the base station shall set this field to 65535.

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

NUM_CHANS - Number of CDMA Channels.

The base station shall set this field to the number of occurrences of the CDMA_CHAN field in this record.

CDMA_CHAN - CDMA Channel number.

1 For each CDMA Channel on which the mobile station is to
2 attempt to acquire a CDMA system, the base station shall
3 include one occurrence of this field specifying the associated
4 CDMA Channel number.

5 RESERVED - Reserved bits.

6 The base station shall add reserved bits as needed in order to
7 make the length of the record equal to an integer number of
8 octets. The base station shall set these bits to '0'.
9

1 3.7.2.3.2.19 TMSI Assignment Message

2 MSG_TAG: TASM

Field	Length (bits)
RESERVED	5
TMSI_ZONE_LEN	4
TMSI_ZONE	$8 \times \text{TMSI_ZONE_LEN}$
TMSI_CODE	32
TMSI_EXP_TIME	24

3

4 RESERVED - Reserved bits.

5 The base station shall set this field to '00000'.

6 TMSI_ZONE_LEN - TMSI zone length.

7 The base station shall set this field to the number of octets
8 included in the TMSI_ZONE. The base station shall set this
9 field to a value in the range 1 to 8 inclusive.

10 TMSI_ZONE - TMSI zone.

11 The base station shall set this field to the TMSI zone number,
12 as specified in [27].

13 TMSI_CODE - Temporary mobile station identity code.

14 The base station shall set this field to the 32-bit TMSI code
15 assigned to the mobile station.

16 If the base station is to deassign the TMSI, the base station
17 shall set all the bits in this field to '1'.

18 TMSI_EXP_TIME - TMSI expiration time.

19 The base station shall set this field to the System Time in
20 the units of $80 \text{ ms} \times 2^{12}$ when the TMSI is to expire.

21

3.7.2.3.2.20 PACA Message

MSG_TAG: PACAM

Field	Length (bits)
RESERVED	7
PURPOSE	4
Q_POS	8
PACA_TIMEOUT	3

RESERVED - Reserved bits.

The base station shall set this field to '0000000'.

PURPOSE - Purpose of the *PACA Message*.

The base station shall set this field to the appropriate PURPOSE code from Table 3.7.2.3.2.20-1 to indicate the purpose of the message.

Table 3.7.2.3.2.20-1. Purpose of PACA Message

PURPOSE (binary)	Meaning
0000	Indicates that the purpose of the message is to respond to an <i>Origination Message</i> .
0001	Indicates that the purpose of the message is to provide the queue position of the PACA call.
0010	Indicates that the purpose of the message is to instruct the mobile station to re-originate the PACA call.
0011	Indicates that the purpose of the message is to cancel the PACA call.
0100 - 1111	Reserved

Q_POS - PACA queue position.

If the PURPOSE field of this message is set to '0000' or '0001', the base station shall set this field to the queue position of the PACA call. If the queue position exceeds 255, the base station shall set this field to '11111111'. If the queue position is unknown or the PURPOSE field of this message is set to '0010' or '0011', the base station shall set this field to '00000000'.

PACA_TIMEOUT - PACA state timer duration.

The base station shall set this field to the PACA_TIMEOUT value shown in Table 3.7.2.3.2.20-2 corresponding to the length of the PACA state timer to be used by the mobile stations.

Table 3.7.2.3.2.20-2. Value of PACA State Timer

PACA_TIMEOUT Value (binary)	Timer Length (Minutes)
000	1
001	2
010	5
011	10
100	20
101	30
110	45
111	60

1 3.7.2.3.2.21 Extended Channel Assignment Message

2 MSG_TAG: ECAM

Field	Length (bits)
ASSIGN_MODE	3
RESERVED_2	5
Additional record fields	$8 \times$ (ADD_RECORD_LEN - 1)

3

4

- 1 If ASSIGN_MODE = '000', the additional record fields shall be:

FREQ_INCL	1
DEFAULT_CONFIG	3
BYPASS_ALERT_ANSWER	1
RESERVED	1
NUM_PILOTS	3
GRANTED_MODE	2
FRAME_OFFSET	4
ENCRYPT_MODE	2
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11

NUM_PILOTS plus one occurrence of the following record:

PILOT_PN	9
PWR_COMB_IND	1
CODE_CHAN	8

FOR_FCH_RC	5
REV_FCH_RC	5
FPC_FCH_INIT_SETPT	8
FPC_SUBCHAN_GAIN	5
RLGAIN_ADJ	4
FPC_FCH_FER	5
FPC_FCH_MIN_SETPT	8
FPC_FCH_MAX_SETPT	8
REV_FCH_GATING_MODE	1
REV_PWR_CNTL_DELAY_INCL	0 or 1
REV_PWR_CNTL_DELAY	0 or 2
SIG_ENCRYPT_MODE	0 or 3
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
RESERVED	0 – 7 (as needed)

1
2

- 1 If ASSIGN_MODE = '001', the additional record fields shall be:

RESPOND	1
FREQ_INCL	1
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11
NUM_PILOTS	6

NUM_PILOTS plus one occurrence of the following field:

PILOT_PN	9
----------	---

RESERVED	0 – 7 (as needed)
----------	-------------------

2

- 3 If ASSIGN_MODE = '010', the additional record fields shall be:

RESPOND	1
ANALOG_SYS	1
USE_ANALOG_SYS	1
BAND_CLASS	5

4

- 5 If ASSIGN_MODE = '011', the additional record fields shall be:

SID	15
VMAC	3
ANALOG_CHAN	11
SCC	2
MEM	1
AN_CHAN_TYPE	2
DSCC_MSB	1
BAND_CLASS	5

6

7

- 1 If ASSIGN_MODE = '100', the additional record fields shall be:

FREQ_INCL	1
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11
BYPASS_ALERT_ANSWER	1
GRANTED_MODE	2
DEFAULT_CONFIG	3
FOR_RC	5
REV_RC	5
FRAME_OFFSET	4
ENCRYPT_MODE	2
FPC_SUBCHAN_GAIN	5
RLGAIN_ADJ	4
NUM_PILOTS	3
CH_IND	2
CH_RECORD_LEN	5
CH_RECORD_FIELDS	8 × CH_RECORD_LEN
REV_FCH_GATING_MODE	1
REV_PWR_CNTL_DELAY_INCL	0 or 1
REV_PWR_CNTL_DELAY	0 or 2
SIG_ENCRYPT_MODE	0 or 3
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
3XFL_1XRL_INCL	1
1XRL_FREQ_OFFSET	0 or 2
RESERVED	0 – 7 (as needed)

2

3

- 1 If CH_IND = '01', the CH_RECORD_FIELDS shall be:

FPC_FCH_INIT_SETPT	8
FPC_FCH_FER	5
FPC_FCH_MIN_SETPT	8
FPC_FCH_MAX_SETPT	8

NUM_PILOTS plus one occurrence of the following record:

PILOT_PN	9
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or (8 × RECORD_LEN)
PWR_COMB_IND	1
CODE_CHAN_FCH	11
QOF_MASK_ID_FCH	2

3X_FCH_INFO_INCL	1
------------------	---

NUM_PILOTS plus one occurrence of the following record if
3X_FCH_INFO_INCL is set to '1':

3X_FCH_LOW_INCL	1
QOF_MASK_ID_FCH_LOW	0 or 2
CODE_CHAN_FCH_LOW	0 or 11
3X_FCH_HIGH_INCL	1
QOF_MASK_ID_FCH_HIGH	0 or 2
CODE_CHAN_FCH_HIGH	0 or 11

RESERVED	0 – 7 (as needed)
----------	-------------------

2

3

- 1 If CH_IND = '10', the CH_RECORD_FIELDS shall be:

FPC_DCCH_INIT_SETPT	8
FPC_DCCH_FER	5
FPC_DCCH_MIN_SETPT	8
FPC_DCCH_MAX_SETPT	8

NUM_PILOTS plus one occurrence of the following record:

PILOT_PN	9
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or (8 × RECORD_LEN)
PWR_COMB_IND	1
CODE_CHAN_DCCH	11
QOF_MASK_ID_DCCH	2

3X_DCCH_INFO_INCL	1
-------------------	---

NUM_PILOTS plus one occurrence of the following record if 3X_DCCH_INFO_INCL is set to '1':

3X_DCCH_LOW_INCL	1
QOF_MASK_ID_DCCH_LOW	0 or 2
CODE_CHAN_DCCH_LOW	0 or 11
3X_DCCH_HIGH_INCL	1
QOF_MASK_ID_DCCH_HIGH	0 or 2
CODE_CHAN_DCCH_HIGH	0 or 11

RESERVED	0 - 7 (as needed)
----------	-------------------

2

3

- 1 If CH_IND = '11', the CH_RECORD_FIELDS shall be:

FPC_FCH_INIT_SETPT	8
FPC_DCCH_INIT_SETPT	8
FPC_PRI_CHAN	1
FPC_FCH_FER	5
FPC_FCH_MIN_SETPT	8
FPC_FCH_MAX_SETPT	8
FPC_DCCH_FER	5
FPC_DCCH_MIN_SETPT	8
FPC_DCCH_MAX_SETPT	8

NUM_PILOTS plus one occurrence of the following record:

PILOT_PN	9
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or (8 × RECORD_LEN)
PWR_COMB_IND	1
CODE_CHAN_FCH	11
QOF_MASK_ID_FCH	2
CODE_CHAN_DCCH	11
QOF_MASK_ID_DCCH	2

3X_FCH_INFO_INCL	1
------------------	---

NUM_PILOTS plus one occurrence of the following record if 3X_FCH_INFO_INCL is set to '1':

3X_FCH_LOW_INCL	1
QOF_MASK_ID_FCH_LOW	0 or 2
CODE_CHAN_FCH_LOW	0 or 11

(continues on next page)

3X_FCH_HIGH_INCL	1
QOF_MASK_ID_FCH_HIGH	0 or 2
CODE_CHAN_FCH_HIGH	0 or 11

3X_DCCH_INFO_INCL	1
-------------------	---

NUM_PILOTS plus one occurrence of the following record if 3X_DCCH_INFO_INCL is set to '1':

3X_DCCH_LOW_INCL	1
QOF_MASK_ID_DCCH_LOW	0 or 2
CODE_CHAN_DCCH_LOW	0 or 11
3X_DCCH_HIGH_INCL	1
QOF_MASK_ID_DCCH_HIGH	0 or 2
CODE_CHAN_DCCH_HIGH	0 or 11

RESERVED	0 – 7 (as needed)
----------	-------------------

ASSIGN_MODE - Assignment mode.

The base station shall set this field to the value shown in Table 3.7.2.3.2.21-1 corresponding to the assignment mode for this assignment.

Table 3.7.2.3.2.21-1. Assignment Mode

Value (binary)	Assignment Mode
000	Traffic Channel Assignment
001	Paging Channel Assignment
010	Acquire Analog System
011	Analog Voice Channel Assignment
100	Enhanced Traffic Channel Assignment
All other values are reserved.	

RESERVED_2 - Reserved bits.

1 The base station shall set this field to '00000'.

2 Additional record fields - Additional record fields.

3 The additional record fields are determined by the value of
4 ASSIGN_MODE, as described below.

5 If the ASSIGN_MODE field is set to '000', the base station shall include the following fields:

6 FREQ_INCL - Frequency included indicator.

If the BAND_CLASS and CDMA_FREQ fields are included in this assignment record, the base station shall set this bit to '1'. If the BAND_CLASS and CDMA_FREQ fields are not included in this assignment record, the base station shall set this bit to '0'.

12 DEFAULT_CONFIG - Default Configuration.

If the GRANTED_MODE field is set to '00', the base station shall set this field as specified in Table 3.7.2.3.2.21-2 to indicate an initial multiplex option and radio configuration for the Forward and Reverse Traffic Channels.

If MOB_P_REV is less than six, the base station shall not set this field to '100'.

Table 3.7.2.3.2.21-2. Default Configuration

Value (binary)	Default Configuration
000	Multiplex Option 1 and Radio Configuration 1 for both the Forward Traffic Channel and the Reverse Traffic Channel
001	Multiplex Option 2 and Radio Configuration 2 for both the Forward Traffic Channel and the Reverse Traffic Channel
010	Multiplex Option 1 and Radio Configuration 1 for the Forward Traffic channel; Multiplex Option 2 and Radio Configuration 2 for the Reverse Traffic channel
011	Multiplex Option 2 and Radio Configuration 2 for the Forward Traffic channel; Multiplex Option 1 and Radio Configuration 1 for the Reverse Traffic channel
100	FOR_FCH_RC or FOR_RC included in this message for the Forward Fundamental Channel or the Forward Dedicated Control Channel and REV_FCH_RC or REV_RC included in this message for the Reverse Fundamental or the Reverse Dedicated Control Channel. Use 20ms frames. Use Multiplex Option 1 for radio configurations that include the bit rate of 9600 bps; Use Multiplex Option 2 for radio configurations that include the bit rate of 14400 bps.
All other values are reserved.	

BYPASS_ALERT-

_ANSWER - Bypass alert indicator.

If the base station has received a *Page Response Message* that specifies a packet data service option, and the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile Station Answer Substate*, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RESERVED - Reserved bit.

1		The base station shall set this field to '0'.
2	NUM_PILOTS	- Number of pilots in the Active Set.
3		The base station shall set this field to number of pilots that
4		are to be in the mobile station's Active Set on the Traffic
5		Channel minus one. The base station shall set this field to
6		the value in the range 0 to $N_{6m}-1$ inclusive.
7	GRANTED_MODE	- Granted mode.
8		The base station shall set this field to '00' to indicate that the
9		mobile station is to use an initial service configuration
10		consisting of the multiplex option and radio configuration
11		defined by the DEFAULT_CONFIG field for the Forward and
12		Reverse Traffic Channels, and to indicate that service
13		negotiation may take place before the base station sends the
14		first <i>Service Connect Message</i> .
15		The base station shall set this field to '01' to indicate that the
16		mobile station is to use an initial service configuration
17		consisting of the default multiplex option and transmission
18		rates corresponding to the service option requested by the
19		mobile station either in the <i>Origination Message</i> or <i>Page</i>
20		<i>Response Message</i> , and to indicate that service negotiation
21		may take place before the base station sends the first <i>Service</i>
22		<i>Connect Message</i> .
23		The base station shall set this field to '10' to indicate that the
24		mobile station is to use an initial service configuration
25		consisting of the default multiplex option and transmission
26		rates corresponding to the service option requested by the
27		mobile station either in the <i>Origination Message</i> or <i>Page</i>
28		<i>Response Message</i> , and to indicate that service negotiation is
29		not to take place before the base station sends the first
30		<i>Service Connect Message</i> .
31	FRAME_OFFSET	- Frame offset.
32		The Forward and Reverse Traffic Channel frames are delayed
33		$FRAME_OFFSET \times 1.25$ ms relative to system timing (see [2]).
34		The base station shall set this field to the Forward and
35		Reverse Traffic Channel frame offset.
36	ENCRYPT_MODE	- Message encryption mode.
37		The base station shall set this field to the ENCRYPT_MODE
38		value shown in Table 3.7.2.3.2.8-2 corresponding to the
39		encrypting mode that is to be used for signaling messages, as
40		specified in 2.3.12.2.

1 BAND_CLASS - Band class.

2 If the FREQ_INCL bit is set to '1', the base station shall set
3 this field to the CDMA band class, as specified in [30],
4 corresponding to the CDMA frequency assignment for the
5 CDMA Channel containing the Forward Traffic Channel the
6 mobile station is to use. If the FREQ_INCL bit is set to '0', the
7 base station shall omit this field.

8 CDMA_FREQ - Frequency assignment.

9 If the FREQ_INCL bit is set to '1', the base station shall set
10 this field to the CDMA Channel number, in the specified
11 CDMA band class, corresponding to the CDMA frequency
12 assignment for the CDMA Channel containing the Forward
13 Traffic Channel the mobile station is to use. If the
14 FREQ_INCL bit is set to '0', the base station shall omit this
15 field.

16 The base station shall include NUM_PILOTS plus one occurrence of the following three-
17 field record, one for each member of the mobile station's Active Set on the Traffic Channel.

18 PILOT_PN - Pilot PN sequence offset index.

19 The base station shall set this field to the pilot PN sequence
20 offset for this pilot in units of 64 PN chips.

21 PWR_COMB_IND - Power control symbol combining indicator.

22 If the Forward Traffic Channel associated with this pilot will
23 carry the same closed-loop power control subchannel bits as
24 that of the previous pilot in this message, the base station
25 shall set this field to '1'; otherwise, the base station shall set
26 this field to '0'. For the first occurrence of this record in the
27 message, the base station shall set this field to '0'.

28 CODE_CHAN - Code channel index.

29 The base station shall set this field to the code channel index
30 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
31 to use on the Forward Traffic Channel associated with this
32 pilot. If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is
33 used, the base station shall set this field in the range 1 to 63
34 inclusive. If Radio Configuration 4, 6 or 8 is used, the base
35 station shall set this field in the range 1 to 127 inclusive. If
36 Radio Configuration 7 or 9 is used, the base station shall set
37 this field in the range 1 to 255 inclusive.

38 FOR_FCH_RC - Forward Fundamental Channel radio configuration

The base station shall set this field to the radio configuration (see Table 3.7.2.3.2.21-3) to be used by the mobile station on the Forward Fundamental Channel before the first *Service Connect Message* is sent to the mobile station.

If GRANTED_MODE is set to '00', and DEFAULT_CONFIG is not set to '100' (see Table 3.7.2.3.2.21-2), the base station shall set this field to either '00001' or '00010' (see Table 3.7.2.3.2.21-3).

REV_FCH_RC - Reverse Fundamental Channel radio configuration

The base station shall set this field to the radio configuration (see Table 3.7.2.3.2.21-3) to be used by the mobile station on the Reverse Fundamental Channel before the first *Service Connect Message* is sent to the mobile station.

If GRANTED_MODE is set to '00', and DEFAULT_CONFIG is not set to '100' (see Table 3.7.2.3.2.21-2), the base station shall set this field to either '00001' or '00010' (see Table 3.7.2.3.2.21-3).

Table 3.7.2.3.2.21-3. Radio Configurations

Value (binary)	Radio Configuration
00001	RC 1
00010	RC 2
00011	RC 3
00100	RC 4
00101	RC 5
00110	RC 6
00111	RC 7
01000	RC 8
01001	RC 9
All other values are reserved.	

FPC_FCH_INIT_SETPT - Initial Fundamental Channel outer loop E_b/N_t setpoint.

The base station shall set this field to initial Fundamental Channel outer loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_FCH_FER - Fundamental Channel target Frame Error Rate.

1			The base station shall set this field to the target Frame Error
2			Rate on the Forward Fundamental Channel, as specified in
3			Table 3.7.3.3.2.25-2.
4	FPC_FCH_MIN_SETPT	-	Minimum Fundamental Channel Outer Loop E_b/N_t setpoint.
5			The base station shall set this field to minimum
6			Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
7			0.125 dB.
8	FPC_FCH_MAX_SETPT	-	Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.
9			The base station shall set this field to maximum
10			Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
11			0.125 dB.
12	FPC_SUBCHAN_GAIN	-	Forward power control subchannel relative gain.
13			The base station shall set FPC_SUBCHAN_GAIN equal to the
14			power level of the forward link power control subchannel
15			relative to the power level of 20 ms frames at a 9600 bps or
16			14400 bps rate of the Forward Fundamental Channel that the
17			Forward Power Control Subchannel is punctured on. The
18			base station shall set the value in units of 0.25 dB.
19	RLGAIN_ADJ	-	Reverse Traffic Channel power relative to access power.
20			The base station shall set this field to adjust the initial
21			Traffic Channel transmission power relative to the Access
22			Channel or Enhanced Access Channel transmission power.
23			The base station shall set this field as a two's complement
24			signed binary number, in units of 1 dB.
25	REV_FCH-		
26	_GATING_MODE	-	Reverse eighth gating mode indicator.
27			The base station shall set this field to '1' if the mobile station
28			is allowed to perform the reverse eighth gating mode where
29			the 1/8 th rate frames on the Reverse Fundamental Channel
30			are gated off for 10 ms per frame (see 2.1.2.3.2 of [2]);
31			otherwise, the base station shall set this field to '0'.
32	REV_PWR-		
33	_CNTL_DELAY_INCL	-	Reverse power control delay included indicator.
34			If REV_FCH_GATING_MODE is set to '0', the base station shall
35			omit this field; otherwise, the base station shall include this
36			field and set it as follows.

1		The base station shall set this field to '1' if
2		REV_PWR_CNTL_DELAY is included in this message;
3		otherwise, the base station shall set this field to '0'.
4	REV_PWR-	
5	_CNTL_DELAY	- The reverse power control delay.
6		If REV_PWR_CNTL_DELAY_INCL is set to '0', the base station
7		shall omit this field; otherwise, the base station shall include
8		this field and set it as follows:
9		The base station shall set this field to the closed-loop reverse
10		power control delay minus one (the closed-loop reverse power
11		control delay is the time between the end of a gated-on
12		reverse PCG and the beginning of the reverse PCG where the
13		corresponding feedback is sent on the Forward Power Control
14		Subchannel, see 2.1.2.3.2 of [2]) used by the mobile station
15		after handoff, in units of 1.25 ms.
16	SIG_ENCRYPT_MODE	- General encryption mode indicator.
17		If ENCRYPT_MODE is set to '11', the base station shall include
18		this field and shall set it to signaling message encryption mode,
19		as shown in Table 3.7.4.5-1; otherwise the base station shall
20		omit this field.
21	KEY_SIZE	- Encryption key size indication.
22		If ENCRYPT_MODE is set to '10' or '11', the base station shall
23		include this field and shall set it to the encryption key size, as
24		shown in Table 3.7.4.5-2; otherwise the base station shall omit
25		this field.
26	USE_NEW_KEY	- Use new encryption key indication
27		If ENCRYPT_MODE is set to '10' or '11', the base station shall
28		include this field. If this field is included, the base station shall
29		set this field to '0' to indicate that the stored encryption key to be
30		used by the mobile station. Otherwise, the base station shall set
31		this field to '1' to indicate that the new encryption key to be used
32		by the mobile station.
33		
34	KEY_SEQ	- Encryption key sequence number.
35		If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to
36		'0', the base station shall include this field and shall set it to the
37		encryption key sequence number to be used by the mobile
38		station. If ENCRYPT_MODE is set to a value other than '10' or '11'
39		or USE_NEW_KEY is set to '1', the base station shall omit this
40		field.

1 RESERVED - Reserved bits.

2 The base station shall add reserved bits as needed in order to
3 make the total length of the fields after the preceding
4 ADD_RECORD_LEN field through this RESERVED field equal to
5 an integer number of octets. The base station shall set these
6 bits to '0'.

7 If the ASSIGN_MODE field is set to '001', the base station shall include the following fields:

8 RESPOND - Respond on new Access Channel indicator.

9 If the mobile station is to retransmit an *Origination Message*
10 or *Page Response Message* after processing this channel
11 assignment, the base station shall set this field to '1'. The
12 base station may set this field to '0' only in response to a *Page*
13 *Response Message*.

14 FREQ_INCL - Frequency included indicator.

15 If the BAND_CLASS and CDMA_FREQ fields are included in
16 this assignment record, the base station shall set this bit to
17 '1'. If the BAND_CLASS and CDMA_FREQ fields are not
18 included in this assignment record, the base station shall set
19 this bit to '0'.

20 BAND_CLASS - Band class.

21 If the FREQ_INCL bit is set to '1', the base station shall set
22 this field to the CDMA band class, as specified in [30],
23 corresponding to the CDMA frequency assignment for the
24 CDMA Channel containing the Paging Channel the mobile
25 station is to use. If the FREQ_INCL bit is set to '0', the base
26 station shall omit this field.

27 CDMA_FREQ - Frequency assignment.

28 If the FREQ_INCL bit is set to '1', the base station shall set
29 this field to the CDMA Channel number, in the specified
30 CDMA band class, corresponding to the CDMA frequency
31 assignment for the CDMA Channel containing the Paging
32 Channel the mobile station is to use. If the FREQ_INCL bit is
33 set to '0', the base station shall omit this field.

1 NUM_PILOTS - Number of pilots whose Paging Channel may be monitored.
 2 The base station shall set this field to the number of pilots
 3 whose Paging Channel may be monitored by the mobile
 4 station minus one. The base station shall set this field to the
 5 value in the range 0 to $N_{8m} - 1$ inclusive.

6 The base station shall include NUM_PILOTS plus one occurrence of the following field
 7 record for each pilot whose Paging Channel may be monitored by the mobile station.

8 PILOT_PN - Pilot PN sequence offset index.
 9 The base station shall include one occurrence of this field for
 10 each base station whose Paging Channel may be monitored
 11 by the mobile station. For each occurrence, the base station
 12 shall set this field to the pilot PN sequence offset for a base
 13 station, in units of 64 PN chips. The base station having this
 14 pilot PN sequence offset should support a Primary Paging
 15 Channel with the same Paging Channel rate as the current
 16 base station.

17 RESERVED - Reserved bits.
 18 The base station shall add reserved bits as needed in order to
 19 make the total length of the fields after the preceding
 20 ADD_RECORD_LEN field through this RESERVED field equal to
 21 an integer number of octets. The base station shall set these
 22 bits to '0'.

23

24 If the ASSIGN_MODE field is set to '010', the base station shall include the following fields:

25 RESPOND - Respond on analog control channel indicator.
 26 If the mobile station is to retransmit an *Origination Message*
 27 or *Page Response Message* on the analog control channel (see
 28 [6]) after processing this channel assignment, the base
 29 station shall set this field to '1'. The base station may set
 30 this field to '0' only in response to a *Page Response Message*.

31 ANALOG_SYS - System indicator.
 32 If USE_ANALOG_SYS is equal to '0', the base station shall set
 33 this field to '0'; otherwise, the base station shall set this field
 34 to '0' if the mobile station is to use analog system A, or to '1' if
 35 the mobile station is to use analog system B.

36 USE_ANALOG_SYS - Use analog system indicator.
 37 The base station shall set this field to '1' to direct the mobile
 38 station to the analog system specified by ANALOG_SYS;
 39 otherwise, the base station shall set this field to '0'.

1 BAND_CLASS - Band class.

2 The base station shall set this field according to values
3 defined in [30].

5 If the ASSIGN_MODE field is set to '011', the base station shall include the following fields:

6 SID - System identification of the analog system.

7 The base station shall set this field to the system
8 identification of the analog system supporting the assigned
9 voice channel for this assignment (see [6]).

10 VMAC - Voice mobile station attenuation code.

11 The base station shall set this field to the mobile station
12 power level associated with the assigned voice channel for
13 this assignment (see [6]).

14 ANALOG_CHAN - Voice channel number.

15 The base station shall set this field to the voice channel
16 number for this assignment (see [6]).

17 SCC - SAT color code.

18 The base station shall set this field to the supervisory audio
19 tone color code associated with the assigned voice channel. If
20 the assignment is to a narrow analog channel, the base
21 station shall set this field to the two least significant bits of
22 the DSCC.

23 MEM - Message encryption mode indicator.

24 If analog control message encryption is to be enabled on the
25 assigned forward and reverse analog voice channels, the base
26 station shall set this bit to '1'; otherwise, the base station
27 shall set this bit to '0'.

28 AN_CHAN_TYPE - Analog voice channel type.

29 The base station shall set this field to the analog channel
30 type as specified in Table 3.7.3.3.2.6-1. If the mobile station
31 does not have narrow analog capability, the base station shall
32 set this field to '00'.

33 DSCC_MSB - Digital supervisory audio tone color code most significant bit.

34 The base station shall set this field to '0' when directing
35 handoff to a wide analog channel. The base station shall set
36 this field to the most significant bit of the DSCC when
37 directing handoff to a narrow analog channel.

1	BAND_CLASS	-	Band class.
2			The base station shall set this field according to values
3			defined in [30].
4	If the ASSIGN_MODE field is set to '100', the base station shall include the following fields:		
5	FREQ_INCL	-	Frequency included indicator.
6			If the BAND_CLASS and CDMA_FREQ fields are included in
7			this assignment record, the base station shall set this bit to
8			'1'. If the BAND_CLASS and CDMA_FREQ fields are not
9			included in this assignment record, the base station shall set
10			this bit to '0'.
11	BAND_CLASS	-	Band class.
12			If the FREQ_INCL bit is set to '1', the base station shall set
13			this field to the CDMA band class, as specified in [30],
14			corresponding to the CDMA frequency assignment for the
15			CDMA Channel containing the Forward Traffic Channel(s) the
16			mobile station is to use. If the FREQ_INCL bit is set to '0', the
17			base station shall omit this field.
18	CDMA_FREQ	-	Frequency assignment.
19			If the FREQ_INCL bit is set to '0', the base station shall omit
20			this field; otherwise, the base station shall set this field as
21			follows:
22			If FOR_RC is set to a Radio Configuration associated with
23			Spreading Rate 1, the FREQ_INCL bit is set to '1', the base
24			station shall set this field to the CDMA Channel number, in
25			the specified CDMA band class, corresponding to the CDMA
26			frequency assignment for the CDMA Channel containing the
27			Forward Traffic Channel(s) the mobile station is to use. If
28			FOR_RC is set to a Radio Configuration associated with
29			Spreading Rate 3, the base station shall set this field to the
30			center SR3 frequency assignment containing the Forward
31			Traffic Channel(s) the mobile station is to use.
32	BYPASS_ALERT-		
33	_ANSWER	-	Bypass alert indicator.
34			If the base station has received a <i>Page Response Message</i> that
35			specifies a packet data service option, and the mobile station
36			is to bypass the <i>Waiting for Order Substate</i> and the <i>Waiting for</i>
37			<i>Mobile Station Answer Substate</i> , the base station shall set this
38			field to '1'; otherwise, the base station shall set this field to
39			'0'.

1 GRANTED_MODE - Granted mode.

2 The base station shall set this field to '00' to indicate that the
3 mobile station is to use an initial service configuration
4 consisting of the multiplex option and rate set defined by the
5 DEFAULT_CONFIG field for the Forward and Reverse Traffic
6 channels, and to indicate that service negotiation may take
7 place before the base station sends the first *Service Connect*
8 *Message*.

9 The base station shall set this field to '01' to indicate that the
10 mobile station is to use an initial service configuration
11 consisting of the default multiplex option and transmission
12 rates corresponding to the service option requested by the
13 mobile station either in the *Origination Message* or *Page*
14 *Response Message*, and to indicate that service negotiation
15 may take place before the base station sends the first *Service*
16 *Connect Message*.

17 The base station shall set this field to '10' to indicate that the
18 mobile station is to use an initial service configuration
19 consisting of the default multiplex option and transmission
20 rates corresponding to the service option requested by the
21 mobile station either in the *Origination Message* or *Page*
22 *Response Message*, and to indicate that service negotiation is
23 not to take place before the base station sends the first
24 *Service Connect Message*.

25 DEFAULT_CONFIG - Default Configuration.

26 If the GRANTED_MODE field is set to '00', the base station
27 shall set this field as specified in Table 3.7.2.3.2.21-2 to
28 indicate an initial multiplex option and rate set for the
29 Forward and Reverse Traffic Channels.

30 FOR_RC - Forward Traffic Channel radio configuration.

31 The base station shall set this field to the radio configuration
32 (see Table 3.7.2.3.2.21-3) to be used by the mobile station on
33 the Forward Traffic (Fundamental and Dedicated Control)
34 Channel before the first *Service Connect Message* is sent to the
35 mobile station.

36 If GRANTED_MODE is set to '00', and DEFAULT_CONFIG is not
37 set to '100' (see Table 3.7.2.3.2.21-2), the base station shall
38 set this field to either '00001' or '00010' (see Table
39 3.7.2.3.2.21-3).

40 REV_RC - Reverse Traffic Channel radio configuration.

1		The base station shall set this field to the radio configuration
2		(see Table 3.7.2.3.2.21-3) to be used by the mobile station on
3		the Reverse Traffic (Fundamental and Dedicated Control)
4		Channel before the first <i>Service Connect Message</i> is sent to the
5		mobile station.
6		If GRANTED_MODE is set to '00', and DEFAULT_CONFIG is not
7		set to '100' (see Table 3.7.2.3.2.21-2), the base station shall
8		set this field to either '0001' or '0010' (see Table 3.7.2.3.21-3).
9	FRAME_OFFSET	- Frame offset.
10		The Forward and Reverse Traffic Channel frames are delayed
11		FRAME_OFFSET \times 1.25 ms relative to system timing (see [2]).
12		The base station shall set this field to the Forward and
13		Reverse Traffic Channel frame offset.
14	ENCRYPT_MODE	- Message encryption mode.
15		The base station shall set this field to the ENCRYPT_MODE
16		value shown in Table 3.7.2.3.2.8-2 corresponding to the
17		encrypting mode that is to be used for signaling messages, as
18		specified in 2.3.12.2.
19	FPC_SUBCHAN_GAIN	- Forward Power Control Subchannel relative gain.
20		The base station shall set FPC_SUBCHAN_GAIN equal to the
21		power level of the forward link power control subchannel
22		relative to the power level of of 20 ms frames at a 9600 bps or
23		14400 bps rate on the Forward Fundamental Channel or the
24		Forward Dedicated Control Channel that the Forward Power
25		Control Subchannel is punctured on. The base station shall
26		set the value in units of 0.25 dB.
27	RLGAIN_ADJ	- Reverse Traffic Channel power relative to access power.
28		The base station shall set this field to adjust the initial
29		Traffic Channel transmission power relative to the Access
30		Channel or Enhanced Access Channel transmission power.
31		The base station shall set this field as a two's complement
32		signed binary number, in units of 1 dB.
33	NUM_PILOTS	- Number of pilots in the Active Set.
34		The base station shall set this field to number of pilots that
35		are to be in the mobile station's Active Set on the Traffic
36		Channel minus one. The base station shall set this field to
37		the value in the range 0 to $N_{6m}-1$ inclusive.
38	CH_IND	- Channel indicator.

The base station shall set this field as shown in Table 3.7.2.3.2.21-4.

Table 3.7.2.3.2.21-4. Channel Indicator

Value (Binary)	Channels Being Assigned
00	Reserved
01	Fundamental Channel only
10	Dedicated Control Channel only
11	Both Fundamental Channel and Dedicated Control Channel

CH_RECORD_LEN - Channel record length.

The base station shall set this field to the number of octets in the CH_RECORD_FIELDS included in this channel record.

CH_RECORD_FIELDS - Channel record fields.

The channel record fields are determined by the value of CH_IND, as described below.

REV_FCH-

_GATING_MODE - Reverse eighth gating mode indicator.

The base station shall set this field to '1' if the mobile station is allowed to perform the reverse eighth gating mode where the 1/8th rate frames on the Reverse Fundamental Channel are gated off for 10 ms per frame (see 2.1.2.3.2 of [2]); otherwise, the base station shall set this field to '0'.

REV_PWR-

_CNTL_DELAY_INCL - Reverse power control delay included indicator.

If REV_FCH_GATING_MODE is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows.

The base station shall set this field to '1' if REV_PWR_CNTL_DELAY is included in this message; otherwise, the base station shall set this field to '0'.

REV_PWR-

_CNTL_DELAY - The reverse power control delay.

1			If REV_PWR_CNTL_DELAY_INCL is set to '0', the base station
2			shall omit this field; otherwise, the base station shall include
3			this field and set it as follows:
4			The base station shall set this field to the closed-loop reverse
5			power control delay minus one (the closed-loop reverse power
6			control delay is the time between the end of a gated-on
7			reverse PCG and the beginning of the reverse PCG where the
8			corresponding feedback is sent on the Forward Power Control
9			Subchannel, see 2.1.2.3.2 of [2]) used by the mobile station
10			after handoff, in units of 1.25 ms.
11	SIG_ENCRYPT_MODE	-	General encryption mode indicator.
12			If ENCRYPT_MODE is set to '11', the base station shall include
13			this field and shall set it to signaling message encryption mode,
14			as shown in Table 3.7.4.5-1; otherwise the base station shall
15			omit this field.
16	KEY_SIZE	-	Encryption key size indication.
17			If ENCRYPT_MODE is set to '10' or '11', the base station shall
18			include this field and shall set it to the encryption key size, as
19			shown in Table 3.7.4.5-2; otherwise the base station shall omit
20			this field.
21	USE_NEW_KEY	-	Use new encryption key indication
22			If ENCRYPT_MODE is set to '10' or '11', the base station shall
23			include this field. If this field is included, the base station shall
24			set this field to '0' to indicate that the stored encryption key to be
25			used by the mobile station. Otherwise, the base station shall set
26			this field to '1' to indicate that the new encryption key to be used
27			by the mobile station.
28			
29	KEY_SEQ	-	Encryption key sequence number.
30			If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to
31			'0', the base station shall include this field and shall set it to the
32			encryption key sequence number to be used by the mobile
33			station. If ENCRYPT_MODE is set to a value other than '10' or '11'
34			or USE_NEW_KEY is set to '1', the base station shall omit this
35			field.
36	3XFL_1XRL_INCL	-	3X Forward Link and 1X Reverse Link indicator.
37			The base station shall set this field to '1' if the base station is
38			assigning 3X traffic channel on the Forward Link and 1X
39			traffic channel on the Reverse Link; otherwise, the base
40			station shall set this field to '0'.

1XRL_-
FREQ_OFFSET

- 1X Reverse Link frequency offset.

If 3XFL_1XRL_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the value shown in Table 3.7.2.3.2.21-5 corresponding to the frequency offset of the 1X reverse link.

Table 3.7.2.3.2.21-5. 1X Reverse Link Frequency Offset

1XRL_FREQ_OFFSET (Binary)	1X Reverse Link frequency offset
00	The Reverse Link is on the lowest SR3 frequency
01	The Reverse Link is on the center SR3 frequency
10	The Reverse Link is on the highest SR3 frequency
11	Reserved

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If the CH_IND field is set to '01', the base station shall include the following fields:

FPC_FCH_INIT_SETPT - Initial Fundamental Channel outer loop E_b/N_t setpoint.

The base station shall set this field to initial Fundamental Channel outer loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_FCH_FER - Fundamental channel target Frame Error Rate.

The base station shall set this field to the target Frame Error Rate on the Forward Fundamental Channel, as specified in Table 3.7.3.3.2.25-2.

FPC_FCH_MIN_SETPT - Minimum Fundamental Channel Outer Loop E_b/N_t setpoint.

1		The base station shall set this field to minimum
2		Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
3		0.125 dB.
4	FPC_FCH_MAX_SETPT	- Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.
5		The base station shall set this field to maximum
6		Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
7		0.125 dB.
8		
9	The base station shall include NUM_PILOTS plus one occurrence of the following record,	
10	one for each member of the mobile station's Active Set on the Traffic Channel.	
11	PILOT_PN	- Pilot PN sequence offset index.
12		The base station shall set this field to the pilot PN sequence
13		offset for this pilot in units of 64 PN chips.
14	ADD_PILOT_REC_INCL	- Additional pilot information included indicator.
15		The base station shall set this field to '1' if additional pilot
16		information listed in PILOT_REC_TYPE and RECORD_LEN
17		fields are included. The base station shall set this field to '0'
18		if the corresponding pilot is the common pilot and there is no
19		additional pilot information included.
20	PILOT_REC_TYPE	- Pilot record type.
21		If ADD_PILOT_REC_INCL is set to '1', the base station shall
22		set this field to the PILOT_REC_TYPE value shown in Table
23		3.7.2.3.2.21-6 corresponding to the type of Pilot Record
24		specified by this record.
25		If ADD_PILOT_REC_INCL is set to '0', the base station shall
26		omit this field.
27		

Table 3.7.2.3.2.21-6. Pilot Record Types

Description	PILOT_REC_TYPE (binary)
1X Common Pilot with Transmit Diversity	000
1X Auxiliary Pilot	001
1X Auxiliary Pilot with Transmit Diversity	010
3X Common Pilot	011
3X Auxiliary Pilot	100
All other PILOT_REC_TYPE values are reserved	

RECORD_LEN - Pilot record length.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the number of octets in the type-specific fields of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If ADD_PILOT_REC_INCL is set to '1', the base station shall include type-specific fields based on the PILOT_REC_TYPE of this pilot record as described in 3.7.6.1.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

PWR_COMB_IND - Power control symbol combining indicator.

If the Forward Fundamental Traffic Channel associated with this pilot will carry the same closed-loop power control subchannel bits as that of the previous pilot in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. For the first occurrence of this record in the message, the base station shall set this field to '0'.

CODE_CHAN_FCH - Code channel index for the Fundamental Channel.

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, the base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the Forward Fundamental Channel associated with this pilot. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the code channel index that the mobile station is to use on the Forward Fundamental on the center SR3 frequency.

If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used, the base station shall set this field in the range 1 to 63 inclusive. If Radio Configuration 4, 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

QOF_MASK_ID_FCH - Quasi-Orthogonal Function Mask Identifier for the Fundamental Channel.

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, the base station shall set this field to the quasi-orthogonal function mask identifier (see Table 3.1.3.1.12-2 of [2]) that the mobile station is to use on the Forward Fundamental Channel associated with this pilot. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the quasi-orthogonal function mask identifier that the mobile station is to use on the Forward Fundamental Channel on the center SR3 frequency.

3X_FCH_INFO_INCL - 3X FCH information included indicator.

If the 3X Fundamental Channel information is included, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

The base station shall include NUM_PILOTS plus one occurrence of the following record if 3X_FCH_INFO_INCL is set to '1'. The base station shall use the same order for the following fields as is used for the PILOT_PN fields listed in this message.

3X_FCH_LOW_INCL - FCH code channel on the lowest SR3 frequency included indicator.

If the FCH on the lowest SR3 frequency has a different code channel than the FCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

1	<code>_FCH_LOW</code>	-	QOF index for the FCH on the lowest SR3 frequency.
2			If <code>3X_FCH_LOW_INCL</code> is set to '0', the base station shall omit
3			this field; otherwise, the base station shall set this field as
4			follows:
5			The base station shall set this field to the index of the Quasi-
6			orthogonal function (see Table 3.1.3.1.12-2 of [2])
7			corresponding to the QOF index for the FCH on the lowest SR3
8			frequency.
9	<code>CODE_CHAN-</code>		
10	<code>_FCH_LOW</code>	-	Code channel for the FCH on the lowest SR3 frequency.
11			If <code>3X_FCH_LOW_INCL</code> is set to '0', the base station shall omit
12			this field; otherwise, the base station shall set this field as
13			follows:
14			The base station shall set this field to the code channel index
15			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
16			to use on the FCH on the lowest SR3 frequency. If Radio
17			Configuration 6 or 8 is used, the base station shall set this
18			field in the range 1 to 127 inclusive. If Radio Configuration 7
19			or 9 is used, the base station shall set this field in the range
20			1 to 255 inclusive.
21	<code>3X_FCH_HIGH_INCL</code>	-	FCH code channel on the highest SR3 frequency included
22			indicator.
23			If the FCH on the highest SR3 frequency has a different code
24			channel than the FCH on the center SR3 frequency, the base
25			station shall set this field to '1'; otherwise, the base station
26			shall set this field to '0'.
27	<code>QOF_MASK_ID-</code>		
28	<code>_FCH_HIGH</code>	-	QOF index for the FCH on the highest SR3 frequency.
29			If <code>3X_FCH_HIGH_INCL</code> is set to '0', the base station shall omit
30			this field; otherwise, the base station shall set this field as
31			follows:
32			The base station shall set this field to the index of the Quasi-
33			orthogonal function (see Table 3.1.3.1.12-2 of [2])
34			corresponding to the QOF index for the FCH on the highest
35			SR3 frequency.

- 1 CODE_CHAN-
- 2 _FCH_HIGH - Code channel for the FCH on the highest SR3 frequency.
- 3 If 3X_FCH_HIGH_INCL is set to '0', the base station shall omit
- 4 this field; otherwise, the base station shall set this field as
- 5 follows:
- 6 The base station shall set this field to the code channel index
- 7 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
- 8 to use on the FCH on the highest SR3 frequency. If Radio
- 9 Configuration 6 or 8 is used, the base station shall set this
- 10 field in the range 1 to 127 inclusive. If Radio Configuration 7
- 11 or 9 is used, the base station shall set this field in the range
- 12 1 to 255 inclusive.
- 13 RESERVED - Reserved bits.
- 14 The base station shall add reserved bits as needed in order to
- 15 make the total length of the fields after the preceding
- 16 ADD_RECORD_LEN field through this RESERVED field equal to
- 17 an integer number of octets. The base station shall set these
- 18 bits to '0'.
- 19 If the CH_IND field is set to '10', the base station shall include the following fields:
- 20 FPC_DCCH_INIT_SETPT - Initial Dedicated Control Channel outer loop E_b/N_t setpoint.
- 21 The base station shall set this field to initial Dedicated
- 22 Control Channel outer loop E_b/N_t setpoint, in units of 0.125
- 23 dB.
- 24 FPC_DCCH_FER - Dedicated Control Channel target Frame Error Rate.
- 25 The base station shall set this field to the target Frame Error
- 26 Rate on the Dedicated Control Channel, as specified in Table
- 27 3.7.3.3.2.25-2.
- 28 FPC_DCCH_MIN_SETPT - Minimum Dedicated Control Channel Outer Loop E_b/N_t
- 29 setpoint.
- 30 The base station shall set this field to minimum Dedicated
- 31 Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125
- 32 dB.
- 33 FPC_DCCH_MAX_SETPT - Maximum Dedicated Control Channel Outer Loop E_b/N_t
- 34 setpoint.
- 35 The base station shall set this field to maximum Dedicated
- 36 Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125
- 37 dB.
- 38 The base station shall include NUM_PILOTS plus one occurrence of the following three-

field record for each member of the mobile station's Active Set on the Traffic Channel.

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this pilot in units of 64 PN chips.

ADD_PILOT_REC_INCL - Additional pilot information included indicator.

The base station shall set this field to '1' if additional pilot information listed in PILOT_REC_TYPE and RECORD_LEN fields are included. The base station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

PILOT_REC_TYPE - Pilot record type.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the PILOT_REC_TYPE value shown in Table 3.7.2.3.2.21-6 corresponding to the type of Pilot Record specified by this record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

RECORD_LEN - Pilot record length.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the number of octets in the type-specific fields of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If ADD_PILOT_REC_INCL is set to '1', the base station shall include type-specific fields based on the PILOT_REC_TYPE of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field as described in 3.7.6.1.

PWR_COMB_IND - Power control symbol combining indicator.

1			If the Forward Dedicated Control Traffic Channel associated
2			with this pilot will carry the same closed-loop power control
3			subchannel bits as that of the previous pilot in this message,
4			the base station shall set this field to '1'; otherwise, the base
5			station shall set this field to '0'. For the first occurrence of
6			this record in the message, the base station shall set this
7			field to '0'.
8	CODE_CHAN_DCCH	-	Code channel index for the Dedicated Control Channel.
9			If FOR_RC is set to a Radio Configuration associated with
10			Spreading Rate 1, the base station shall set this field to the
11			code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that
12			the mobile station is to use on the Forward Dedicated Control
13			Channel associated with this pilot. If FOR_RC is set to a Radio
14			Configuration associated with Spreading Rate 3, the base
15			station shall set this field to the code channel index that the
16			mobile station is to use on the Forward Dedicated Control
17			Channel on the center SR3 frequency.
18			If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used,
19			the base station shall set this field in the range 1 to 63
20			inclusive. If Radio Configuration 4, 6 or 8 is used, the base
21			station shall set this field in the range 1 to 127 inclusive. If
22			Radio Configuration 7 or 9 is used, the base station shall set
23			this field in the range 1 to 255 inclusive.
24	QOF_MASK_ID_DCCH	-	Quasi-Orthogonal Function Mask Identifier for the Dedicated
25			Control Channel.
26			If FOR_RC is set to a Radio Configuration associated with
27			Spreading Rate 1, the base station shall set this field to the
28			quasi-orthogonal function mask identifier (see Table
29			3.1.3.1.12-2 of [2]) that the mobile station is to use on the
30			Forward Dedicated Control Channel associated with this pilot.
31			If FOR_RC is set to a Radio Configuration associated with
32			Spreading Rate 3, the base station shall set this field to the
33			quasi-orthogonal function mask identifier (see Table
34			3.1.3.1.12-2 of [2]) that the mobile station is to use on the
35			Forward Dedicated Control Channel on the center SR3
36			frequency.
37	3X_DCCH_INFO_INCL	-	3X DCCH information included indicator.
38			If the 3X Dedicated Control Channel information is included,
39			the base station shall set this field to '1'; otherwise, the base
40			station shall set this field to '0'.

The base station shall include NUM_PILOTS plus one occurrence of the following record if 3X_DCCH_INFO_INCL is set to '1'. The base station shall use the same order for the following fields as is used for the PILOT_PN fields listed in this message.

3X_DCCH_LOW_INCL – DCCH code channel on the lowest SR3 frequency included indicator.

If the DCCH on the lowest SR3 frequencies has a different code channel than the DCCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_DCCH_LOW – QOF index for the DCCH on the lowest SR3 frequency.

If 3X_DCCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the DCCH on the lowest SR3 frequency.

CODE_CHAN-

_DCCH_LOW – Code channel for the DCCH on the lowest SR3 frequency.

If 3X_DCCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the DCCH on the lowest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

3X_DCCH_HIGH_INCL – DCCH code channel on the highest SR3 frequency included indicator.

If the DCCH on the highest SR3 frequencies has a different code channel than the DCCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_DCCH_HIGH – QOF index for the DCCH on the highest SR3 frequency.

1		If 3X_DCCH_HIGH_INCL is set to '0', the base station shall
2		omit this field; otherwise, the base station shall set this field
3		as follows:
4		The base station shall set this field to the index of the Quasi-
5		orthogonal function (see Table 3.1.3.1.12-2 of [2]
6		corresponding to the QOF index for the DCCH on the highest
7		SR3 frequency.
8	CODE_CHAN-	
9	_DCCH_HIGH	- Code channel for the DCCH on the highest SR3 frequency.
10		If 3X_DCCH_HIGH_INCL is set to '0', the base station shall
11		omit this field; otherwise, the base station shall set this field
12		as follows:
13		The base station shall set this field to the code channel index
14		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
15		to use on the DCCH on the highest SR3 frequency. If Radio
16		Configuration 6 or 8 is used, the base station shall set this
17		field in the range 1 to 127 inclusive. If Radio Configuration 7
18		or 9 is used, the base station shall set this field in the range
19		1 to 255 inclusive.
20	RESERVED	- Reserved bits.
21		The base station shall add reserved bits as needed in order to
22		make the total length of the fields after the preceding
23		ADD_RECORD_LEN field through this RESERVED field equal to
24		an integer number of octets. The base station shall set these
25		bits to '0'.
26		
27	If the CH_IND field is set to '11', the base station shall include the following fields:	
28	FPC_FCH_INIT_SETPT	- Initial Fundamental Channel outer loop E_b/N_t setpoint.
29		The base station shall set this field to initial Fundamental
30		Channel outer loop E_b/N_t setpoint, in units of 0.125 dB.
31	FPC_DCCH_INIT_SETPT	- Initial Dedicated Control Channel outer loop E_b/N_t setpoint.
32		The base station shall set this field to initial Dedicated
33		Control Channel outer loop E_b/N_t setpoint, in units of 0.125
34		dB.
35	FPC_PRI_CHAN	- Power Control Subchannel indicator.

1		The base station shall set this field to '0' if the mobile station
2		is to perform the primary inner loop estimation on the
3		received Forward Fundamental Channel and the base station
4		is to multiplex the Power Control Subchannel on the Forward
5		Fundamental Channel. The base station shall set this field
6		to '1' if the mobile station is to perform the primary inner loop
7		estimation on the received Forward Dedicated Control
8		Channel and the base station is to multiplex the Power
9		Control Subchannel on the Forward Dedicated Control
10		Channel.
11	FPC_FCH_FER	- Fundamental channel target Frame Error Rate.
12		The base station shall set this field to the target Frame Error
13		Rate on the Forward Fundamental Channel.
14	FPC_FCH_MIN_SETPT	- Minimum Fundamental Channel Outer Loop E_b/N_t setpoint.
15		The base station shall set this field to minimum
16		Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
17		0.125 dB.
18	FPC_FCH_MAX_SETPT	- Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.
19		The base station shall set this field to maximum
20		Fundamental Channel Outer Loop E_b/N_t setpoint, in units of
21		0.125 dB.
22	FPC_DCCH_FER	- Dedicated Control Channel target Frame Error Rate.
23		The base station shall set this field to the target Frame Error
24		Rate on the Dedicated Control Channel.
25	FPC_DCCH_MIN_SETPT	- Minimum Dedicated Control Channel Outer Loop E_b/N_t
26		setpoint.
27		The base station shall set this field to minimum Dedicated
28		Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125
29		dB.
30	FPC_DCCH-	
31	_MAX_SETPT	- Maximum Dedicated Control Channel Outer Loop E_b/N_t
32		setpoint.
33		The base station shall set this field to maximum Dedicated Control Channel Outer Loop
34		E_b/N_t setpoint, in units of 0.125 dB.
35		The base station shall include NUM_PILOTS plus one occurrence of the following three-
36		field record, one for each member of the mobile station's Active Set on the Traffic Channel.
37	PILOT_PN	- Pilot PN sequence offset index.

1			The base station shall set this field to the pilot PN sequence
2			offset for this pilot in units of 64 PN chips.
3	ADD_PILOT_REC_INCL	-	Additional pilot information included indicator.
4			The base station shall set this field to '1' if additional pilot
5			information listed in PILOT_REC_TYPE and RECORD_LEN
6			fields are included. The base station shall set this field to '0'
7			if the corresponding pilot is the common pilot and there is no
8			additional pilot information included.
9	PILOT_REC_TYPE	-	Pilot record type.
10			If ADD_PILOT_REC_INCL is set to '1', the base station shall
11			set this field to the PILOT_REC_TYPE value shown in Table
12			3.7.2.3.2.21-6 corresponding to the type of Pilot Record
13			specified by this record.
14			If ADD_PILOT_REC_INCL is set to '0', the base station shall
15			omit this field.
16	RECORD_LEN	-	Pilot record length.
17			If ADD_PILOT_REC_INCL is set to '1', the base station shall
18			set this field to the number of octets in the type-specific fields
19			of this pilot record.
20			If ADD_PILOT_REC_INCL is set to '0', the base station shall
21			omit this field.
22	Type-specific fields	-	Pilot record type-specific fields.
23			If ADD_PILOT_REC_INCL is set to '1', the base station shall
24			include type-specific fields based on the PILOT_REC_TYPE of
25			this pilot record as described in 3.7.6.1.
26			If ADD_PILOT_REC_INCL is set to '0', the base station shall
27			omit this field.
28			
29	PWR_COMB_IND	-	Power control symbol combining indicator.
30			If the Forward Fundamental Traffic Channel associated with
31			this pilot will carry the same closed-loop power control
32			subchannel bits as that of the previous pilot in this message,
33			the base station shall set this field to '1'; otherwise, the base
34			station shall set this field to '0'. For the first occurrence of
35			this record in the message, the base station shall set this
36			field to '0'.
37	CODE_CHAN_FCH	-	Code channel index for the Fundamental Channel.

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, the base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the Forward Channel associated with this pilot. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the code channel index that the mobile station is to use on the Forward Channel on the center SR3 frequency.

If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used, the base station shall set this field in the range 1 to 63 inclusive. If Radio Configuration 4, 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

QOF_MASK_ID_FCH - Quasi-Orthogonal Function Mask Identifier for the Fundamental Channel.

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, the base station shall set this field to the quasi-orthogonal function mask identifier (see Table 3.1.3.1.12-2 of [2]) that the mobile station is to use on the Forward Fundamental Channel associated with this pilot. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the quasi-orthogonal function mask identifier that the mobile station is to use on the Forward Fundamental Channel on the center SR3 frequency.

CODE_CHAN_DCCH - Code channel index for the Dedicated Control channel.

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, the base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]), in the range of 1 to 255 inclusive, that the mobile station is to use on the Dedicated Control Channel associated with this pilot. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the code channel index in the range of 1 to 255 inclusive, that the mobile station is to use on the Dedicated Control Channel on the center SR3 frequency.

1			If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used,
2			the base station shall set this field in the range 1 to 63
3			inclusive. If Radio Configuration 4, 6 or 8 is used, the base
4			station shall set this field in the range 1 to 127 inclusive. If
5			Radio Configuration 7 or 9 is used, the base station shall set
6			this field in the range 1 to 255 inclusive.
7	QOF_MASK_ID_DCCH	-	Quasi-Orthogonal Function Mask Identifier for the Dedicated
8			Control Channel.
9			If FOR_RC is set to a Radio Configuration associated with
10			Spreading Rate 1, the base station shall set this field to the
11			quasi-orthogonal function mask identifier (see Table
12			3.1.3.1.12-2 of [2]) that the mobile station is to use on the
13			Forward Dedicated Control Channel associated with this pilot.
14			If FOR_RC is set to a Radio Configuration associated with
15			Spreading Rate 1, the base station shall set this field to the
16			quasi-orthogonal function mask identifier that the mobile
17			station is to use on the Forward Dedicated Control Channel
18			on the center SR3 frequency.
19	3X_FCH_INFO_INCL	-	3X FCH information included indicator.
20			If the 3X Fundamental Channel information is included, the
21			base station shall set this field to '1'; otherwise, the base
22			station shall set this field to '0'.
23	The base station shall include NUM_PILOTS plus one occurrence of the following record if		
24	3X_FCH_INFO_INCL is set to '1'. The base station shall use the same order for the		
25	following fields as is used for the PILOT_PN fields listed in this message.		
26	3X_FCH_LOW_INCL	-	FCH code channel on the lowest SR3 frequency included
27			indicator.
28			If the FCH on the lowest SR3 frequencies has a different code
29			channel than the FCH on the center SR3 frequency, the base
30			station shall set this field to '1'; otherwise, the base station
31			shall set this field to '0'.
32	QOF_MASK_ID-		
33	_FCH_LOW	-	QOF index for the FCH on the lowest SR3 frequency.
34			If 3X_FCH_LOW_INCL is set to '0', the base station shall omit
35			this field; otherwise, the base station shall set this field as
36			follows:
37			The base station shall set this field to the index of the Quasi-
38			orthogonal function (see Table 3.1.3.1.12-2 of [2])
39			corresponding to the QOF index for the FCH on the lowest SR3
40			frequency.

CODE_CHAN-

_FCH_LOW - Code channel for the FCH on the lowest SR3 frequency.

If 3X_FCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the FCH on the lowest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

3X_FCH_HIGH_INCL - FCH code channel on the highest SR3 frequency included indicator.

If the FCH on the highest SR3 frequencies has a different code channel than the FCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_FCH_HIGH - QOF index for the FCH on the highest SR3 frequency.

If 3X_FCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the FCH on the highest SR3 frequency.

CODE_CHAN-

_FCH_HIGH - Code channel for the FCH on the highest SR3 frequency.

If 3X_FCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the FCH on the highest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

- 1 3X_DCCH_INFO_INCL - 3X DCCH information included indicator.
- 2 If the 3X Dedicated Control Channel information is included,
- 3 the base station shall set this field to '1'; otherwise, the base
- 4 station shall set this field to '0'.
- 5 The base station shall include NUM_PILOTS plus one occurrence of the following record if
- 6 3X_DCCH_INFO_INCL is set to '1'. The base station shall use the same order for the
- 7 following fields as is used for the PILOT_PN fields listed in this message.
- 8 3X_DCCH_LOW_INCL - DCCH code channel on the lowest SR3 frequency included
- 9 indicator.
- 10 If the DCCH on the lowest SR3 frequencies has a different
- 11 code channel than the DCCH on the center SR3 frequency,
- 12 the base station shall set this field to '1'; otherwise, the base
- 13 station shall set this field to '0'.
- 14 QOF_MASK_ID-
- 15 _DCCH_LOW - QOF index for the DCCH on the lowest SR3 frequency.
- 16 If 3X_DCCH_LOW_INCL is set to '0', the base station shall
- 17 omit this field; otherwise, the base station shall set this field
- 18 as follows:
- 19 The base station shall set this field to the index of the Quasi-
- 20 orthogonal function (see Table 3.1.3.1.12-2 of [2])
- 21 corresponding to the QOF index for the DCCH on the lowest
- 22 SR3 frequency.
- 23 CODE_CHAN-
- 24 _DCCH_LOW - Code channel for the DCCH on the lowest SR3 frequency.
- 25 If 3X_DCCH_LOW_INCL is set to '0', the base station shall
- 26 omit this field; otherwise, the base station shall set this field
- 27 as follows:
- 28 The base station shall set this field to the code channel index
- 29 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
- 30 to use on the DCCH on the lowest SR3 frequency. If Radio
- 31 Configuration 6 or 8 is used, the base station shall set this
- 32 field in the range 1 to 127 inclusive. If Radio Configuration 7
- 33 or 9 is used, the base station shall set this field in the range
- 34 1 to 255 inclusive.
- 35 3X_DCCH_HIGH_INCL - DCCH code channel on the highest SR3 frequency included
- 36 indicator.

If the DCCH on the highest SR3 frequencies has a different code channel than the DCCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_DCCH_HIGH - QOF index for the DCCH on the highest SR3 frequency.

If 3X_DCCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the DCCH on the highest SR3 frequency.

CODE_CHAN-

_DCCH_HIGH - Code channel for the DCCH on the highest SR3 frequency.

If 3X_DCCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the DCCH on the highest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the total length of the fields after the preceding ADD_RECORD_LEN field through this RESERVED field equal to an integer number of octets. The base station shall set these bits to '0'.

1 3.7.2.3.2.22 General Neighbor List Message

2 MSG_TAG: GNLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
PILOT_INC	4
NGHBR_SRCH_MODE	2
NGHBR_CONFIG_PN_INCL	1
FREQ_FIELDS_INCL	1
USE_TIMING	1
GLOBAL_TIMING_INCL	0 or 1
GLOBAL_TX_DURATION	0 or 4
GLOBAL_TX_PERIOD	0 or 7
NUM_NGHBR	6

NUM_NGHBR occurrences of the following record:

NGHBR_CONFIG	0 or 3
NGHBR_PN	0 or 9
SEARCH_PRIORITY	0 or 2
SRCH_WIN_NGHBR	0 or 4
FREQ_INCL	0 or 1
NGHBR_BAND	0 or 5
NGHBR_FREQ	0 or 11
TIMING_INCL	0 or 1
NGHBR_TX_OFFSET	0 or 7
NGHBR_TX_DURATION	0 or 4
NGHBR_TX_PERIOD	0 or 7

(continues on next page)

1

Field	Length (bits)
NUM_ANALOG_NGHR	3

NUM_ANALOG_NGHR occurrences of the following record:

BAND_CLASS	5
SYS_A_B	2

SRCH_OFFSET_INCL	1
------------------	---

NUM_NGHR occurrences of the following record:

ADD_PILOT_REC_INCL	1
NGHR_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or 8 × RECORD_LEN
SRCH_OFFSET_NGHR	0 or 3

2

3

PILOT_PN - Pilot PN sequence offset index.

4

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

5

6

CONFIG_MSG_SEQ - Configuration message sequence number.

7

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

8

9

PILOT_INC - Pilot PN sequence offset index increment.

10

A mobile station searches for Remaining Set pilots at pilot PN sequence index values that are multiples of this value.

11

12

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that mobile stations are to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

13

14

15

16

17

18

The base station shall set this field to a value in the range 1 to 15 inclusive.

19

20

NGHR_SRCH_MODE- Search mode.

21

The base station shall set this field to the value shown in Table 3.7.2.3.2.22-1 corresponding to the search mode.

22

Table 3.7.2.3.2.22-1. Search Mode Field

Value (binary)	Description
00	No search priorities or search windows
01	Search priorities
10	Search windows
11	Search windows and search priorities

NGHBR_CONFIG-

_PN_INCL - Neighbor configuration and PN offset included.

If neighbor configuration and PN offset fields are included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FREQ_FIELDS_INCL - Frequency fields included.

If frequency fields are included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

USE_TIMING - Use timing indicator.

If base station timing information is included for neighbor base stations, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

GLOBAL_TIMING-

_INCL - Global timing included.

If USE_TIMING is set to '1', the base station shall include the field GLOBAL_TIMING_INCL and set this field as described below; otherwise, the base station shall omit this field.

If base station timing information is included globally for all neighbor base stations with TIMING_INCL equal to '1', the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

GLOBAL_TX-

_DURATION - Global neighbor transmit time duration.

If GLOBAL_TIMING_INCL is included and is set to '1', the base station shall include the field GLOBAL_TX_DURATION and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the duration of the base station transmit window, during each period, in units of 80 ms. The base station should set this field to a value of 3 or greater.

GLOBAL_TX-

_PERIOD - Global neighbor transmit time period.

If GLOBAL_TIMING_INCL is included and is set to '1', the base station shall include the field GLOBAL_TX_PERIOD and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to duration of the period, in units of 80 ms.

NUM_NGHR - Number of neighbor pilot PN sequences.

The base station shall set this field to the number of neighbors included in the message.

The base station shall include one occurrence of the following record for each pilot that a mobile station is to place in its Neighbor Set. The base station shall use the same order for the following record in this message as is used for pilots which are listed in the *Neighbor List Message* or *Extended Neighbor List Message*. Specifically, the i^{th} occurrence of the following record shall correspond the i^{th} pilot in the *Neighbor List Message* or in the *Extended Neighbor List Message*.

NGHR_CONFIG - Neighbor configuration.

If NGHR_CONFIG_PN_INCL = '1', the base station shall set this field to the value shown in Table 3.7.2.3.2.22-2 corresponding to the configuration of this neighbor; otherwise, the base station shall omit this field.

1

Table 3.7.2.3.2.22-2. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the same Paging Channel on the CDMA channel assignment on the neighbor base station.
001	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, use the same CDMA frequency assignment on the neighbor base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.
010	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields stored in the mobile station, if these fields are different than the current CDMA frequency assignment; otherwise, if processing of the <i>Extended CDMA Channel List Message</i> is supported and the <i>Extended CDMA Channel List Message</i> is being sent by the current base station, use the first CDMA Channel listed in the <i>Extended CDMA Channel List Message</i> transmitted by the current base station; otherwise, use the first CDMA Channel listed in the <i>CDMA Channel List Message</i> transmitted by the current base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.

011	<p>The base station shall set the neighbor configuration to this value if the mobile station is to enter the <i>System Determination Substate</i> of the <i>Mobile Station Initialization State</i> with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2).</p> <p>If FREQ_INCL equals '0' for this record, this CDMA frequency assignment has a Pilot Channel. If FREQ_INCL equals '1' for this record, the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ has a Pilot Channel.</p>
100-111	Reserved.

NGHBR_PN - Neighbor pilot PN sequence offset index.

If NGHBR_CONFIG_PN_INCL = '1', the base station shall set this field to the pilot PN sequence offset for this neighbor, in units of 64 PN chips; otherwise, the base station shall omit this field.

SEARCH_PRIORITY - Pilot Channel search priority.

If NGHBR_SRCH_MODE = '01' or NGHBR_SRCH_MODE = '11', then the base station shall set this field to the search priority for the Pilot Channel corresponding to NGHBR_PN. The base station shall set the search priority as shown in Table 3.7.2.3.2.22-3. If NGHBR_SRCH_MODE is set to any other value, the base station shall omit this field.

Table 3.7.2.3.2.22-3. Search Priority Field

Value (binary)	Search Priority
00	Low
01	Medium
10	High
11	Very High

SRCH_WIN_NGHBR - Neighbor pilot channel search window size.

If NGHBR_SRCH_MODE = '10' or '11', then the base station shall set this field to the value shown in Table 2.6.6.2.1-1 corresponding to the search window size to be used by mobile stations for this neighbor. If NGHBR_SRCH_MODE is set to any other value, the base station shall omit this field.

1	FREQ_INCL	-	Frequency included indicator.
2			If FREQ_FIELDS_INCL is set to '0', the base station shall omit
3			this field; otherwise, the base station shall set this field as
4			follows:
5			If the NGHBR_BAND and NGHBR_FREQ fields are included for
6			this neighbor base station, the base station shall set this bit
7			to '1'. If the NGHBR_BAND and NGHBR_FREQ fields are not
8			included in this assignment record, the base station shall set
9			this bit to '0'.
10	NGHBR_BAND	-	Neighbor band class.
11			If the FREQ_INCL bit is included and is set to '1', the base
12			station shall set this field to the CDMA band class, as
13			specified in [30], corresponding to the CDMA frequency
14			assignment for the CDMA Channel containing the Paging
15			Channel the mobile station is to search. If the FREQ_INCL bit
16			is omitted or is set to '0', the base station shall omit this field.
17	NGHBR_FREQ	-	Neighbor frequency assignment.
18			If the FREQ_INCL bit is omitted or is set to '0', the base
19			station shall omit this field.
20			If the FREQ_INCL bit is included and is set to '1' and the
21			corresponding neighbor has a 1X neighbor pilot record type,
22			the base station shall set this field to the CDMA Channel
23			number, in the specified CDMA band class, corresponding to
24			the CDMA frequency assignment for the CDMA Channel
25			containing the Paging Channel the mobile station is to
26			search.
27			If the FREQ_INCL bit is included and is set to '1' and the
28			corresponding neighbor has a 3X neighbor pilot record type,
29			the base station shall set this field to the CDMA Channel
30			number, in the specified CDMA band class, corresponding to
31			the center SR3 frequency assignment containing the Paging
32			Channel the mobile station is to search.
33	TIMING_INCL	-	Timing included indicator.
34			If USE_TIMING is set to '1', the base station shall include the
35			field TIMING_INCL and set this field as described below;
36			otherwise, the base station shall omit this field.
37			If base station timing information is included for this
38			neighbor base station, the base station shall set this field to
39			'1'; otherwise, the base station shall set this field to '0'.
40	NGHBR_TX_OFFSET	-	Neighbor transmit time offset.

If TIMING_INCL is included and is set to '1', the base station shall include the field NGHBR_TX_OFFSET and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the time offset, in units of 80 ms, from the beginning of the neighbor timing period to the beginning of the first base station transmit window within the period. The beginning of the neighbor timing period occurs when $\lfloor t/4 \rfloor \bmod (16384) = 0$.

NGHBR_TX_DURATION - Neighbor transmit time duration.

If TIMING_INCL is included and is set to '1' and GLOBAL_TIMING_INCL is set to '0', the base station shall include the field NGHBR_TX_DURATION and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to duration of the base station transmit window, during each period, in units of 80 ms. The base station should set this field to a value of 3 or greater.

NGHBR_TX_PERIOD - Neighbor transmit time period.

If TIMING_INCL is included and is set to '1' and GLOBAL_TIMING_INCL is set to '0', the base station shall include the field NGHBR_TX_PERIOD and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to duration of the period, in units of 80 ms.

NUM_ANALOG_NGHR - Number of neighboring analog systems.

The base station shall set this field to the number of neighboring analog systems included in the message.

The base station shall include one occurrence of the following record for each neighboring analog system included in the message:

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

SYS_A_B - System A/B.

If BAND_CLASS is set to '00000', the base station shall set this field to the value shown in Table 3.7.2.3.2.22-4 corresponding to the availability of neighboring analog systems; otherwise, the base station shall set this field to '00'.

Table 3.7.2.3.2.22-4. Cellular System A/B

Cellular System A/B	Value
RESERVED	00
System A	01
System B	10
System A and B	11

SRCH_OFFSET_INCL - Neighbor pilot channel search window offset included.

If NGHBR_SRCH_MODE = '10' or '11' and if the SRCH_OFFSET_NGHR field is included in the following records, the base station shall set this bit to '1'; otherwise, the base station shall set this bit to '0'.

The base station shall include one occurrence of the following record for each pilot that a mobile station is to place in its Neighbor Set. The base station shall use the same order for the following record in this message as is used for pilots which are listed in the *Neighbor List Message* or *Extended Neighbor List Message*. Specifically, the i^{th} occurrence of the following record shall correspond the i^{th} pilot in the *Neighbor List Message* or in the *Extended Neighbor List Message*.

ADD_PILOT_REC_INCL - Additional pilot information included indicator.

The base station shall set this field to '1' if additional pilot information listed in the NGHBR_PILOT_REC_TYPE and RECORD_LEN fields are included. The base station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

NGHBR_PILOT_REC_TYPE - Neighbor Pilot record type

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the NGHBR_PILOT_REC_TYPE value shown in Table 3.7.2.3.2.22-5 corresponding to the type of Pilot Record specified by this record.

Table 3.7.2.3.2.22-5. Neighbor Pilot Record Types

Description	NGHBR_PILOT_REC_TYPE (binary)
1X Common Pilot with Transmit Diversity	000
1X Auxiliary Pilot	001
1X Auxiliary Pilot with Transmit Diversity	010
3X Common Pilot	011
3X Auxiliary Pilot	100
All other NGHBR_PILOT_REC_TYPE values are reserved	

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

RECORD_LEN - Pilot record length.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the number of octets in the type-specific fields of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If ADD_PILOT_REC_INCL is set to '1', the base station shall include type-specific fields based on the NGHBR_PILOT_REC_TYPE of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

If NGHBR_PILOT_REC_TYPE is equal to '000', the base station shall include the following fields:

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

- 1 TD_POWER_LEVEL - TD Transmit Power Level.
- 2 The base station shall set this field to the TD transmit power
- 3 level relative to that of the Forward Pilot Channel as specified
- 4 in Table 3.7.2.3.2.21-7.
- 5 TD_MODE - Transmit Diversity mode.
- 6 The base station shall set this field to the Transmit Diversity
- 7 mode, as specified in Table 3.7.2.3.2.26-3.
- 8 RESERVED - Reserved bits.
- 9 The base station shall set this field to '0000'.

10 If NGHBR_PILOT_REC_TYPE is equal to '001', the base station shall include the following

11 fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

- 12
- 13 QOF - Quasi-orthogonal function index.
- 14 The base station shall set this field to the index of the Quasi-
- 15 orthogonal function (see Table 3.1.3.1.12-2 of [2].
- 16 WALSH_LENGTH - Length of the Walsh Code.
- 17 The base station shall set this field to the WALSH_LENGTH
- 18 value shown in Table 3.7.2.3.2.22-6 corresponding to the
- 19 length of the Walsh code for the pilot that is used in as the
- 20 Auxiliary pilot.

21 **Table 3.7.2.3.2.22-6. Walsh Code Length**

WALSH_LENGTH (binary)	Length of the Walsh Code
'000'	64
'001'	128
'010'	256
'011'	512
'100' – '111'	Reserved

AUX_PILOT_WALSH - Walsh Code for the Auxiliary Pilot.

The base station shall set this field to the Walsh code corresponding to the Auxiliary pilot.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If NGHBR_PILOT_REC_TYPE is equal to '010', the base station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index for the Auxiliary Transmit Diversity Pilot.

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh Code.

The base station shall set this field to the WALSH_LENGTH value shown in 3.7.2.3.2.22-6 corresponding to the length of the Walsh code for the pilots that are used as Auxiliary pilot in the transmit diversity mode.

AUX_TD_WALSH - Walsh Code for the Auxiliary Transmit Diversity Pilot.

The base station shall set this field to the Walsh code corresponding to the Auxiliary Transmit Diversity Pilot.

AUX_TD-
_POWER_LEVEL - Auxiliary Transmit Diversity Pilot Power Level.

The base station shall set this field to the Auxiliary Transmit Diversity Pilot transmit power level relative to that of the Auxiliary Pilot as specified in Table 3.7.2.3.2.22-7.

**Table 3.7.2.3.2.22-7. Auxiliary Transmit Diversity Pilot
Transmit Power Level**

AUX_TD_POWER_LEVEL	Transmit Power Level
00	9 dB below the Auxiliary Pilot Channel transmit power
01	6 dB below the Auxiliary Pilot Channel transmit power
10	3 dB below the Auxiliary Pilot Channel transmit power
11	Same as the Auxiliary Pilot Channel transmit power

TD_MODE - Transmit Diversity mode.

The base station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If NGHBR_PILOT_REC_TYPE is equal to '011', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3

SR3_PRIMARY_PILOT - Primary SR3 pilot.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-5 corresponding to the position of the primary SR3 pilot.

SR3_PILOT_POWER1 - Relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

RESERVED – Reserved bits.

The base station shall set this field to '00000000'.

If NGHBR_PILOT_REC_TYPE is equal to '100', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

SR3_PRIMARY_PILOT – Primary SR3 pilot.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-5 corresponding to the position of the primary SR3 pilot.

1	SR3_PILOT_POWER1	-	Relative power level between the primary SR3 pilot and the
2			pilot on the lower frequency of the two remaining SR3
3			frequencies.
4			The base station shall set this field to the value shown in
5			Table 3.7.2.3.2.26-6 corresponding to the power level of the
6			primary pilot with respect to the pilot on the lower frequency
7			of the two remaining SR3 frequencies.
8	SR3_PILOT_POWER2	-	Relative power level between the primary SR3 pilot and the
9			pilot on the higher frequency of the two remaining SR3
10			frequencies.
11			The base station shall set this field to the value shown in
12			Table 3.7.2.3.2.26-6 corresponding to the power level of the
13			primary pilot with respect to the pilot on the higher frequency
14			of the two remaining SR3 frequencies.
15	QOF	-	Quasi-orthogonal function index.
16			The base station shall set this field to the index of the Quasi-
17			orthogonal function (see Table 3.1.3.1.12-2 of [2] on the
18			frequency of the primary pilot.
19	WALSH_LENGTH	-	Length of the Walsh Code.
20			The base station shall set this field to the WALSH_LENGTH
21			value shown in Table 3.7.2.3.2.22-6 corresponding to the
22			length of the Walsh code for the pilot that is used as the
23			Auxiliary pilot on the frequency of the primary pilot.
24	AUX_PILOT_WALSH	-	Walsh Code for the Auxiliary Pilot.
25			The base station shall set this field to the Walsh code
26			corresponding to the Auxiliary pilot on the frequency of the
27			primary pilot.
28	ADD_INFO_INCL1	-	Additional information included for the pilot on the lower
29			frequency of the two remaining SR3 frequencies.
30			If the additional information for the pilot on the lower
31			frequencies of the two remaining SR3 frequencies is the
32			same as pilot on the primary frequency, the base station shall
33			set this field to '0'; otherwise, the base station shall set this
34			field to '1'.
35	QOF1	-	Quasi-orthogonal function index for the pilot on the lower
36			frequency of the two remaining SR3 frequencies.
37			If ADD_INFO_INCL1 is set to '0', the base station shall omit
38			this field; otherwise, the base station shall set this field as
39			follows:

1		The base station shall set this field to the index of the Quasi-
2		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the lower
3		frequency of the two remaining SR3 frequencies.
4	WALSH_LENGTH1	- Length of the Walsh Code for the pilot on the lower frequency
5		of the two remaining SR3 frequencies.
6		If ADD_INFO_INCL1 is set to '0', the base station shall omit
7		this field; otherwise, the base station shall set this field as
8		follows:
9		The base station shall set this field to the WALSH_LENGTH
10		value shown in Table 3.7.2.3.2.22-6 corresponding to the
11		length of the Walsh code for the pilot that is used as the
12		Auxiliary pilot on the lower frequency of the two remaining
13		SR3 frequencies.
14	AUX_PILOT_WALSH1	- Walsh Code for the Auxiliary Pilot on the lower frequency of
15		the two remaining SR3 frequencies.
16		If ADD_INFO_INCL1 is set to '0', the base station shall omit
17		this field; otherwise, the base station shall set this field as
18		follows:
19		The base station shall set this field to the Walsh code
20		corresponding to the Auxiliary pilot on the lower frequency of
21		the two remaining SR3 frequencies.
22	ADD_INFO_INCL2	- Additional information included for the pilot on the higher
23		frequency of the two remaining SR3 frequencies.
24		If the additional information for the pilot on the higher
25		frequencies of the two remaining SR3 frequencies is the
26		same as pilot on the primary frequency, the base station shall
27		set this field to '0'; otherwise, the base station shall set this
28		field to '1'.
29	QOF2	- Quasi-orthogonal function index for the pilot on the higher
30		frequency of the two remaining SR3 frequencies.
31		If ADD_INFO_INCL2 is set to '0', the base station shall omit
32		this field; otherwise, the base station shall set this field as
33		follows:
34		The base station shall set this field to the index of the Quasi-
35		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
36		higher frequency of the two remaining SR3 frequencies.
37	WALSH_LENGTH2	- Length of the Walsh Code for the pilot on the higher
38		frequency of the two remaining SR3 frequencies.

1			If ADD_INFO_INCL2 is set to '0', the base station shall omit
2			this field; otherwise, the base station shall set this field as
3			follows:
4			The base station shall set this field to the WALSH_LENGTH
5			value shown in Table 3.7.2.3.2.22-6 corresponding to the
6			length of the Walsh code for the pilot that is used as the
7			Auxiliary pilot on the higher frequency of the two remaining
8			SR3 frequencies.
9	AUX_PILOT_WALSH2	-	Walsh Code for the Auxiliary Pilot on the higher frequency of
10			the two remaining SR3 frequencies.
11			If ADD_INFO_INCL2 is set to '0', the base station shall omit
12			this field; otherwise, the base station shall set this field as
13			follows:
14			The base station shall set this field to the Walsh code
15			corresponding to the Auxiliary pilot on the higher frequency of
16			the two remaining SR3 frequencies.
17	RESERVED	-	Reserved bits.
18			The base station shall set all the bits of this field to '0' to
19			make the entire record octet-aligned.
20	SRCH_OFFSET_NGHR	-	Neighbor pilot channel search window size offset.
21			If SRCH_OFFSET_INCL equals to '1', then the base station
22			shall set this field to the value shown in Table 2.6.6.2.1-2
23			corresponding to the search window offset to be used by
24			mobile stations for this neighbor; otherwise, the base station
25			shall omit this field.
26			

3.7.2.3.2.23 User Zone Identification Message

MSG_TAG: UZIM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
UZ_EXIT	4
NUM_UZID	4

NUM_UZID occurrences of the following record:

UZID	16
UZ_REV	4
TEMP_SUB	1

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

UZ_EXIT - User Zone Exit parameter.

The base station shall set this field to the User Zone exit parameter (see 2.6.9.2.1). The base station shall set this field to a value (in dB) in the range 0 to 15.

NUM_UZID - Number of User Zone identifiers.

The base station shall set this field to the number of user zone identifiers included in this message.

The base station shall include NUM_UZID occurrences of the following record.

UZID - User Zone identifier.

The base station shall set this field to the User Zone identifier (see 3.6.7) supported by the base station.

UZ_REV - User Zone update revision number.

The base station shall set this field to the User Zone update revision number.

TEMP_SUB - Temporary subscription flag.

1 If the corresponding User Zone allows for temporary
2 subscription, the base station shall set this field to '1';
3 otherwise, the base station shall set this field to '0'.
4

3.7.2.3.2.24 Private Neighbor List Message

MSG_TAG: PNLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
NUM_RADIO_INTERFACE	4

NUM_RADIO_INTERFACE occurrences of the following record:

RADIO_INTERFACE_TYPE	4
RADIO_INTERFACE_LEN	8
Radio Interface Type -specific fields	8× RADIO_INTERFACE_LEN

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

NUM_RADIO-
_INTERFACE - Number of interface types.

The base station shall set this field to the number of radio interface types for which private neighbors are included in this message.

The base station shall include NUM_RADIO_INTERFACE occurrences of the following record, one occurrence for each radio interface for which private neighbors are included in this message.

RADIO-
_INTERFACE_TYPE - The radio interface type.

The base station shall set this field to the radio interface type of this record as specified in Table 3.7.2.3.2.24-1.

Table 3.7.2.3.2.24-1. Radio Interface Type

RAIO_INTERAFCE_TYPE (binary)	Descriptions
0000	MC system
0001-1111	Reserved

RADIO-
_INTERFACE_LEN

- The length of the Radio Interface Type -specific fields.

The base station shall set this field to the number of octets in the Radio Interface Type -specific fields of this record.

If RADIO_INTERFACE_TYPE is equal to '0000', the base station shall include the following fields:

1

Field	Length (bits)
COMMON_INCL	1
COMMON_BAND_CLASS	0 or 5
COMMON_NGHBR_FREQ	0 or 11
SRCH_WIN_PN	4
NUM_PRI_NGHBR	6

NUM_PRI_NGHBR occurrences of the following record:

SID	15
NID	16
PRI_NGHBR_PN	9
ADD_PILOT_REC_INCL	1
NGHBR_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8× RECORD_LEN
BAND_CLASS	0 or 5
NGHBR_FREQ	0 or 11
UZID_INCL	1
NUM_UZID	0 or 4

If UZID_INCL = 1, NUM_UZID occurrences of the following subrecord; otherwise, no occurrence of the following subrecord:

UZID	0 or 16
UZ_REV	0 or 4
TEMP_SUB	0 or 1

2

3 COMMON_INCL - Common configuration included indicator.

4 If all private neighbor base stations included in this message
5 are on the same CDMA band class and CDMA Channel
6 number as specified in the COMMON_BAND_CLASS and
7 COMMON_NGHBR_FREQ fields, the base station shall set this
8 field to '1'; otherwise, the base station shall set this field to
9 '0'.

10 COMMON_BAND_CLASS - Neighbor band class.

1			If COMMON_INCL is set to '1', the base station shall set this
2			field to the CDMA band class as in Table 3.7.2.3.2.8-3
3			corresponding to the CDMA frequency assignment for the
4			CDMA Channel containing the Paging Channel or the
5			Forward Common Control Channel for all private neighbors;
6			otherwise, the base station shall omit this field.
7	COMMON_NGHBR_FREQ	-	Neighbor frequency assignment.
8			If the COMMON_INCL bit is set to '1', the base station shall
9			set this field to the CDMA Channel number, in the specified
10			CDMA band class, corresponding to the CDMA frequency
11			assignment for the CDMA Channel containing the Paging
12			Channel or the Forward Common Control Channel for all
13			private neighbor base station; otherwise, the base station
14			shall omit this field.
15	SRCH_WIN_N	-	Search window size for the Private Neighbor Set.
16			The base station shall set this field to the value shown in
17			Table 2.6.6.2.1-1 corresponding to the search window size to
18			be used by mobile stations for the Private Neighbor Set.
19	NUM_PRI_NGHBR	-	Number of private neighbor pilot PN sequences.
20			The base station shall set this field to the number of private
21			neighbors included in the message.
22			
23	The base station shall include NUM_PRI_NGHBR occurrences of the following record.		
24	SID	-	System Identification.
25			The base station shall set this field to the system
26			identification number for this private neighbor system (see
27			2.6.5.2).
28	NID	-	Network Identification.
29			This field serves as a sub-identifier of a system as defined by
30			the owner of the SID.
31			The base station shall set this field to the system
32			identification number for this private neighbor network (see
33			2.6.5.2).
34	PRI_NGHBR_PN	-	Private neighbor pilot PN sequence offset index.
35			The base station shall set this field to the pilot PN sequence
36			offset for this private neighbor, in units of 64 PN chips.
37	ADD_PILOT_REC_INCL	-	Additional pilot information included indicator.

The base station shall set this field to '1' if additional pilot information listed in the NGHBR_PILOT_REC_TYPE and RECORD_LEN fields are included. The base station shall set this field to '0' if the corresponding pilot is the common pilot and there is no additional pilot information included.

NGHBR_PILOT_REC_TYPE - Neighbor Pilot record type

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the NGHBR_PILOT_REC_TYPE value shown in Table 3.7.2.3.2.22-5 corresponding to the type of Pilot Record specified by this record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

RECORD_LEN - Pilot record length.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the number of octets in the type-specific fields of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If ADD_PILOT_REC_INCL is set to '1', the base station shall include type-specific fields based on the NGHBR_PILOT_REC_TYPE of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

If NGHBR_PILOT_REC_TYPE is equal to '000', the base station shall include the following fields:

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

TD_POWER_LEVEL - TD Transmit Power Level.

The base station shall set this field to the TD transmit power level relative to that of the Forward Pilot Channel as specified in Table 3.7.2.3.2.21-7.

TD_MODE - Transmit Diversity mode.

1 The base station shall set this field to the Transmit Diversity
2 mode, as specified in Table 3.7.2.3.2.26-3.

3 RESERVED - Reserved bits.

4 The base station shall set this field to '0000'.

5 If NGHBR_PILOT_REC_TYPE is equal to '001', the base station shall include the following
6 fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

7

8 QOF - Quasi-orthogonal function index.

9 The base station shall set this field to the index of the Quasi-
10 orthogonal function (see Table 3.1.3.1.12-2 of [2]).

11 WALSH_LENGTH - Length of the Walsh Code.

12 The base station shall set this field to the WALSH_LENGTH
13 value shown in Table 3.7.2.3.2.22-6 corresponding to the
14 length of the Walsh code for the pilot that is used in as the
15 Auxiliary pilot.

16 AUX_PILOT_WALSH - Walsh Code for the Auxiliary Pilot.

17 The base station shall set this field to the Walsh code
18 corresponding to the Auxiliary pilot.

19 RESERVED - Reserved bits.

20 The base station shall set all the bits of this field to '0' to
21 make the entire record octet-aligned.

22 If NGHBR_PILOT_REC_TYPE is equal to '010', the base station shall include the following
23 fields:

24

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

1			
2	QOF	-	Quasi-orthogonal function index for the Auxiliary Transmit Diversity Pilot.
3			
4			The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).
5			
6	WALSH_LENGTH	-	Length of the Walsh Code.
7			The base station shall set this field to the WALSH_LENGTH value shown in 3.7.2.3.2.22-6 corresponding to the length of the Walsh code for the pilots that are used as Auxiliary pilot in the transmit diversity mode.
8			
9			
10			
11	AUX_TD_WALSH	-	Walsh Code for the Auxiliary Transmit Diversity Pilot.
12			The base station shall set this field to the Walsh code corresponding to the Auxiliary Transmit Diversity Pilot.
13			
14	AUX_TD-		
15	_POWER_LEVEL	-	Auxiliary Transmit Diversity Pilot Power Level.
16			The base station shall set this field to the Auxiliary Transmit Diversity Pilot transmit power level relative to that of the Auxiliary Pilot as specified in Table 3.7.2.3.2.22-7.
17			
18			
19	TD_MODE	-	Transmit Diversity mode.
20			The base station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.
21			
22	RESERVED	-	Reserved bits.
23			The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.
24			

25 If NGHBR_PILOT_REC_TYPE is equal to '011', the base station shall include the following
 26 fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3

- | | | |
|-------------------|---|--|
| SR3_PRIMARY_PILOT | - | Primary SR3 pilot.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-5 corresponding to the position of the primary SR3 pilot. |
| SR3_PILOT_POWER1 | - | Relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies. |
| SR3_PILOT_POWER2 | - | Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies. |
| RESERVED | - | Reserved bits.

The base station shall set this field to '00000000'. |

If NGHBR_PILOT_REC_TYPE is equal to '100', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

- 1 SR3_PRIMARY_PILOT – Primary SR3 pilot.
- 2 The base station shall set this field to the value shown in
- 3 Table 3.7.2.3.2.26-5 corresponding to the position of the
- 4 primary SR3 pilot.
- 5 SR3_PILOT_POWER1 – Relative power level between the primary SR3 pilot and the
- 6 pilot on the lower frequency of the two remaining SR3
- 7 frequencies.
- 8 The base station shall set this field to the value shown in
- 9 Table 3.7.2.3.2.26-6 corresponding to the power level of the
- 10 primary pilot with respect to the pilot on the lower frequency
- 11 of the two remaining SR3 frequencies.
- 12 SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the
- 13 pilot on the higher frequency of the two remaining SR3
- 14 frequencies.
- 15 The base station shall set this field to the value shown in
- 16 Table 3.7.2.3.2.26-6 corresponding to the power level of the
- 17 primary pilot with respect to the pilot on the higher frequency
- 18 of the two remaining SR3 frequencies.

1	QOF	-	Quasi-orthogonal function index.
2			The base station shall set this field to the index of the Quasi-
3			orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
4			frequency of the primary pilot.
5	WALSH_LENGTH	-	Length of the Walsh Code.
6			The base station shall set this field to the WALSH_LENGTH
7			value shown in Table 3.7.2.3.2.22-6 corresponding to the
8			length of the Walsh code for the pilot that is used as the
9			Auxiliary pilot on the frequency of the primary pilot.
10	AUX_PILOT_WALSH	-	Walsh Code for the Auxiliary Pilot.
11			The base station shall set this field to the Walsh code
12			corresponding to the Auxiliary pilot on the frequency of the
13			primary pilot.
14	ADD_INFO_INCL1	-	Additional information included for the pilot on the lower
15			frequency of the two remaining SR3 frequencies.
16			If the additional information for the pilot on the lower
17			frequencies of the two remaining SR3 frequencies is the
18			same as pilot on the primary frequency, the base station shall
19			set this field to '0'; otherwise, the base station shall set this
20			field to '1'.
21	QOF1	-	Quasi-orthogonal function index for the pilot on the lower
22			frequency of the two remaining SR3 frequencies.
23			If ADD_INFO_INCL1 is set to '0', the base station shall omit
24			this field; otherwise, the base station shall set this field as
25			follows:
26			The base station shall set this field to the index of the Quasi-
27			orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the lower
28			frequency of the two remaining SR3 frequencies.
29	WALSH_LENGTH1	-	Length of the Walsh Code for the pilot on the lower frequency
30			of the two remaining SR3 frequencies.
31			If ADD_INFO_INCL1 is set to '0', the base station shall omit
32			this field; otherwise, the base station shall set this field as
33			follows:
34			The base station shall set this field to the WALSH_LENGTH
35			value shown in Table 3.7.2.3.2.22-6 corresponding to the
36			length of the Walsh code for the pilot that is used as the
37			Auxiliary pilot on the lower frequency of the two remaining
38			SR3 frequencies.

1	AUX_PILOT_WALSH1	-	Walsh Code for the Auxiliary Pilot on the lower frequency of
2			the two remaining SR3 frequencies.
3			If ADD_INFO_INCL1 is set to '0', the base station shall omit
4			this field; otherwise, the base station shall set this field as
5			follows:
6			The base station shall set this field to the Walsh code
7			corresponding to the Auxiliary pilot on the lower frequency of
8			the two remaining SR3 frequencies.
9	ADD_INFO_INCL2	-	Additional information included for the pilot on the higher
10			frequency of the two remaining SR3 frequencies.
11			If the additional information for the pilot on the higher
12			frequencies of the two remaining SR3 frequencies is the
13			same as pilot on the primary frequency, the base station shall
14			set this field to '0'; otherwise, the base station shall set this
15			field to '1'.
16	QOF2	-	Quasi-orthogonal function index for the pilot on the higher
17			frequency of the two remaining SR3 frequencies.
18			If ADD_INFO_INCL2 is set to '0', the base station shall omit
19			this field; otherwise, the base station shall set this field as
20			follows:
21			The base station shall set this field to the index of the Quasi-
22			orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
23			higher frequency of the two remaining SR3 frequencies.
24	WALSH_LENGTH2	-	Length of the Walsh Code for the pilot on the higher
25			frequency of the two remaining SR3 frequencies.
26			If ADD_INFO_INCL2 is set to '0', the base station shall omit
27			this field; otherwise, the base station shall set this field as
28			follows:
29			The base station shall set this field to the WALSH_LENGTH
30			value shown in Table 3.7.2.3.2.22-6 corresponding to the
31			length of the Walsh code for the pilot that is used as the
32			Auxiliary pilot on the higher frequency of the two remaining
33			SR3 frequencies.
34	AUX_PILOT_WALSH2	-	Walsh Code for the Auxiliary Pilot on the higher frequency of
35			the two remaining SR3 frequencies.
36			If ADD_INFO_INCL2 is set to '0', the base station shall omit
37			this field; otherwise, the base station shall set this field as
38			follows:

1		The base station shall set this field to the Walsh code
2		corresponding to the Auxiliary pilot on the higher frequency of
3		the two remaining SR3 frequencies.
4	RESERVED	- Reserved bits.
5		The base station shall set all the bits of this field to '0' to
6		make the entire record octet-aligned.
7	BAND_CLASS	- Neighbor band class.
8		If COMMON_INCL is set to '0', the base station shall set this
9		field to the CDMA band class as in Table 3.7.2.3.2.8-3
10		corresponding to the CDMA frequency assignment for the
11		CDMA Channel containing the Paging Channel for the
12		private neighbor; otherwise, the base station shall omit this
13		field.
14	NGHBR_FREQ	- Neighbor frequency assignment.
15		If the COMMON_INCL bit is set to '0', the base station shall
16		set this field to the CDMA Channel number, in the specified
17		CDMA band class, corresponding to the CDMA frequency
18		assignment for the CDMA Channel containing the Paging
19		Channel for the private neighbor base station; otherwise, the
20		base station shall omit this field.
21	UZID_INCL	- User Zone identifier included indicator.
22		If the UZID information is included, the base station shall set
23		this field to '1'; otherwise, the base station shall set this field
24		to '0'.
25	NUM_UZID	- Number of User Zone identifiers.
26		If UZID_INCL is set to '1', the base station shall set this field
27		to the number of occurrences of UZID supported by the private
28		neighbor base station; otherwise, the base station shall omit
29		this field.
30	If UZID_INCL is set to '1', the base station shall include NUM_UZID occurrences of the	
31	following three-field subrecord; otherwise, the base station shall omit this subrecord.	
32	UZID	- User Zone identifiers.
33		The base station shall set this field to the User Zone
34		identifier supported by the private neighbor base station.
35	UZ_REV	- User Zone update revision number.
36		The base station shall set this field to the User Zone update
37		revision number.
38	TEMP_SUB	- Temporary subscription flag.

1 If the corresponding User Zone allows for temporary
2 subscription, the base station shall set this field to '1';
3 otherwise, the base station shall set this field to '0'.
4

- 1 3.7.2.3.2.25 Reserved
- 2

1 3.7.2.3.2.26 Sync Channel Message

2 MSG_TAG: SCHM

3

Field	Length (bits)
P_REV	8
MIN_P_REV	8
SID	15
NID	16
PILOT_PN	9
LC_STATE	42
SYS_TIME	36
LP_SEC	8
LTM_OFF	6
DAYLT	1
PRAT	2
CDMA_FREQ	11
EXT_CDMA_FREQ	11
SR1_BCCH_SUPPORTED	1
SR1_NON_TD_FREQ_INCL	0 or 1
SR1_CDMA_FREQ_NON_TD	0 or 11
SR1_BRAT_NON_TD	0 or 2
SR1_CRAT_NON_TD	0 or 1
SR1_BCCH_CODE_CHAN_NON_TD	0 or 6
SR1_TD_INCL	0 or 1
SR1_CDMA_FREQ_TD	0 or 11
SR1_BRAT_TD	0 or 2
SR1_CRAT_TD	0 or 1
SR1_BCCH_CODE_CHAN_TD	0 or 6

(continues on next page)

4

Field	Length (bits)
SR1_TD_MODE	0 or 2
SR1_TD_POWER_LEVEL	0 or 2
SR3_INCL	1
SR3_CENTER_FREQ_INCL	0 or 1
SR3_CENTER_FREQ	0 or 11
SR3_BRAT	0 or 2
SR3_BCCH_CODE_CHAN	0 or 7
SR3_PRIMARY_PILOT	0 or 2
SR3_PILOT_POWER1	0 or 3
SR3_PILOT_POWER2	0 or 3

1

2

P_REV - Protocol revision level.

3

The base station shall set this field to '00000111'.

4

MIN_P_REV - Minimum protocol revision level.

5

The base station sets this field to prevent mobile stations which cannot be supported by the base station from accessing the system.

6

7

8

The base station shall set this field to the minimum protocol revision level that it supports. For Band Class 0 operation, the base station should set this field to a value of '00000010' or greater. For Band Class 1 operation, the base station should set this field to a value of '00000001' or greater.

9

10

11

12

13

SID - System identification.

14

The base station shall set this field to the system identification number for this system (see 2.6.5.2).

15

16

NID - Network identification.

17

This field serves as a sub-identifier of a system as defined by the owner of the SID.

18

19

The base station shall set this field to the network identification number for this network (see 2.6.5.2).

20

21

PILOT_PN - Pilot PN sequence offset index.

22

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

23

24

LC_STATE - Long code state.

The base station shall set this field to the long code state at the time given by the SYS_TIME field of this message.

SYS_TIME - System time.

The base station shall set this field to the System Time as of four Sync Channel superframes (320 ms) after the end of the last superframe containing any part of this *Sync Channel Message*, minus the pilot PN sequence offset, in units of 80 ms (see 1.3 of [2]).

LP_SEC - The number of leap seconds that have occurred since the start of System Time.

The base station shall set this field to the number of leap seconds that have occurred since the start of System Time, as of the time given by the SYS_TIME field of this message.

LTM_OFF - Offset of local time from System Time.

The base station shall set this field to the two's complement offset of local time from System Time, in units of 30 minutes.

The local time of day, in units of 80 ms, as of four Sync Channel superframes (320 ms) after the end of the last superframe containing any part of this *Sync Channel Message*, minus the pilot PN sequence offset, is equal to $\text{SYS_TIME} - (\text{LP_SEC} \times 12.5) + (\text{LTM_OFF} \times 22500)$.

DAYLT - Daylight savings time indicator.

If daylight savings time is in effect, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

PRAT - Paging Channel data rate.

The base station shall set this field to the PRAT field value shown in Table 3.7.2.3.2.26-1 corresponding to the data rate used by the Paging Channels in the system.

Table 3.7.2.3.2.26-1. Paging Channel Data Rate

PRAT Field (binary)	Paging Channel data rate
00	9600 bps
01	4800 bps
10	Reserved
11	Reserved

CDMA_FREQ - Frequency assignment.

1			The base station shall set this field to the CDMA Channel
2			number corresponding to the CDMA frequency assignment for
3			the CDMA Channel containing a Primary Paging Channel. ²⁶
4	EXT_CDMA_FREQ	-	Extended frequency assignment.
5			The base station shall set this field to the CDMA Channel
6			number corresponding to the CDMA frequency assignment for
7			the CDMA Channel containing a Primary Paging Channel
8			that a mobile station capable of Radio Configurations greater
9			than 2 or capable of supporting Quick Paging Channel will
10			use.
11	SR1_BCCH_SUPPORTED	-	Common Channel on Spreading Rate 1 supported indicator.
12			The base station shall set this field to '1' if the base station
13			supports common channels (BCCH/F-CCCH/EACH);
14			otherwise, the base station shall set this field to '0'.
15	SR1_NON_TD-		
16	_FREQ_INCL	-	Non Transmit Diversity frequency included indicator.
17			If SR1_BCCH_SUPPORTED is set to '0', the base station shall
18			omit this field; otherwise, the base station shall set this field
19			as follows:
20			The base station shall set this field to '1' if
21			SR1_CDMA_FREQ_NON_TD is included in the message. The
22			base station shall set this field to '0' if the frequency specified
23			by the EXT_CDMA_FREQ field is used for BCCH frequency
24			assignment.
25	SR1_CDMA-		
26	_FREQ_NON_TD	-	Frequency assignment for non-transmit diversity operation.
27			If SR1_NON_TD_FREQ_INCL is set to '0', the base station shall
28			omit this field; otherwise, the base station shall set this field
29			as follows:
30			The base station shall set this field to the CDMA Channel
31			number corresponding to the CDMA frequency assignment for
32			the CDMA Channel containing a Broadcast Control Channel
33			that does not support the TD operation.
34	SR1_BRAT_NON_TD	-	BCCH data rate in non-TD mode for Spreading Rate 1.

²⁶ If compatibility with IS-95-A mobile stations is desired in a Band Class 0 system, the CDMA_FREQ field is set to the CDMA frequency assignment containing this Sync Channel.

If SR1_BCCH_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the BRAT field value shown in Table 3.7.2.3.2.26-2 corresponding to the data rate used by the Broadcast Control Channel in the system.

Table 3.7.2.3.2.26-2. Broadcast Control Channel Data Rate

BRAT Field (binary)	Broadcast Control Channel data rate
00	4800 bps
01	9600 bps
10	19200bps
11	Reserved

SR1_CRAT_NON_TD – BCCH code rate in non Transmit Diversity mode for Spreading Rate 1.

If SR1_BCCH_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to '0' if the BCCH Code Rate is 1/4 (see 3.1.3.1.2.1 of [2]). The base station shall set this field to '1' if the BCCH code rate is 1/2 (see 3.1.3.1.2.1 of [2]).

SR1_BCCH_CODE-

_CHAN_NON_TD – Walsh code for the Spreading Rate 1 BCCH in non Transmit Diversity mode.

If SR1_BCCH_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the Walsh code corresponding to the Spreading Rate 1 BCCH in non Transmit Diversity mode.

SR1_TD_INCL – Spreading Rate 1 Transmit Diversity frequency included indicator.

If SR1_BCCH_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

1			The base station shall set this field to '1' if
2			SR1_CDMA_FREQ_TD, SR1_BRAT_TD, SR1_TD_MODE, and
3			SR1_TD_POWER_LEVEL are included in the message;
4			otherwise, the base station shall set this field to '0'.
5	SR1_CDMA_FREQ_TD	-	Spreading Rate 1 frequency assignment for Transmit
6			Diversity operation.
7			If SR1_TD_INCL is set to '0', the base station shall omit this
8			field; otherwise, the base station shall set this field as follows:
9			The base station shall set this field to the CDMA Channel
10			number corresponding to the CDMA frequency assignment for
11			the CDMA Channel containing a BCCH Channel that
12			supports the TD operation.
13	SR1_BRAT_TD	-	BCCH data rate in Transmit Diversity mode for Spreading
14			Rate 1.
15			If SR1_TD_INCL is set to '0', the base station shall omit this
16			field; otherwise, the base station shall set this field as follows:
17			The base station shall set this field to the BRAT field value
18			shown in Table 3.7.2.3.2.26-2 corresponding to the data rate
19			used by the Broadcast Control Channel in the system.
20	SR1_CRAT_TD	-	BCCH code rate in Transmit Diversity mode for Spreading
21			Rate 1.
22			If SR1_TD_INCL is set to '0', the base station shall omit this
23			field; otherwise, the base station shall set this field as follows:
24			The base station shall set this field to '0' if the BCCH Code
25			Rate is 1/4 (see 3.1.3.1.2.1 of [2]). The base station shall set
26			this field to '1' if the BCCH Code Rate is 1/2 (see 3.1.3.1.2.1 of
27			[2]).
28	SR1_BCCH-		
29	_CODE_CHAN_TD	-	Walsh code for the Spreading Rate 1 BCCH in Transmit
30			Diversity mode.
31			If SR1_TD_INCL is set to '0', the base station shall omit this
32			field; otherwise, the base station shall set this field as follows:
33			The base station shall set this field to the Walsh code
34			corresponding to the Spreading Rate 1 BCCH in Transmit
35			Diversity mode.
36	SR1_TD_MODE	-	Spreading Rate 1 Transmit Diversity Mode.
37			If SR1_TD_INCL is set to '0', the base station shall omit this
38			field; otherwise, the base station shall set this field as follows:

The base station shall set this field corresponding to Table 3.7.2.3.2.26-3.

Table 3.7.2.3.2.26-3. TD Mode

TD_MODE	Descriptions
00	OTD (Orthogonal Transmit Diversity) mode
01	STS (Space Time Spreading) mode
10-11	Reserved

SR1_TD-
_POWER_LEVEL

- Spreading Rate 1 TD transmit power level.

If SR1_TD_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the TD transmit power level relative to that of the Forward Pilot Channel, as specified in Table 3.7.2.3.2.26-4.

Table 3.7.2.3.2.26-4. TD Transmit Power Level

TD_POWER_LEVEL	Transmit Power Level
00	9 dB below the Forward Pilot Channel transmit power
01	6 dB below the Forward Pilot Channel transmit power
10	3 dB below the Forward Pilot Channel transmit power
11	Same as the Forward Pilot Channel transmit power

SR3_INCL - Spreading Rate 3 information included indicator.

The base station shall set this field to '1' if the Spreading Rate 3 information is included in this message; otherwise, the base station shall set this field to '0'.

SR3_CENTER-

_FREQ_INCL - Center SR3 frequency assignment included.

1			If SR3_INCL is set to '0', the base station shall omit this field;
2			otherwise, the base station shall set this field as follows:
3			The base station shall set this field to '1', if the CDMA
4			Channel number corresponding to the SR3 center frequency
5			assignment for the CDMA Channel containing a Broadcast
6			Control Channel is different to EXT_CDMA_FREQ. Otherwise,
7			the base station shall set this field to '0'.
8	SR3_CENTER_FREQ	-	Center SR3 frequency assignment.
9			If SR3_CENTER_FREQ_INCL is included and is set to '0', the
10			base station shall omit this field; otherwise, the base station
11			shall set this field as follows:
12			The base station shall set this field to the CDMA Channel
13			number corresponding to the SR3 center frequency
14			assignment for the CDMA Channel containing a Broadcast
15			Control Channel.
16	SR3_BRAT	-	Spreading Rate 3 BCCH data rate.
17			If SR3_INCL is set to '0', the base station shall omit this field;
18			otherwise, the base station shall set this field as follows:
19			The base station shall set this field to the BCCH rate field
20			value shown in Table 3.7.2.3.2.26-2 corresponding to the data
21			rate used by the Broadcast Control Channel in the system.
22	SR3_BCCH-		
23	_CODE_CHAN	-	Spreading Rate 3 BCCH Walsh code.
24			If SR3_SUPPORTED is set to '0', the base station shall omit
25			this field; otherwise, the base station shall set this field as
26			follows:
27			The base station shall set this field to the Walsh code
28			corresponding to the Spreading Rate 3 BCCH.
29	SR3_PRIMARY_PILOT	-	Primary SR3 pilot.
30			If SR3_INCL is set to '0', the base station shall omit this field;
31			otherwise, the base station shall set this field as follows:
32			The base station shall set this field to the value shown in
33			Table 3.7.2.3.2.26-5 corresponding to the position of the
34			primary SR3 pilot.

Table 3.7.2.3.2.26-5. The Position of the Primary SR3 Pilot

SR3_PRIMARY_PILOT (Binary)	Position
00	The primary pilot is on the lowest SR3 frequency
01	The primary pilot is on the center SR3 frequency
10	The primary pilot is on the highest SR3 frequency
11	Reserved

SR3_PILOT_POWER1 – Relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies.

If SR3_CCCH_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

Table 3.7.2.3.2.26-6. Pilot Transmission Power

SR3_PILOT_POWER1 (Binary)	Relative Transmission Power
000	0
001	1dB
010	2dB
011	3dB
100	4dB
101	5dB
110	6dB
111	7dB

1 SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the
2 pilot on the higher frequency of the two remaining SR3
3 frequencies.
4
5 If SR3_INCL is set to '0', the base station shall omit this field;
6 otherwise, the base station shall set this field to the value
7 shown in Table 3.7.2.3.2.26-6 corresponding to the power level
8 of the primary pilot with respect to the pilot on the higher
9 frequency of the two remaining SR3 frequencies.
10

3.7.2.3.2.27 Extended Global Service Redirection Message

MSG_TAG: EGSRDM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
REDIRECT_ACCOLC	16
RETURN_IF_FAIL	1
DELETE_TMSI	1
REDIRECT_P_REV_INCL	1
EXCL P_REV_IND	0 or 1
REDIRECT_P_MIN	0 or 8
REDIRECT_P_MAX	0 or 8

One occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

REDIRECT_ACCOLC - Redirected access overload classes.

See REDIRECT_ACCOLC field defined in 3.7.2.3.2.18.

The base station shall set the subfields corresponding to the access overload classes of mobile stations which are to be redirected to '1', and shall set the remaining subfields to '0'.

1	RETURN_IF_FAIL	-	Return if fail indicator.
2			The base station shall set this field to '1' if the mobile station
3			is required to return to the system from which it is being
4			redirected upon failure to obtain service using the redirection
5			criteria specified in this message; otherwise, the base
6			station shall set this field to '0'.
7	DELETE_TMSI	-	Delete TMSI indicator.
8			The base station shall set this field to '1' if the mobile station
9			is required to delete the TMSI assigned to the mobile station;
10			otherwise, the base station shall set this field to '0'.
11	REDIRECT_P_REV_INCL	-	Redirection mobile protocol revision included.
12			If the redirection specified in this message applies to the
13			mobile stations of some specific protocol revisions, the base
14			station shall set this field to '1'; otherwise, if this redirection
15			applies to all mobile stations, the base station shall set this
16			field to '0'.
17	EXCL_P_REV_IND	-	Excluding mobile protocol revision indicator.
18			If the REDIRECT_P_REV_INCL is set to '1', the base station
19			shall include this field and set this field as described below;
20			otherwise, the base station shall omit this field.
21			If mobile stations with MOB_P_REV in the range between
22			REDIRECT_P_MIN and REDIRECT_P_MAX inclusive are
23			excluded from this Global Service Redirection, the base
24			station shall set this field to '1'. Otherwise, if the mobile
25			stations with MOB_P_REV in the protocol revision range
26			specified in DIRECT_P_MIN and DIRECT_P_MAX are subjected
27			to the redirection, the base station shall set this field to '0'.
28	REDIRECT_P_MIN	-	Minimum redirection protocol revision.
29			The base station shall set this field to the minimum protocol
30			revision of which mobile stations are subjected to as specified
31			by the action contained in EXCL_P_REV_IND (i.e., to be
32			redirected or excluded from redirection). The base station
33			shall set this field to a protocol revision equal to or greater
34			than six.
35	REDIRECT_P_MAX	-	Maximum direction protocol revision.

The base station shall set this field to the maximum protocol revision of which mobile stations are subjected to as specified by the action contained in EXCL_P_REV_IND (i.e., to be redirected or excluded from redirection). The base station shall set this field to a protocol revision equal to or greater than six.

The base station shall include one occurrence of the following three-field record:

RECORD_TYPE - Redirection record type.

The base station shall set this field to the RECORD_TYPE value shown in Table 3.7.2.3.2.16-2 corresponding to the type of redirection specified by this record.

RECORD_LEN - Redirection record length.

The base station shall set this field to the number of octets in the type-specific fields of this redirection record.

Type-specific fields - Redirection record type-specific fields.

The base station shall include type-specific fields based on the RECORD_TYPE of this redirection record.

If RECORD_TYPE is equal to '00000001', the base station shall include the following fields:

Field	Length (bits)
EXPECTED_SID	15
IGNORE_CDMA	1
SYS_ORDERING	3
MAX_REDIRECT_DELAY	5

EXPECTED_SID - Expected SID.

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

IGNORE_CDMA - Ignore CDMA Available indicator.

The base station shall set this field to '1' to indicate that the mobile station is to ignore the *CDMA Capability Message* on the analog system to which it is being redirected. The base station shall set this field to '0' to indicate that the mobile station may discontinue service on the system to which it is being redirected if the mobile station receives a *CDMA Capability Message* with CDMA_AVAIL equal to '1', and the preferred mode of the mobile station is CDMA.

SYS_ORDERING - System ordering.

The base station shall set this field to the SYS_ORDERING value shown in Table 3.7.2.3.2.16-3 corresponding to the order in which the mobile station is to attempt to obtain service on an analog system.

MAX_REDIRECT_DELAY - Maximum delay upon redirection.

The base station shall set this field to the maximum delay time, in units of 8 seconds, to be used by mobile stations in the event of a global redirection to analog mode. This operation can be invoked to avoid overloading an underlying analog cell's reverse control channel.

If RECORD_TYPE is equal to '00000010', the base station shall include the following fields:

Subfield	Length (bits)
BAND_CLASS	5
EXPECTED_SID	15
EXPECTED_NID	16
RESERVED	4
NUM_CHANS	4

NUM_CHANS occurrences of the following field:

CDMA_CHAN	11
-----------	----

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

EXPECTED_SID - Expected SID.

1			If the base station is redirecting the mobile station to a
2			specific system, the base station shall set this field to the SID
3			of that system; otherwise, the base station shall set this field
4			to '0'.
5	EXPECTED_NID	-	Expected NID.
6			If the base station is redirecting the mobile station to a
7			specific network, the base station shall set this field to the
8			NID of that network; otherwise, the base station shall set this
9			field to 65535.
10	RESERVED	-	Reserved bits.
11			The base station shall set this field to '0'
12	NUM_CHANS	-	Number of CDMA Channels.
13			The base station shall set this field to the number of
14			occurrences of the CDMA_CHAN field in this record.
15	CDMA_CHAN	-	CDMA Channel number.
16			For each CDMA Channel on which the mobile station is to
17			attempt to acquire a CDMA system, the base station shall
18			include one occurrence of this field specifying the associated
19			CDMA Channel number.
20			

3.7.2.3.2.28 Extended CDMA Channel List Message

MSG_TAG: ECCLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
NUM_FREQ	4

NUM_FREQ occurrences of the following field:

CDMA_FREQ	11
-----------	----

RC_QPCH_SEL_INCL	1
------------------	---

If RC_QPCH_SEL_INCL is equal to '1', include NUM_FREQ occurrences of the following field:

RC_QPCH_HASH_IND	1
------------------	---

TD_SEL_INCL	1
TD_MODE	0 or 2

If TD_SEL_INCL is equal to '1', include NUM_FREQ occurrences of the following fields:

TD_HASH_IND	1
TD_POWER_LEVEL	0 or 2

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

NUM_FREQ - Number of CDMA Frequencies

The base station shall set this field to the number of supported CDMA frequencies included in this message.

1	CDMA_FREQ	-	CDMA Channel frequency assignment.
2			The base station shall include one occurrence of this field for
3			each CDMA Channel, containing either a Paging Channel, or
4			a Broadcast Control Channel and Forward Common Control
5			Channel.
6			The base station shall set each occurrence of this field to the
7			CDMA channel number corresponding to the CDMA frequency
8			assignment for that CDMA Channel (see [2]).
9			If the base station supports a CDMA frequency assignment
10			without transmit diversity, the base station should not set
11			the first occurrence of this field to a CDMA channel number
12			corresponding to a transmit diversity frequency assignment.
13	RC_QPCH_SEL_INCL	-	RC and QPCH Selection included indicator
14			The base station shall set this field to '1', if NUM_FREQ
15			occurrences of RC_QPCH_HASH_IND are included; otherwise,
16			it shall set this field to '0'.
17	RC_QPCH-		
18	_HASH_IND	-	RC_QPCH channel hashing indicator
19			If RC_QPCH_SEL_INCL is set to '1', the base station shall
20			include NUM_FREQ occurrences of this field and set this field
21			as follow; otherwise, the base station shall omit this field.
22			If the associated CDMA_FREQ is to be selected for CDMA
23			channel hashing by mobile stations capable of RC greater
24			than two or capable of supporting Quick Paging Channel, the
25			base station shall set the field to '1'; otherwise, the base
26			station shall set this field to '0'.
27			When the <i>Extended CDMA Channel List Message</i> is sent on the
28			Broadcast Control Channel, the base station shall set this
29			field to '1', if the corresponding CDMA channel is to be
30			selected for channel hashing by mobile station with Quick
31			Paging Channel capability.
32	TD_SEL_INCL	-	Transmit diversity selection indicator included.
33			The base station shall set this field to '1', if the base station
34			includes transmit diversity selection information in this
35			message; otherwise, the base station shall set this field to '0'.
36	TD_MODE	-	Transmit diversity mode.
37			If the field TD_SEL_INCL is set to '0', the base station shall
38			omit this field; otherwise, the base station shall include this
39			field and set it as follows:

1 The base station shall set this field to the Transmit Diversity
2 mode, as specified in Table 3.7.2.3.2.26-3.

3 If the TD_SEL_INCL is set to '1', the base station shall include NUM_FREQ occurrences of
4 the following fields:

5 TD_HASH_IND - Transmit diversity hash indicator.

6 If the associated CDMA_FREQ is to be selected for CDMA
7 channel hashing by mobile stations capable of supporting
8 transmit diversity [TD_MODE], the base station shall set the
9 field to '1'; otherwise, the base station shall set this field to
10 '0'.

11 TD_POWER_LEVEL - Transmit diversity power level.

12 If TD_HASH_IND is set to '0', the base station shall omit this
13 field; otherwise, the base station shall include this field and
14 set it to the transmit diversity transmission power level
15 relative to that of the Forward Pilot Channel, as specified in
16 Table 3.7.2.3.2.21-7.

17

18

3.7.2.3.2.29 User Zone Reject Message

MSG_TAG: UZRM

Field	Length (bits)
REJECT_UZID	16
REJECT_ACTION_INDI	3
UZID_ASSIGN_INCL	1
ASSIGN_UZID	0 or 16

REJECT_UZID - Rejected User Zone identifier.

The base station shall set this field to the User Zone identifier of the User Zone rejected by the base station.

REJECT_ACTION_INDI - Rejection action indicator.

The base station shall set this field to the value shown in Table 3.7.2.3.2.29-1 corresponding to the User Zone rejection action field to identify the mobile station action.

Table 3.7.2.3.2.29-1. Rejection Action Indicators

Description	REJECT_ACTION_INDI (binary)
Disable UZID until Next Update	000
Disable UZID until next power cycle	001
Disable UZID until new SID	010
Disable UZID until new SID/NID	011
Disable UZID until next BASE_ID	100
All other REJECT_ACTION_INDI values are reserved	

UZID_ASSIGN_INCL - User Zone identifier assignment included indicator.

If assigned UZID information is included, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

1 ASSIGN_UZID - Assigned User Zone identifiers.
2 The base station shall set this field to the User Zone
3 identifier of the User Zone assigned to the mobile station.
4

3.7.2.3.2.30 ANSI-41 System Parameters Message

MSG_TAG: A41SPM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
SID	15
NID	16
PACKET_ZONE_ID	8
REG_ZONE	12
TOTAL_ZONES	3
ZONE_TIMER	3
MULT_SIDS	1
MULT_NIDS	1
HOME_REG	1
FOR_SID_REG	1
FOR_NID_REG	1
POWER_UP_REG	1
POWER_DOWN_REG	1
PARAMETER_REG	1
REG_PRD	7
DIST_REG_INCL	1
REG_DIST	0 or 11
DELETE_FOR_TMSI	1
USE_TMSI	1
PREF_MSID_TYPE	2

(continues on next page)

1

Field	Length (bits)
TMSI_ZONE_LEN	4
TMSI_ZONE	$8 \times \text{TMSI_ZONE_LEN}$
IMSI_T_SUPPORTED	1
MAX_NUM_ALT_SO	3
AUTO_MSG_SUPPORTED	1
AUTO_MSG_INTERVAL	0 or 3
OTHER_INFO_INCL	1
BASE_ID	0 or 16
MCC	0 or 7
IMSI_11_12	0 or 10
BROADCAST_GPS_ASST	0 or 1
SIG_ENCRYPT_SUP	0 or 8
STORE_KEY	0 or 1

2

3

PILOT_PN - Pilot PN sequence offset index.

4

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

5

6

CONFIG_MSG_SEQ - Configuration message sequence number.

7

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

8

9

SID - System identification.

10

The base station shall set this field to the system identification number for this system (see 2.6.5.2).

11

12

NID - Network identification.

13

This field serves as a sub-identifier of a system as defined by the owner of the SID.

14

15

The base station shall set this field to the network identification number for this network (see 2.6.5.2).

16

17

PACKET_ZONE_ID - Packet data services zone identifier.

18

If the base station supports a packet data service zone, the base station shall set this field to its non-zero packet data services zone identifier.

19

20

If the base station does not support a packet data service zone, the base station shall set this field to '00000000'.

REG_ZONE - Registration zone.

The base station shall set this field to its registration zone number (see 2.6.5.1.5).

TOTAL_ZONES - Number of registration zones to be retained.

The base station shall set this field to the number of registration zones the mobile station is to retain for purposes of zone-based registration (see 2.6.5.1.5).

If zone-based registration is to be disabled, the base station shall set this field to '000'.

ZONE_TIMER - Zone timer length.

The base station shall set this field to the ZONE_TIMER value shown in Table 3.7.2.3.2.30-1 corresponding to the length of the zone registration timer to be used by mobile stations.

Table 3.7.2.3.2.30-1. Value of Zone Timer

ZONE_TIMER Value (binary)	Timer Length (Minutes)
000	1
001	2
010	5
011	10
100	20
101	30
110	45
111	60

MULT_SIDS - Multiple SID storage indicator.

If mobile stations may store entries of SID_NID_LIST containing different SIDs, the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

1	MULT_NIDS	-	Multiple NID storage indicator.
2			If mobile stations may store multiple entries of SID_NID_LIST
3			having the same SID (with different NIDs), the base station
4			shall set this field to '1'; otherwise the base station shall set
5			this field to '0'.
6	HOME_REG	-	Home registration indicator.
7			If mobile stations that are not roaming (see 2.6.5.3) and have
8			MOB_TERM_HOME equal to '1' are to be enabled for
9			autonomous registrations, the base station shall set this field
10			to '1'. If such mobile stations are not to be enabled for
11			autonomous registration, the base station shall set this field
12			to '0'.
13	FOR_SID_REG	-	SID roamer registration indicator.
14			If mobile stations that are foreign SID roamers (see 2.6.5.3)
15			and have MOB_TERM_FOR_SID equal to '1' are to be enabled
16			for autonomous registration, the base station shall set this
17			field to '1'. If such mobile stations are not to be enabled for
18			autonomous registration, the base station shall set this field
19			to '0'.
20	FOR_NID_REG	-	NID roamer registration indicator.
21			If mobile stations that are foreign NID roamers (see 2.6.5.3)
22			and have MOB_TERM_FOR_NID equal to '1' are to be enabled
23			for autonomous registration, the base station shall set this
24			field to '1'. If such mobile stations are not to be enabled for
25			autonomous registration, the base station shall set this field
26			to '0'.
27	POWER_UP_REG	-	Power-up registration indicator.
28			If mobile stations enabled for autonomous registration are to
29			register immediately after powering on and receiving the
30			system overhead messages, the base station shall set this
31			field to '1'; otherwise, the base station shall set this field to
32			'0'.
33	POWER_DOWN_REG	-	Power-down registration indicator.
34			If mobile stations enabled for autonomous registration are to
35			register immediately before powering down, the base station
36			shall set this field to '1'; otherwise, the base station shall set
37			this field to '0'.
38	PARAMETER_REG	-	Parameter-change registration indicator.

1			If mobile stations are to register on parameter change events
2			as specified in 2.6.5.1.6, the base station shall set this field to
3			'1'. If not, the base station shall set this field to '0'.
4	REG_PRD	-	Registration period.
5			If mobile stations are not to perform timer-based registration,
6			the base station shall set this field to '0000000'. If mobile
7			stations are to perform timer-based registration, the base
8			station shall set this field to the value in the range 29 to 85
9			inclusive, such that the desired timer value is
10			$\lfloor 2^{\text{REG_PRD}/4} \rfloor \times 0.08 \text{ seconds.}$
11	DIST_REG_INCL	-	Distance-Based Registration Information Included.
12			The base station shall set this field to '1' if it includes
13			distance-based registration information in the message and
14			mobile stations are to perform distance-based registration;
15			otherwise the base station shall set this field to '0'.
16	REG_DIST	-	Registration distance.
17			If DIST_REG_INCL is set to '1', the base station shall include
18			the field REG_DIST and shall set this field as shown below;
19			otherwise, the base station shall omit this field.
20			The base station shall set this field to the non-zero "distance"
21			beyond which the mobile station is to re-register (see
22			2.6.5.1.4).
23	DELETE_FOR_TMSI	-	Delete foreign TMSI.
24			The base station shall set this field to '1' to cause the mobile
25			station to delete its TMSI if the TMSI was assigned in a
26			different TMSI zone from that specified by the TMSI_ZONE
27			field of this message; otherwise, the base station shall set
28			this field to '0'.
29	USE_TMSI	-	Use TMSI indicator.
30			The base station shall set this field to the value shown in
31			Table 3.7.2.3.2.29-2 corresponding to the type of MSID that
32			the mobile station is to use on the Enhanced Access
33			Channel.
34	PREF_MSID_TYPE	-	Preferred Enhanced Access Channel Mobile Station Identifier
35			Type.
36			The base station shall set this field to the value shown in
37			Table 3.7.2.3.2.30-2 corresponding to the type of MSID that
38			the mobile station is to use on the Enhanced Access
39			Channel.

Table 3.7.2.3.2.30-2. Preferred MSID Types

USE_TMSI (binary)	PREF_MSID_TYP E (binary)	Description
0	00	IMSI_S and ESN
0	10	IMSI
0	11	IMSI and ESN
1	10	TMSI (valid TMSI is assigned); IMSI (TMSI not assigned)
1	11	TMSI (valid TMSI is assigned); IMSI and ESN (TMSI not assigned)
All other values are reserved.		

TMSI_ZONE_LEN - TMSI zone length.

The base station shall set this field to the number of octets included in the TMSI_ZONE. The base station shall set this field to a value in the range 1 to 8 inclusive.

TMSI_ZONE - TMSI zone.

The base station shall set this field to the TMSI zone number as specified in [27].

IMSI_T_SUPPORTED - IMSI_T support indicator.

The base station shall set this field to '1' to indicate support for a 15-digit IMSI_T addressing according to [18].

MAX_NUM_ALT_SO - Maximum number of alternative service options.

The base station shall set this field to the maximum number of service option numbers defined in [30], corresponding to alternative service options with no service option group number assigned, that the mobile station is allowed to include in the *Origination Message*, and the *Page Response*.

If the base station sets this field to a value greater than zero, in addition, the base station shall allow the mobile station to include

- a 4-bit or 8-bit service option bitmap in the *Origination Message* and the *Page Response Message*;

- alternate service option numbers, not limited to MAX_ALT_SO_NUM, in the *Enhanced Origination Message*.

AUTO_MSG-

_SUPPORTED - Autonomous message supported indicator.

If the base station allows the autonomous delivery of the *Device Information Message* on the r-csch, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

AUTO_MSG-

_INTERVAL - Autonomous message interval.

If AUTO_MSG_SUPPORTED is set to '1', the base station shall set this field to the AUTO_MSG_INTERVAL value shown in Table 3.7.2.3.2.13-4 to indicate the minimum time interval between autonomous messages sent by a mobile station to the infrastructure. This parameter is intended to allow the infrastructure to limit the frequency of autonomous messages sent by a mobile station on the r-csch.

OTHER_INFO_INCL - Other information included indicator.

The base station shall set this field to '1' if the MC-RR Parameters Message is not sent; otherwise, the base station shall set this field to '0'.

BASE_ID - Base station identification.

If OTHER_INFO_INCL is set to '1', the base station shall include this field and set it as follows; otherwise, the base station shall omit this field.

The base station shall set this field to its identification number.

MCC - Mobile Country Code.

If OTHER_INFO_INCL is set to '1', the base station shall include this field and set it as follows; otherwise, the base station shall omit this field.

The base station shall set this field to the MCC (see 2.3.1)

IMSI_11_12 - 11th and 12th digits of the IMSI.

If OTHER_INFO_INCL is set to '1', the base station shall include this field and set it as follows; otherwise, the base station shall omit this field.

The base station shall set this field to the IMSI_11_12 (see 2.3.1).

1	BROADCAST_GPS_ASST	-	Broadcast GPS Assist Indicator.
2			If OTHER_INFO_INCL is set to '1', the base station shall
3			include this field and set it as follows; otherwise, the base
4			station shall omit this field.
5			The base station shall set this field to '1' if it supports
6			Broadcast GPS Assist capability; otherwise, the base station
7			shall set this field to '0'.
8	SIG_ENCRYPT_SUP	-	Signaling Encryption supported indicator.
9			If OTHER_INFO_INCL is set to '1', the base station shall
10			include this field and set it as follows; otherwise, the base
11			station shall omit this field.
12			The base station shall set this field to the field consists of the
13			subfields shown in Table 2.7.1.3.2.1-4.
14	STORE_KEY	-	Store session key indicator
15			If OTHER_INFO_INCL is set to '1', the base station shall
16			include this field and set it as follows; otherwise, the base
17			station shall omit this field.
18			The base station shall set this field to '1' to indicate that the
19			mobile station is to store the session key; otherwise the base
20			station shall set this field to '0'.
21			

1 3.7.2.3.2.31 MC-RR Parameters Message

2 MSG_TAG: MCRRPM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
BASE_ID	16
P_REV	8
MIN_P_REV	8
SR3_INCL	1
SR3_CENTER_FREQ_INCL	0 or 1
SR3_CENTER_FREQ	0 or 11
SR3_BRAT	0 or 2
SR3_BCCH_CODE_CHAN	0 or 7
SR3_PRIMARY_PILOT	0 or 2
SR3_PILOT_POWER1	0 or 3
SR3_PILOT_POWER2	0 or 3
SRCH_WIN_A	4
SRCH_WIN_R	4
T_ADD	6
T_DROP	6
T_COMP	4
T_TDROP	4
NGHBR_MAX_AGE	4
SOFT_SLOPE	6
ADD_INTERCEPT	6
DROP_INTERCEPT	6
ENC_SUPPORTED	1
SIG_ENCRYPT_SUP	0 or 8
UI_ENCRYPT_SUP	0 or 8
STORE_KEY	0 or 1

(continues on next page)

3

4

Field	Length (bits)
ADD_FIELDS_LEN	8
ADD_FIELDS	$8 \times \text{ADD_FIELDS_LEN}$
CCH_INFO_INCL	1
MCC	0 or 10
IMSI_11_12	0 or 7
MAX_SLOT_CYCLE_INDEX	0 or 3
CHAN_SEL_PREF	0 or 1
PWR_REP_THRESH	0 or 5
PWR_REP_FRAMES	0 or 4
PWR_THRESH_ENABLE	0 or 1
PWR_PERIOD_ENABLE	0 or 1
PWR_REP_DELAY	0 or 5
RESELECT_INCLUDED	0 or 1
EC_THRESH	0 or 5
EC_IO_THRESH	0 or 5
BASE_LAT	0 or 22
BASE_LONG	0 or 23
PILOT_REPORT	0 or 1
ACC_ENT_HO_ORDER	0 or 1
ACCESS_HO	0 or 1
ACCESS_HO_MSG_RSP	0 or 1
ACCESS_PROBE_HO	0 or 1
ACC_HO_LIST_UPD	0 or 1
ACC_PROBE_HO_OTHER_MSG	0 or 1
MAX_NUM_PROBE_HO	0 or 3
NUM_FCCCH	0 or 3
FCCCH_RATE	0 or 3
FCCCH_CODE_RATE	0 or 1

NUM_FCCCH occurrences of the following one field record:

FCCCH_CODE_CHAN	8
-----------------	---

(continues on next page)

1

Field	Length (bits)
BCAST_INDEX	0 or 3
NUM_BCCH_BCAST	0 or 3

NUM_BCCH_BCAST occurrences of the following two-field record:

BCCH_CODE_CHAN	7
BRAT	2
BCCH_CODE_RATE	1

QPCH_SUPPORTED	0 or 1
NUM_QPCH	0 or 2
QPCH_RATE	0 or 1
QPCH_POWER_LEVEL_PAGE	0 or 3
QPCH_CCI_SUPPORTED	0 or 1
QPCH_POWER_LEVEL_CONFIG	0 or 3

NUM_QPCH occurrences of the following one field record if operating in Spreading Rate 3 common channel:

QPCH_CODE_CHAN	0 or 8
----------------	--------

QPCH_BI_SUPPORTED	0 or 1
QPCH_POWER_LEVEL_BCAST	0 or 3
SDB_SUPPORTED	0 or 1
BROADCAST_GPS_ASST	0 or 1
MAC_CF_SUPPORTED	0 or 1
RLGAIN_TRAFFIC_PILOT	0 or 6
REV_PWR_CNTL_DELAY_INCL	0 or 1
REV_PWR_CNTL_DELAY	0 or 2
MOB_QOS	0 or 1
USE_SYNC_ID	0 or 1
NUM_OPT_MSG	0 or 4

(continues on next page)

2

Field	Length (bits)
SENDING_RAND	0 or 1
PRI_NGHR_LIST	0 or 1
USER_ZONE_ID	0 or 1
EXT_GLOBAL_REDIRECT	0 or 1
RESERVED	0 or (NUM_OPT_MSG - 4)

1		
2	PILOT_PN	- Pilot PN sequence offset index.
3		The base station shall set this field to the pilot PN sequence
4		offset for this base station, in units of 64 PN chips.
5	CONFIG_MSG_SEQ	- Configuration message sequence number.
6		The base station shall set this field to CONFIG_SEQ
7		(see 3.6.2.2).
8	BASE_ID	- Base station identification.
9		The base station shall set this field to its identification
10		number.
11	P_REV	- Protocol revision level.
12		The base station shall set this field to '00000111'.
13	MIN_P_REV	- Minimum protocol revision level.
14		The base station sets this field to prevent mobile stations,
15		which cannot be supported by the base station from accessing
16		the system.
17		The base station shall set this field to the minimum protocol
18		revision level that it supports. For Band Class 0 operation,
19		the base station should set this field to a value of '00000010'
20		or greater. For Band Class 1 operation, the base station
21		should set this field to a value of '00000001' or greater.
22	SR3_INCL	- Spreading Rate 3 common channel parameters included
23		indicator.
24		The base station shall set this field to '1' if the base station
25		includes SR3 related parameters in this message; otherwise,
26		the base station shall set this field to '0'.
27		If the base station is operating in SR3 mode, the base station
28		shall set this field to '0'.
29	SR3_CENTER-	

1	<code>_FREQ_INCL</code>	- Center SR3 frequency assignment included.
2		If <code>SR3_INCL</code> is set to '0', the base station shall omit this field;
3		otherwise, the base station shall set this field as follows:
4		The base station shall set this field to '1', if the CDMA
5		Channel number corresponding to the SR3 center frequency
6		assignment for the CDMA Channel containing a Broadcast
7		Control Channel is different from the current SR1 frequency
8		assignment. Otherwise, the base station shall set this field
9		to '0'.
10	<code>SR3_CENTER_FREQ</code>	- Center SR3 frequency assignment.
11		If <code>SR3_CENTER_FREQ_INCL</code> is included and is set to '0', the
12		base station shall omit this field; otherwise, the base station
13		shall set this field as follows:
14		The base station shall set this field to the CDMA Channel
15		number corresponding to the SR3 center frequency
16		assignment for the CDMA Channel containing a Broadcast
17		Control Channel.
18	<code>SR3_BRAT</code>	- Spreading Rate 3 BCCH data rate.
19		If <code>SR3_INCL</code> is set to '0', the base station shall omit this field;
20		otherwise, the base station shall set this field as follows:
21		The base station shall set this field to the BCCH rate field
22		value shown in Table 3.7.2.3.2.26-2 corresponding to the data
23		rate used by the Broadcast Control Channel in the system.
24	<code>SR3_BCCH-</code>	
25	<code>_CODE_CHAN</code>	- Spreading Rate 3 BCCH Walsh code index.
26		If <code>SR3_INCL</code> is set to '0', the base station shall omit this field;
27		otherwise, the base station shall set this field as follows:
28		The base station shall set this field to the Walsh code index
29		corresponding to the Spreading Rate 3 BCCH.
30	<code>SR3_PRIMARY_PILOT</code>	- Primary SR3 pilot.
31		If <code>SR3_INCL</code> is set to '0', the base station shall omit this field;
32		otherwise, the base station shall set this field as follows:
33		The base station shall set this field to the value shown in
34		Table 3.7.2.3.2.26-5 corresponding to the position of the
35		primary SR3 pilot.
36	<code>SR3_PILOT_POWER1</code>	- Relative power level between the primary SR3 pilot and the
37		pilot on the lower frequency of the two remaining SR3
38		frequencies.

1		If SR3_INCL is set to '0', the base station shall omit this field;
2		otherwise, the base station shall set this field to the value
3		shown in Table 3.7.2.3.2.26-6 corresponding to the power level
4		of the primary pilot with respect to the pilot on the lower
5		frequency of the two remaining SR3 frequencies.
6	SR3_PILOT_POWER2	- Relative power level between the primary SR3 pilot and the
7		pilot on the higher frequency of the two remaining SR3
8		frequencies.
9		If SR3_INCL is set to '0', the base station shall omit this field;
10		otherwise, the base station shall set this field to the value
11		shown in Table 3.7.2.3.2.26-6 corresponding to the power level
12		of the primary pilot with respect to the pilot on the higher
13		frequency of the two remaining SR3 frequencies.
14	SRCH_WIN_A	- Search window size for the Active Set and Candidate Set.
15		The base station shall set this field to the value shown in
16		Table 2.6.6.2.1-1 corresponding to the search window size to
17		be used by mobile stations for the Active Set and Candidate
18		Set.
19	SRCH_WIN_R	- Search window size for the Remaining Set.
20		The base station shall set this field to the value shown in
21		Table 2.6.6.2.1-1 corresponding to the search window size to
22		be used by mobile stations for the Remaining Set.
23	T_ADD	- Pilot detection threshold.
24		This value is used by the mobile station to trigger the
25		transfer of a pilot from the Neighbor Set or Remaining Set to
26		the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
27		the <i>Pilot Strength Measurement Message</i> initiating the handoff
28		process (see 2.6.6.2.5.2).
29		The base station shall set this field to the pilot detection
30		threshold, expressed as an unsigned binary number equal to
31		$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.
32	T_DROP	- Pilot drop threshold.
33		This value is used by mobile stations to start a handoff drop
34		timer for pilots in the Active Set and the Candidate Set (see
35		2.6.6.2.3).
36		The base station shall set this field to the pilot drop threshold,
37		expressed as an unsigned binary number equal to
38		$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.

1	T_COMP	-	Active Set versus Candidate Set comparison threshold.
2			Mobile stations transmit a <i>Pilot Strength Measurement Message</i>
3			when the strength of a pilot in the Candidate Set exceeds
4			that of a pilot in the Active Set by this margin (see
5			2.6.6.2.5.2).
6			The base station shall set this field to the threshold
7			Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.
8	T_TDROP	-	Drop timer value.
9			Timer value after which an action is taken by mobile stations
10			for a pilot that is a member of the Active Set or Candidate
11			Set, and whose strength has not become greater than
12			T_DROP. If the pilot is a member of the Active Set, a <i>Pilot</i>
13			<i>Strength Measurement Message</i> is issued. If the pilot is a
14			member of the Candidate Set, it will be moved to the Neighbor
15			Set.
16			The base station shall set this field to the T_TDROP value
17			shown in Table 2.6.6.2.3-1 corresponding to the drop timer
18			value to be used by mobile stations.
19	NGHBR_MAX_AGE	-	Neighbor Set maximum AGE.
20			The base station shall set this field to the maximum AGE
21			value beyond which mobile stations are to drop members from
22			the Neighbor Set (see 2.6.6.2.6.3).
23	SOFT_SLOPE	-	The slope in the inequality criterion for adding a pilot to the
24			Active Set, or dropping a pilot from the Active Set (see
25			2.6.6.2.3 and 2.6.6.2.5.2).
26			The base station shall set this field as an unsigned binary
27			number.
28	ADD_INTERCEPT	-	The intercept in the inequality criterion for adding a pilot to
29			the Active Set (see 2.6.6.2.5.2).
30			The base station shall set this field as a two's complement
31			signed binary number, in units of dB.
32	DROP_INTERCEPT	-	The intercept in the inequality criterion for dropping a pilot
33			from the Active Set (see 2.6.6.2.3).
34			The base station shall set this field as a two's complement
35			signed binary number, in units of dB.

1	ENC_SUPPORTED	-	Encryption fields included.
2			The base station shall set this field to '1' if the encryption
3			related fields are included; otherwise the base station shall
4			set this field to '0'.
5	SIG_ENCRYPT_SUP	-	Signaling Encryption supported indicator.
6			The base station shall include this field only if
7			ENC_SUPPORTED is equal to '1'. If this field is included, this
8			field indicates which signaling encryption algorithms are
9			supported by the base station.
10			This field consists of the subfields shown in Table 2.7.1.3.2.1-
11			5.
12	UI_ENCRYPT_SUP	-	User information Encryption supported indicator.
13			The base station shall include this field only if
14			ENC_SUPPORTED is equal to '1'. If this field is included, the
15			base station shall set this field to indicate the supported user
16			information encryption algorithms.
17			This field consists of the subfields shown in Table 2.7.1.3.2.4-
18			7.
19			The base station shall set each subfield to '1' if the
20			corresponding user information encryption algorithm is
21			supported by the base station; otherwise, the base station
22			shall set the subfield to '0'.
23	STORE_KEY	-	Store session key indicator
24			The base station shall include this field only if
25			ENC_SUPPORTED is equal to '1'. If this field is included, the
26			base station shall set this field to '1' to indicate that the
27			mobile station is to store the session key; otherwise the base
28			station shall set this field to '0'.
29	ADD_FIELDS_LEN	-	Additional fields length.
30			The base station shall set this field to the number of octets
31			included in the ADD_FIELDS. The base station shall set this
32			field to '00000000'.
33	ADD_FIELDS	-	Additional fields.
34			The base station shall include 8 x ADD_FIELDS_LEN bits to
35			support additional fields, if any.

1	CCH_INFO_INCL	-	Common Channel information included indicator.
2			If the message is sent on the f-csch and additional
3			information is included, the base station shall set this field to
4			'1'; otherwise, the base station shall set this field to '0'.
5			The base station shall set this field to '1'.
6	MCC	-	Mobile Country Code.
7			If CCH_INFO_INCL is set to '1', the base station shall include
8			this field and set it as follows; otherwise, the base station
9			shall omit this field.
10			The base station shall set this field to the MCC (see 2.3.1)
11	IMSI_11_12	-	11 th and 12 th digits of the IMSI.
12			If CCH_INFO_INCL is set to '1', the base station shall include
13			this field and set it as follows; otherwise, the base station
14			shall omit this field.
15			The base station shall set this field to the IMSI_11_12 (see
16			2.3.1).
17	MAX_SLOT_CYCLE-	-	Maximum slot cycle index.
18	_INDEX		If CCH_INFO_INCL is set to '1', the base station shall include
19			the field MAX_SLOT_CYCLE_INDEX and shall set this field as
20			shown below; otherwise, the base station shall omit this field.
21			The base station shall set this field to the
22			SLOT_CYCLE_INDEX value corresponding to the maximum
23			slot cycle length permitted (see 2.6.2.1.1).
24	CHAN_SEL_PREF	-	Channel selection preference indicator.
25			If CCH_INFO_INCL is set to '0', the base station shall omit
26			this field; otherwise, the base station shall include this field
27			and set it as follows.
28			If transmit diversity support is preferred for CDMA Channel
29			selection, the base station shall set this field to '1'. If over
30			Quick Paging Channel support is preferred for CDMA Channel
31			selection, the base station shall set this field to '0'.
32	PWR_REP_THRESH	-	Power control reporting threshold.
33			If CCH_INFO_INCL is set to '1', the base station shall include
34			the field PWR_REP_THRESH and shall set this field as shown
35			below; otherwise, the base station shall omit this field.

1			The base station shall set this field to the number of bad
2			frames (see [2]) to be received in a measurement period on
3			the channel which carries the Power Control Subchannel
4			before mobile stations are to generate a <i>Power Measurement</i>
5			<i>Report Message</i> (see 2.6.4.1.1). If the base station sets
6			PWR_THRESH_ENABLE to '1', it shall not set this field to
7			'00000'.
8	PWR_REP_FRAMES	-	Power control reporting frame count.
9			If CCH_INFO_INCL is set to '1', the base station shall include
10			the field PWR_REP_FRAMES and shall set this field as shown
11			below; otherwise, the base station shall omit this field.
12			The base station shall set this field to the value such that the
13			number given by
14			$\lfloor 2^{(PWR_REP_FRAMES/2)} \times 5 \rfloor \text{ frames}$
15			is the number of frames over which mobile stations are to
16			count frame errors.
17	PWR_THRESH-	-	Threshold report mode indicator.
18	_ENABLE		If CCH_INFO_INCL is set to '1', the base station shall include
19			the field PWR_THRESH_ENABLE and shall set this field as
20			shown below; otherwise, the base station shall omit this field.
21			If mobile stations are to generate threshold <i>Power</i>
22			<i>Measurement Report Messages</i> , the base station shall set this
23			field to '1'. If mobile stations are not to generate threshold
24			<i>Power Measurement Report Messages</i> , the base station shall set
25			this field to '0'.
26	PWR_PERIOD-	-	Periodic report mode indicator.
27	_ENABLE		If CCH_INFO_INCL is set to '1', the base station shall include
28			the field PWR_PERIOD_ENABLE and shall set this field as
29			shown below; otherwise, the base station shall omit this field.
30			If mobile stations are to generate periodic <i>Power Measurement</i>
31			<i>Report Messages</i> , the base station shall set this field to '1'. If
32			mobile stations are not to generate periodic <i>Power</i>
33			<i>Measurement Report Messages</i> , the base station shall set this
34			field to '0'.
35	PWR_REP_DELAY	-	Power report delay.
36			The period that mobile stations wait following a <i>Power</i>
37			<i>Measurement Report Message</i> before restarting frame counting
38			for power control purposes.

1			If CCH_INFO_INCL is set to '1', the base station shall include
2			the field PWR_REP_DELAY and shall set this field as shown
3			below; otherwise, the base station shall omit this field.
4			The base station shall set this field to the power report delay
5			value, in units of 4 frames (see 2.6.4.1.1).
6	RESELECT_INCLUDED	-	System reselection parameters included.
7			If CCH_INFO_INCL is set to '1', the base station shall include
8			the field RESELECT_INCLUDED and shall set this field as
9			shown below; otherwise, the base station shall omit this field.
10			If the base station is including system reselection
11			parameters, the base station shall set this field to '1';
12			otherwise, the base station shall set this field to '0'.
13	EC_THRESH	-	Pilot power threshold.
14			If RESELECT_INCLUDED is included and is set to '1', the base
15			station shall include the field EC_THRESH and shall set this
16			field as shown below; otherwise, the base station shall omit
17			this field.
18			The base station shall set this field to:
19			$\lceil (pilot_power_threshold + 115) \rceil$
20			where <i>pilot_power_threshold</i> is the pilot power, E_c , in
21			dBm/1.23 MHz, below which the mobile station is to perform
22			system reselection.
23	EC_IO_THRESH	-	Pilot E_c/I_0 threshold.
24			If RESELECT_INCLUDED is included and is set to '1', the base
25			station shall include the field EC_IO_THRESH and shall set
26			this field as shown below; otherwise, the base station shall
27			omit this field.
28			The base station shall set this field to:
29			$\lfloor -20 \times \log_{10}(pilot_threshold) \rfloor$
30			where <i>pilot_threshold</i> is the pilot E_c/I_0 below which the mobile
31			station is to perform system reselection.
32	BASE_LAT	-	Base station latitude.
33			If CCH_INFO_INCL is set to '1', the base station shall include
34			this field and set it as shown below; otherwise, the base
35			station shall omit this field.

1			The base station shall set this field to its latitude in units of
2			0.25 second, expressed as a two's complement signed number
3			with positive numbers signifying North latitudes. The base
4			station shall set this field to a value in the range -1296000 to
5			1296000 inclusive (corresponding to a range of -90° to +90°).
6	BASE_LONG	-	Base station longitude.
7			If CCH_INFO_INCL is set to '1', the base station shall include
8			this field and set it as shown below; otherwise, the base
9			station shall omit this field.
10			The base station shall set this field to its longitude in units of
11			0.25 second, expressed as a two's complement signed number
12			with positive numbers signifying East longitude. The base
13			station shall set this field to a value in the range -2592000 to
14			2592000 inclusive (corresponding to a range of -180° to
15			+180°).
16	PILOT_REPORT	-	Pilot reporting indicator.
17			If CCH_INFO_INCL is set to '1', the base station shall include
18			the field PILOT_REPORT and shall set this field as shown
19			below; otherwise, the base station shall omit this field.
20			The base station shall set this field to '1' if the mobile station
21			is to report the additional pilots which have pilot strengths
22			exceeding T_ADD in all Enhanced Access Channel messages.
23			The base station shall set this field to '0' if the mobile station
24			is to report the additional pilots which have pilot strengths
25			exceeding T_ADD only in the <i>Origination Message</i> and the
26			<i>Page Response Message</i> .
27	ACC_ENT_HO_ORDER	-	Access entry handoff permitted indicator.
28			If CCH_INFO_INCL is set to '1', the base station shall include
29			this field and set it as described below; otherwise, the base
30			station shall omit this field.
31			The base station shall set this field to '1' if the mobile station
32			is permitted to perform an access entry handoff after
33			receiving a message while performing the <i>Mobile Station</i>
34			<i>Order and Message Processing Operation</i> in the <i>Mobile Station</i>
35			<i>Idle State</i> (see 2.6.2.4); otherwise, the base station shall set
36			this field to '0'.
37	ACCESS_HO	-	Access handoff permitted indicator.
38			If CCH_INFO_INCL is set to '1', the base station shall include
39			this field and set it as described below; otherwise, the base
40			station shall omit this field.

1			The base station shall set this field to '1' if the mobile station
2			is permitted to perform an access handoff (see 2.6.3.1.3.2);
3			otherwise, the base station shall set this field to '0'.
4	ACCESS_HO_MSG_RSP	-	Access handoff permitted for message response indicator.
5			If ACCESS_HO is included and set to '1', the base station shall
6			include this field and set it as described below; otherwise, the
7			base station shall omit this field.
8			The base station shall set this field to '1' if the mobile station
9			is permitted to perform an access handoff after receiving a
10			message and before responding to that message in the <i>System</i>
11			<i>Access State</i> ; otherwise, the base station shall set this field to
12			'0'.
13	ACCESS_PROBE_HO	-	Access probe handoff permitted indicator.
14			If CCH_INFO_INCL is set to '1', the base station shall include
15			this field and set it as described below; otherwise, the base
16			station shall omit this field.
17			The base station shall set this field to '1' if the mobile station
18			is permitted to perform an access probe handoff (see
19			2.6.3.1.3.3); otherwise, the base station shall set this field to
20			'0'.
21	ACC_HO_LIST_UPD	-	Access handoff list update permitted indicator.
22			If ACCESS_PROBE_HO is included and is set to '1', the base
23			station shall include this field and set it as described below;
24			otherwise, the base station shall omit this field.
25			The base station shall set this field to '1' if the mobile station
26			is permitted to update the access handoff list during an
27			access attempt (see 2.6.3.1.7.2); otherwise, the base station
28			shall set this field to '0'.
29	ACC_PROBE_HO-		
30	_OTHER_MSG	-	Access probe handoff permitted for messages other than the
31			<i>Origination Message</i> and the <i>Page Response Message</i> .
32			If ACCESS_PROBE_HO is included and set to '1', the base
33			station shall include this field and set it as described below;
34			otherwise, the base station shall omit this field.

1			The base station shall set this field to '1' if the mobile station
2			is permitted to perform an access probe handoff for messages
3			other than the <i>Origination Message</i> and the <i>Page Response</i>
4			<i>Message</i> . The base station shall set this field to '0' if the
5			mobile station is permitted to perform an access probe
6			handoff only for the <i>Origination Message</i> and the <i>Page</i>
7			<i>Response Message</i> . See 2.6.3.1.3.3.
8	MAX_NUM_PROBE_HO	-	Maximum number of times that the mobile station is
9			permitted to perform an access probe handoff.
10			If ACCESS_PROBE_HO is included and set to '1', the base
11			station shall include this field and set it as described below;
12			otherwise, the base station shall omit this field.
13			The base station shall set this field to the maximum number
14			of times the mobile station is allowed to perform an access
15			probe handoff within an access attempt minus one.
16	NUM_FCCCH	-	Total number of Forward Common Control Channels.
17			If CCH_INFO_INCL is set to '1', the base station shall include
18			this field and shall set it as shown below; otherwise, the base
19			station shall omit this field.
20			The base station shall set this field to the total number of
21			Forward Common Control Channels on this CDMA Channel.
22	FCCCH_RATE	-	Rate words for the Forward Common Control Channels.
23			If CCH_INFO_INCL is set to '1', the base station shall include
24			this field and shall set it as shown below; otherwise, the base
25			station shall omit this field.
26			The base station shall set this field to the FCCCH rate field
27			value shown in Table 3.7.2.3.2.31-1 corresponding to the data
28			rate used on the Forward Common Control Channels in the
29			system.

Table 3.7.2.3.2.31-1. Forward Common Control Channel Rate Words

FCCCH Rate Field (binary)	Forward Common Control Channel rate word
000	9600 bps, 20 ms frame size
001	19200 bps, 20 ms frame size
010	19200 bps, 10 ms frame size
011	38400 bps, 20 ms frame size
100	38400 bps, 10 ms frame size
101	38400 bps, 5 ms frame size
110 – 111	Reserved

FCCCH_CODE_RATE - Code Rate for the Forward Common Control Channels.

If CCH_INFO_INCL is set to '1', the base station shall include this field and shall set it as shown below; otherwise, the base station shall omit this field.

If the FCCCH is operating in Spreading Rate 1, the base station shall set this field to '0' if the FCCCH Code Rate is 1/4 (see 3.1.3.1.2.1 of [2]). The base station shall set this field to '1' if the FCCCH Code Rate is 1/2 (see 3.1.3.1.2.1 of [2]).

If the FCCCH is operating in Spreading Rate 3, the base station shall set this field to '0'.

The base station shall include NUM_FCCCH occurrences of the following one field record:

FCCCH_CODE_CHAN - Code channel index for the Forward Common Control Channel.

The base station shall set this field to the code channel index (see [2]) in the range 1 to 256 inclusive that the mobile station is to use on the Forward Common Control Channel.

BCAST_INDEX - Broadcast index.

If CCH_INFO_INCL is set to '1', the base station shall include the field BCAST_INDEX and shall set this field as shown below; otherwise, the base station shall omit this field.

If Periodic Enhanced Broadcast Paging is disabled, the base station shall set this field to '000'; otherwise, the base station shall set this field to the Broadcast Index (see 2.6.2.1.1.3.3.1).

- 1 NUM_BCCH_BCAST - The number of Broadcast Control Channels used for
 2 transmitting broadcast messages.
- 3 If the base station supports transmission of broadcast
 4 messages, the base station shall set this field to the number
 5 of Broadcast Control Channels used for transmitting
 6 broadcast messages. If the base station supports
 7 transmission of broadcast messages, the base station shall
 8 not set this field to '000'.
- 9 The base station shall set NUM_BCCH_BCAST occurrences of the following record:
- 10 BCCH_CODE_CHAN - The Walsh Code index for the Broadcast Control Channel
 11 specified by BCCH_ID.
- 12 The base station shall set this field to the Walsh code
 13 corresponding to the Broadcast Control Channel specified by
 14 BCCH_ID.
- 15 BRAT - BCCH data rate.
- 16 The base station shall set this field to the BRAT field value
 17 shown in Table 3.7.2.3.2.31-2 corresponding to the data rate
 18 used by the Broadcast Control Channel to which the mobile
 19 station is being directed.

Table 3.7.2.3.2.31-2. Broadcast Control Channel Data Rate

BRAT Field (binary)	Broadcast Control Channel data rate
00	4800 bps
01	9600 bps
10	19200 bps
11	Reserved

- 21
- 22 BCCH_CODE_RATE - BCCH code rate.
- 23 For spreading rate 1, the base station shall set this field to '0'
 24 if the BCCH Code Rate is 1/4 (see 3.1.3.1.2.1 of [2]). For
 25 spreading rate 1, the base station shall set this field to '1' if
 26 the BCCH code rate is 1/2 (see 3.1.3.1.2.1 of [2]). For
 27 spreading rate 3, the base station shall set this field to '0'.
- 28 QPCH_SUPPORTED - Quick Paging Channel Supported Indication.
- 29 If CCH_INFO_INCL is set to '1', the base station shall include
 30 the field QPCH_SUPPORTED and shall set this field as shown
 31 below; otherwise, the base station shall omit this field.

1			If the base station supports Quick Paging Channel operation,
2			the base station shall set this field to '1'; otherwise the base
3			station shall set this field to '0'.
4	NUM_QPCH	-	Number of Quick Paging Channels.
5			If QPCH_SUPPORTED is included and set to '1', the base
6			station shall include this field and set it as described below;
7			otherwise, the base station shall omit this field.
8			The base station shall set this field to the number of Quick
9			Paging Channels on this CDMA Channel. The base station
10			shall not set this field to '00'.
11	QPCH_RATE	-	Quick Paging Channel indicator rate.
12			If QPCH_SUPPORTED is included and set to '1', the base
13			station shall include this field and set it as described below;
14			otherwise, the base station shall omit this field.
15			The base station shall set this field to the QPCH_RATE field
16			value shown in Table 3.7.2.3.2.13-2 corresponding to the
17			indicator rate used by the Quick Paging Channel in the
18			system.
19	QPCH_POWER-		
20	_LEVEL_PAGE	-	Quick Paging Channel paging indicator transmit power level.
21			If QPCH_SUPPORTED is included and set to '1', the base
22			station shall include this field and set it as described below;
23			otherwise, the base station shall omit this field.
24			The base station shall set this field to the Quick Paging
25			Channel paging indicator transmit power level relative to that
26			of the Pilot Channel as specified in Table 3.7.2.3.2.31-3.

Table 3.7.2.3.2.31-3. Quick Paging Channel Transmit Power Level

QPCH_POWER_LEVEL_PAGE QPCH_POWER_LEVEL_CONFIG QPCH_POWER_LEVEL_BCAST (binary)	Transmit Power Level
000	5 dB below the Pilot Channel Transmit Power
001	4 dB below the Pilot Channel Transmit Power
010	3 dB below the Pilot Channel Transmit Power
011	2 dB below the Pilot Channel Transmit Power
100	1 dB below the Pilot Channel Transmit Power
101	Same as the Pilot Channel Transmit Power
110	1 dB above the Pilot Channel Transmit Power
111	2 dB above the Pilot Channel Transmit Power

QPCH_CCI_SUPPORTED - Quick Paging Channel configuration change indicator supported.

If QPCH_SUPPORTED is included and set to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

If the base station supports configuration change indicators on the Quick Paging Channel, the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

QPCH_POWER_LEVEL_CONFIG - Quick Paging Channel configuration change indicator transmit power level.

If QPCH_CCI_SUPPORTED is included and set to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the Quick Paging Channel configuration change indicator transmit power level relative to that of the Pilot Channel as specified in Table 3.7.2.3.2.31-3.

If the base station is operating in Spreading Rate 3 BCCH channel, the base station shall include NUM_QPCH occurrences of the following one field record:

QPCH_CODE_CHAN - Code channel index of the Quick Paging Channel for Spreading Rate 3.

The base station shall set this field to the code channel index (see [2]) in the range 1 to 256 inclusive that the mobile station is to use on the Quick Paging Channel for Spreading Rate 3.

QPCH_BI_SUPPORTED - Quick Paging Channel broadcast indicator supported.

If QPCH_SUPPORTED is included and set to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

If the base station supports broadcast indicators on the Quick Paging Channel, the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

QPCH_POWER_LEVEL - Quick Paging Channel broadcast indicator
_BCAST transmit power level.

If QPCH_BI_SUPPORTED is included and set to '1', the base station shall include this field and set it as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the Quick Paging Channel broadcast indicator transmit power level relative to that of the Pilot Channel as specified in Table 3.7.2.3.2.31-3.

SDB_SUPPORTED - Short Data Burst supported indicator.

If CCH_INFO_INCL is set to '1', the base station shall include the field SDB_SUPPORTED and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to '1' if the mobile station is permitted to send a Short Data Burst; otherwise, the base station shall set this field to '0'.

BROADCAST_GPS_ASST - Broadcast GPS Assist Indicator.

If CCH_INFO_INCL is set to '1', the base station shall include the field BROADCAST_GPS_ASST and shall set this field as shown below; otherwise, the base station shall omit this field.

1		The base station shall set this field to '1' if it supports
2		Broadcast GPS Assist capability; otherwise, the base station
3		shall set this field to '0'.
4	MAC_CF_SUPPORTED	- MAC control function supported indicator.
5		If CCH_INFO_INCL is set to '1', the base station shall include
6		the field MAC_CF_SUPPORTED and shall set this field as
7		shown below; otherwise, the base station shall omit this field.
8		The base station shall set this field to '1' to indicate that the
9		base station supports MAC control functions; otherwise, the base
10		station shall set this field to '0'.
11	RLGAIN_TRAFFIC_PILOT	- Gain adjustment of the Reverse Traffic Channel relative to
12		the Reverse Pilot Channel for Radio Configurations greater
13		than 2.
14		If CCH_INFO_INCL is set to '1', the base station shall include
15		the field RLGAIN_TRAFFIC_PILOT and shall set this field as
16		shown below; otherwise, the base station shall omit this field.
17		The base station shall set this field to the correction factor to
18		be used by mobile stations in setting the power of a reverse
19		traffic channel, expressed as a two's complement value in
20		units of 0.125 dB (see 2.1.2.3.3 of [2]).
21	REV_PWR-	
22	CNTL_DELAY_INCL	- Reverse Power Control Delay included indicator.
23		If CCH_INFO_INCL is set to '1', the base station shall include
24		this field and set it as shown below; otherwise, the base
25		station shall omit this field.
26		The base station shall set this field to '1' if the base station
27		includes the REV_PWR_CNTL_DELAY field in this message;
28		otherwise, the base station shall set this field to '0'.
29	REV_PWR-	
30	_CNTL_DELAY	- The reverse power control delay.
31		If REV_PWR_CNTL_INCL is included and set to '1', the base
32		station shall include this field and set it as follows; otherwise,
33		the base station shall omit this field.
34		The base station shall set this field to the closed-loop reverse
35		power control delay minus one (the closed-loop reverse power
36		control delay is the time between the end of a gated-on
37		reverse PCG and the beginning of the reverse PCG where the
38		corresponding feedback is sent on the Forward Power Control
39		Subchannel, see 2.1.2.3.2 of [2]), in units of 1.25 ms.

1	MOB_QOS	-	Indicator granting permission to the mobile station to request
2			QoS parameter settings in the <i>Origination Message</i> .
3			If CCH_INFO_INCL is set to '1', the base station shall include
4			this field and set it as shown below; otherwise, the base
5			station shall omit this field.
6			The base station shall set this field to '1', if the mobile station
7			is allowed to include a QoS record in the <i>Origination Message</i> ,
8			or to '0', otherwise.
9	USE_SYNC_ID	-	Sync ID supported indicator.
10			The base station shall set this field to '1' to indicate that the
11			mobile station is permitted to include the SYNC_ID field in
12			the <i>Page Response Message</i> and the <i>Origination Message</i> .
13			Otherwise, the base station shall set this field to '0'.
14	NUM_OPT_MSG	-	Number of optional overhead messages to be sent.
15			If CCH_INFO_INCL is set to '1', the base station shall include
16			this field and shall set this field as shown below; otherwise,
17			the base station shall omit this field.
18			The base station shall set this field to the number of optional
19			overhead messages to be sent.
20	SENDING_RAND	-	<i>ANSI-41 RAND Message</i> indicator.
21			If NUM_OPT_MSG is included and is equal to or greater than
22			1, the base station shall include the field SENDING_RAND and
23			shall set this field as shown below; otherwise, the base
24			station shall omit this field.
25			If the base station is sending the <i>ANSI-41 RAND Message</i> on
26			the Broadcast Control Channel, it shall set this field to '1';
27			otherwise, it shall set this field to '0'.
28	PRI_NGHBR_LIST	-	<i>Private Neighbor List Message</i> indicator.
29			If NUM_OPT_MSG is included and is equal to or greater than
30			2, the base station shall include the field PRI_NGHBR_LIST
31			and shall set this field as shown below; otherwise, the base
32			station shall omit this field.
33			If the base station is sending the <i>Private Neighbor List Message</i>
34			on the Broadcast Control Channel, it shall set this field to '1';
35			otherwise, it shall set this field to '0'.
36	USER_ZONE_ID	-	<i>User Zone Identification Message</i> indicator.

1		If NUM_OPT_MSG is included and is equal to or greater than
2		3, the base station shall include the field USER_ZONE_ID and
3		shall set this field as shown below; otherwise, the base
4		station shall omit this field.
5		If the base station is sending the <i>User Zone Identification</i>
6		<i>Message</i> on the Broadcast Control Channel, it shall set this
7		field to '1'; otherwise, it shall set this field to '0'.
8	EXT_GLOBAL-	
9	_REDIRECT	- Extended <i>Global Service Redirection Message</i> indicator.
10		If NUM_OPT_MSG is included and is equal to or greater than
11		4, the base station shall include the field
12		EXT_GLOBAL_REDIRECT and shall set this field as shown
13		below; otherwise, the base station shall omit this field.
14		If the base station is sending the <i>Extended Global Service</i>
15		<i>Redirection Message</i> on the Broadcast Control Channel, it shall
16		set this field to '1'; otherwise, the base station shall set this
17		field to '0'.
18	RESERVED	- Reserved bits.
19		If NUM_OPT_MSG is included and is equal to or greater than
20		5, the base station shall include the field RESERVED and shall
21		set this field as shown below; otherwise, the base station
22		shall omit this field.
23		The base station shall add (NUM_OPT_MSG - 4) reserved bits.
24		The base station shall set these bits to '0'.
25		

3.7.2.3.2.32 ANSI-41 RAND Message

MSG_TAG: A41RANDM

Field	Length (bits)
PILOT_PN	9
RESERVED	6
RAND	32

- PILOT_PN - Pilot PN sequence offset index.
The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.
- RESERVED - Reserved bits.
The base station shall set this field to '000000'.
- RAND - Random challenge value.
The base station shall set this field to the random challenge value to be used by mobile stations for authentication.

1 3.7.2.3.2.33 Enhanced Access Parameters Message

2 MSG_TAG: EAPM

3

Field	Length (bits)
PILOT_PN	9
ACC_MSG_SEQ	6

PSIST_PARMS_INCL	1
PSIST_PARMS_LEN	0 or 5
PSIST(0-9)_EACH	0 or 6
PSIST(10)_EACH	0 or 3
PSIST(11)_EACH	0 or 3
PSIST(12)_EACH	0 or 3
PSIST(13)_EACH	0 or 3
PSIST(14)_EACH	0 or 3
PSIST(15)_EACH	0 or 3
PSIST_EMG	0 or 3
MSG_PSIST_EACH	0 or 3
REG_PSIST_EACH	0 or 3
RESERVED	0 – 7 (as needed)

LAC_PARMS_LEN	4
ACC_TMO	6
PROBE_PN_RAN	4
MAX_REQ_SEQ	4
MAX_RSP_SEQ	4
RESERVED	0 – 7 (as needed)

4

(continues on next page)

5

1

Field	Length (bits)
NUM_MODE_SELECTION_ENTRIES	3

NUM_MODE_SELECTION_ENTRIES + 1 occurrences of the following record:

ACCESS_MODE	3
ACCESS_MODE_MIN_DURATION	10
ACCESS_MODE_MAX_DURATION	10

RLGAIN_COMMON_PILOT	6
IC_THRESH	4
IC_MAX	4
NUM_MODE_PARM_REC	3

NUM_MODE_PARM_REC + 1 occurrences of the following record:

EACH_PARM_REC_LEN	4
APPLICABLE_MODES	8
EACH_NOM_PWR	4
EACH_INIT_PWR	5
EACH_PWR_STEP	3
EACH_NUM_STEP	4
EACH_PREAMBLE_ENABLED	1
EACH_PREAMBLE_NUM_FRAC	0 or 4
EACH_PREAMBLE_FRAC_DURATION	0 or 4
EACH_PREAMBLE_OFF_DURATION	0 or 4
EACH_PREAMBLE_ADD_DURATION	0 or 4
EACH_ACCESS_THRESH	6
EACH_PROBE_BKOFF	4
EACH_BKOFF	4
EACH_SLOT	6
EACH_SLOT_OFFSET1	6

(continues on next page)

2

3

Field	Length (bits)
EACH_SLOT_OFFSET2	6
RESERVED	0 – 7 (as needed)

BA_PARM_LEN	2
NUM_EACH_BA	5
EACH_BA_RATES_SUPPORTED	8
RESERVED	0 – 7 (as needed)

RA_PARM_LEN	5
NUM_EACH_RA	5
EACH_RA_RATES_SUPPORTED	8
NUM_CACH	3
CACH_CODE_RATE	1

NUM_CACH occurrences of the following one field record:

CACH_CODE_CHAN	8
----------------	---

NUM_RCCCH	5
RCCCH_RATES_SUPPORTED	8
RCCCH_PREAMBLE_ENABLED	1
RCCCH_PREAMBLE_NUM_FRAC	0 or 4
RCCCH_PREAMBLE- _FRAC_DURATION	0 or 4
RCCCH_PREAMBLE_OFF_DURATION	0 or 4
RCCCH_PREAMBLE_ADD_DURATION	0 or 4
RCCCH_SLOT	6
RCCCH_SLOT_OFFSET1	6
RCCCH_SLOT_OFFSET2	6
RCCCH_NOM_PWR	4
RCCCH_INIT_PWR	5
RA_PC_DELAY	5

1
2

(continues on next page)

1

Field	Length (bits)
EACAM_CACH_DELAY	4
RCCCH_HO_SUPPORTED	1
RCCCH_HO_THRESH	0 or 4
EACAM_PCCAM_DELAY	0 or 5
NUM_CPCCH	2
CPCCH_RATE	2

NUM_CPCCH occurrences of the following one field record:

CPCCH_CODE_CHAN	8
-----------------	---

RA_CPCCH_STEP_UP	2
RA_CPCCH_STEP_DN	2
NUM_PCSCH_RA	7
RESERVED	0 – 7 (as needed)

2

3

PILOT_PN - Pilot PN sequence offset index.

4

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

5

6

ACC_MSG_SEQ - *Enhanced Access Parameters Message* sequence number.

7

The base station shall set this field to ACC_CONFIG_SEQ (see 2.6.2.2.15).

8

9

PSIST_PARMS_INCL - Persistence parameters included indicator.

10

If persistence parameters are included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

11

12

13

PSIST_PARMS_LEN - Length of persistence parameters record.

14

If PSIST_PARMS_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the total length, in octets, of persistence parameters included in the message, including the PSIST_PARMS_LEN and RESERVED fields.

15

16

17

18

19

PSIST(0-9)_EACH - Persistence value for access overload classes 0 through 9.

1			If PSIST_PARMS_INCL is set to '0', the base station shall omit
2			this field; otherwise, the base station shall set this field as
3			follows:
4			If a mobile station in access overload classes 0 through 9 is
5			permitted to transmit requests on the Enhanced Access
6			Channel, the base station shall set this field to the
7			persistence value to be used. If such a mobile stations is not
8			permitted to transmit requests on the Enhanced Access
9			Channel, the base station shall set this field to '111111'.
10	PSIST(10)_EACH	-	Persistence value for access overload class 10 (test mobile
11			stations).
12			If PSIST_PARMS_INCL is set to '0', the base station shall omit
13			this field; otherwise, the base station shall set this field as
14			follows:
15			If a mobile station in access overload class 10 is permitted to
16			transmit requests on the Enhanced Access Channel, the base
17			station shall set this field to the persistence value to be used.
18			If such a mobile station is not permitted to transmit requests
19			on the Enhanced Access Channel, the base station shall set
20			this field to '111'.
21	PSIST(11)_EACH	-	Persistence value for access overload class 11 (emergency
22			mobile stations).
23			If PSIST_PARMS_INCL is set to '0', the base station shall omit
24			this field; otherwise, the base station shall set this field as
25			follows:
26			If a mobile station in access overload class 11 is permitted to
27			transmit requests on the Enhanced Access Channel, the base
28			station shall set this field to the persistence value to be used.
29			If such a mobile station is not permitted to transmit requests
30			on the Enhanced Access Channel, the base station shall set
31			this field to '111'.
32	PSIST(12)_EACH	-	Persistence value for access overload class 12.
33			If PSIST_PARMS_INCL is set to '0', the base station shall omit
34			this field; otherwise, the base station shall set this field as
35			follows:
36			If a mobile station in access overload class 12 is permitted to
37			transmit requests on the Enhanced Access Channel, the base
38			station shall set this field to the persistence value to be used.
39			If such a mobile station is not permitted to transmit requests
40			on the Enhanced Access Channel, the base station shall set
41			this field to '111'.

1	PSIST(13)_EACH	-	Persistence value for access overload class 13.
2			If PSIST_PARMS_INCL is set to '0', the base station shall omit
3			this field; otherwise, the base station shall set this field as
4			follows:
5			If a mobile station in access overload class 13 is permitted to
6			transmit requests on the Enhanced Access Channel, the base
7			station shall set this field to the persistence value to be used.
8			If such a mobile station is not permitted to transmit requests
9			on the Enhanced Access Channel, the base station shall set
10			this field to '111'.
11	PSIST(14)_EACH	-	Persistence value for access overload class 14.
12			If PSIST_PARMS_INCL is set to '0', the base station shall omit
13			this field; otherwise, the base station shall set this field as
14			follows:
15			If a mobile station in access overload class 14 is permitted to
16			transmit requests on the Enhanced Access Channel, the base
17			station shall set this field to the persistence value to be used.
18			If such a mobile station is not permitted to transmit requests
19			on the Enhanced Access Channel, the base station shall set
20			this field to '111'.
21	PSIST(15)_EACH	-	Persistence value for access overload class 15.
22			If PSIST_PARMS_INCL is set to '0', the base station shall omit
23			this field; otherwise, the base station shall set this field as
24			follows:
25			If a mobile station in access overload class 15 is permitted to
26			transmit requests on the Enhanced Access Channel, the base
27			station shall set this field to the persistence value to be used.
28			If such a mobile stations is not permitted to transmit
29			requests on the Enhanced Access Channel, the base station
30			shall set this field to '111'.
31	PSIST_EMG	-	Persistence value for emergency call for access overload
32			classes 0 through 9.
33			If PSIST_PARMS_INCL is set to '0', the base station shall omit
34			this field; otherwise, the base station shall set this field as
35			follows:

1			If a mobile station in access overload classes 0 through 9 is
2			permitted to transmit emergency requests on the Enhanced
3			Access Channel, the base station shall set this field to the
4			persistence value to be used for the emergency calls. If such
5			a mobile station is not permitted to transmit emergency
6			requests on the Enhanced Access Channel, the base station
7			shall set this field to '111'.
8	MSG_PSIST_EACH	-	Persistence modifier for Enhanced Access Channel attempts
9			for message transmissions.
10			If PSIST_PARMS_INCL is set to '0', the base station shall omit
11			this field; otherwise, the base station shall set this field to
12			the persistence modifier for Enhanced Access Channel
13			attempts for message transmissions.
14	REG_PSIST_EACH	-	Persistence modifier for Enhanced Access Channel attempts
15			for registrations which are not responses to the <i>Registration</i>
16			<i>Request Order</i> .
17			If PSIST_PARMS_INCL is set to '0', the base station shall omit
18			this field; otherwise, the base station shall set this field to
19			the persistence modifier for Enhanced Access Channel
20			attempts for registrations which are not responses to the
21			<i>Registration Request Order</i> .
22	RESERVED	-	Reserved bits.
23			If PSIST_PARMS_INCL is set to '0', the base station shall omit
24			this field; otherwise, the base station shall include as many
25			bits as required to make the length of the persistence
26			parameters record an integral number of octets. If this field
27			is included, the base station shall set each of these bits to '0'.
28			
29	LAC_PARMS_LEN	-	Length of Link Access Control parameter fields.
30			The base station shall set this field to the total length, in
31			octets, of Link Access Control parameters included in the
32			message, including the LAC_PARMS_LEN and RESERVED
33			fields.
34	ACC_TMO	-	Acknowledgment timeout.
35			The base station shall set this field to one less than the
36			length of time, in units of 20 ms, that a mobile station is to
37			wait to receive a Layer 2 acknowledgment after the end of an
38			Enhanced Access Channel transmission.
39	PROBE_PN_RAN	-	Time randomization for Enhanced Access Channel probes.

The base station shall set this field to the value in the range 0 to 9 inclusive, so that the time randomization range to be used by a mobile station is 0 to $2^{\text{PROBE_PN_RAN_EACH} - 1}$ PN chips.

MAX_REQ_SEQ - Maximum number of access probe sequences for an Enhanced Access Channel request.

The base station shall set this field to the maximum number of access probe sequences a mobile station is to transmit for an Enhanced Access Channel request. The base station shall set this field to a value greater than 0.

MAX_RSP_SEQ - Maximum number of access probe sequences for an Enhanced Access Channel response.

The base station shall set this field to the maximum number of access probe sequences a mobile station is to transmit for an Enhanced Access Channel response. The base station shall set this field to a value greater than 0.

RESERVED - Reserved Bits.

The base station shall include as many bits as required to make the length of the Link Access Control parameters record an integral number of octets. The base station shall set each of these bits to '0'.

NUM_MODE_

SELECTION_ENTRIES - Number of entries of the Mode Selection Table.

The base station shall set this field to the number of entries of the Mode Selection Table, minus one.

The base station shall include **NUM_MODE_SELECTION_ENTRIES** + 1 occurrences of the following three-field record:

ACCESS_MODE - Access Mode used for the Enhanced Access Channel.

The base station shall set this field to the Access Mode value shown in Table 3.7.2.3.2.33-1 corresponding to the Access Mode used.

Table 3.7.2.3.2.33-1. Enhanced Access Modes

ACCESS_MODE (binary)	Access Mode
000	Basic Access Mode
001	Reservation Access Mode
010 – 011	Reserved

1	ACCESS_MODE_MIN-	
2	_DURATION	- The minimum message duration for the corresponding
3		Access Mode.
4		The base station shall set this field to the minimum message
5		duration for the corresponding Access Mode, in units of 5 ms.
6		See [3].
7	ACCESS_MODE_MAX-	
8	_DURATION	- The maximum message duration for the corresponding
9		Access Mode.
10		The base station shall set this field to the maximum message
11		duration for the corresponding Access Mode, in units of 5 ms.
12		See [3].
13	RLGAIN_COMMON-	
14	_PILOT	- Gain adjustment of the Enhanced Access Channel or Reverse
15		Common Control Channel relative to the Reverse Pilot
16		Channel.
17		The base station shall set this field to the correction factor to
18		be used by mobile stations in setting the power of a code
19		channel, expressed as a two's complement value in units of
20		0.125 dB (see 2.1.2.3.3 of [2]).
21	IC_THRESH	- Interference correction threshold.
22		The threshold level at which the interference correction
23		begins to be applied.
24	IC_MAX	- The maximum interference correction that can be applied.
25		The base station shall set this field to the maximum
26		interference correction that can be applied, in units of 1 dB
27		(see 2.1.2.3.1.2 of [2]).
28	NUM_MODE_PARM-	
29	_REC	- The number of mode-specific parameter records.
30		The base station shall set this field to the number of mode-
31		specific parameter records included in the message, minus
32		one.
33	The base station shall include NUM_MODE_PARM_REC + 1 occurrences of the following	
34	record:	
35	EACH_PARM_REC-	
36	_LEN	- Length of the mode-specific parameters record.

The base station shall set this field to the total length, in octets, of the mode-specific parameters record, including the EACH_PARM_REC_LEN and RESERVED fields.

APPLICABLE_MODES - Access modes to which the access parameters specified in this record apply.

The base station shall set each subfield of the APPLICABLE_MODES field as follows: the base station shall set the subfield to '1' if the access parameters included in this record are applicable to the corresponding Access Mode in Table 3.7.2.3.2.33-2; otherwise, the base station shall set the subfield to '0'.

Table 3.7.2.3.2.33-2. Applicable Modes

Subfield	Length (bits)	Subfield Description
ACC_MODE_1	1	Basic Access Mode
ACC_MODE_2	1	Reservation Access Mode
RESERVED	6	

EACH_NOM_PWR - Nominal transmit power offset for the Enhanced Access Channels.

The base station shall set this field to the correction factor to be used by a mobile station in the open loop power estimate, expressed as a two's complement value in units of 1 dB (see [2]).

EACH_INIT_PWR - Initial power offset for the Enhanced Access Channels.

The base station shall set this field to the correction factor to be used by a mobile station in the open loop power estimate for the initial transmission on an Enhanced Access Channel, expressed as a two's complement value in units of 1 dB (see [2]).

EACH_PWR_STEP - Power increment for the Enhanced Access Channels.

The base station shall set this field to the value by which a mobile station is to increase their transmit power between successive access probes in an access probe sequence, in units of 1 dB.

EACH_NUM_STEP - Number of access probes.

1		The base station shall set this field to one less than the
2		maximum number of access probes a mobile station is to
3		transmit in a single access probe sequence.
4	EACH_PREAMBLE-	
5	_ENABLED	- Preamble enabled indicator for the Enhanced Access
6		Channel.
7		The base station shall set this field to '1' if EACH preambles
8		related information is included in this message; otherwise,
9		the base station shall set this field to '0'.
10	EACH_PREAMBLE-	
11	_NUM_FRAC	- The number of fractional preambles on the Enhanced Access
12		Channels.
13		If EACH_PREAMBLE_ENABLED is set to '1', the base station
14		shall set this field to the number of fractional preambles
15		minus one on the Enhanced Access Channels; otherwise, the
16		base station shall omit this field.
17	EACH_PREAMBLE-	
18	_FRAC_DURATION	- Fractional preamble duration on the Enhanced Access
19		Channels.
20		If EACH_PREAMBLE_ENABLED is set to '1', the base station
21		shall set this field to the fractional preamble duration minus
22		one on an Enhanced Access Channel, in units of 1.25 ms;
23		otherwise, the base station shall omit this field.
24	EACH_PREAMBLE-	
25	_OFF_DURATION	- Fractional preamble gated-off duration on the Enhanced
26		Access Channels.
27		If EACH_PREAMBLE_ENABLED is set to '1', the base station
28		shall set this field to the fractional preamble gated-off
29		duration (in units of 1.25 ms) after the transmission of each
30		fractional preamble on an Enhanced Access Channel;
31		otherwise, the base station shall omit this field.
32	EACH_PREAMBLE-	
33	_ADD_DURATION	- Additional preamble duration on the Enhanced Access
34		Channels.
35		If EACH_PREAMBLE_ENABLED is set to '1', the base station
36		shall set this field to the additional preamble duration on an
37		Enhanced Access Channel, in units of 1.25 ms; otherwise,
38		the base station shall omit this field.

EACH_ACCESS-

_THRESH - Pilot E_c/I_0 threshold for transmission on the Enhanced Access Channels.

The base station shall set this field to:

$$\lfloor -20 \times \log_{10} \text{pilot_threshold} \rfloor$$

where *pilot_threshold* is the pilot E_c/I_0 threshold below which the mobile station is not to transmit a probe on an Enhanced Access Channel.

EACH_PROBE_BKOFF - Enhanced Access Channel probe backoff range.

The base station shall set this field to one less than the maximum number of slots a mobile station is to delay due to random backoff between consecutive enhanced access probes.

EACH_BKOFF - Enhanced Access Channel probe sequence backoff range.

The base station shall set this field to one less than the maximum number of slots a mobile station is to delay due to random backoff between successive enhanced access probe sequences and before the first enhanced access probe sequence of a response access.

EACH_SLOT - Slot duration for the Enhanced Access Channels.

The base station shall set this field to N where the slot duration of the Enhanced Access Channel is $(N+1) \times 1.25$ ms. The base station shall set this field to a value between 0 and 63.

EACH_SLOT_OFFSET1 - First slot offset for the Enhanced Access Channels.

The base station shall set this field so that the Enhanced Access Channel has a slot offset equal to $(\text{EACH_ID} \times \text{EACH_SLOT_OFFSET2} + \text{EACH_SLOT_OFFSET1}) \bmod \text{EACH_SLOT}$, where *EACH_ID* is the Enhanced Access Channel Index. The base station shall set this field to a value between 0 and 63.

EACH_SLOT_OFFSET2 - Relative slot offset for the Enhanced Access Channels.

The base station shall set this field so that the Enhanced Access Channel has a slot offset equal to $(\text{EACH_ID} \times \text{EACH_SLOT_OFFSET2} + \text{EACH_SLOT_OFFSET1}) \bmod \text{EACH_SLOT}$, where *EACH_ID* is the Enhanced Access Channel Index. The base station shall set this field to a value between 0 and 63.

- 1 RESERVED - Reserved bits.
- 2 The base station shall include as many bits as required to
- 3 make the length of the mode-specific parameters record an
- 4 integral number of octets. The base station shall set each of
- 5 these bits to '0'.
- 6
- 7 BA_PARMS_LEN - Length of Basic Access Mode parameter record.
- 8 The base station shall set this field to the total length, in
- 9 octets, of Basic Access Mode parameters record included in
- 10 the message, including the BA_PARMS_LEN and RESERVED
- 11 fields.
- 12 NUM_EACH_BA - Number of Enhanced Access Channels used for the Basic
- 13 Access Mode.
- 14 The base station shall set this field to the number of
- 15 Enhanced Access Channels used for the Basic Access mode.
- 16 EACH_BA_RATES -
- 17 _SUPPORTED - Supported rate words for the Basic Access mode on the
- 18 Enhanced Access Channels.
- 19 The base station shall set each subfield of the
- 20 EACH_BA_RATES_SUPPORTED field as follows: the base
- 21 station shall set the subfield to '1' if the corresponding mode
- 22 in Table 3.7.2.3.2.33-3 is allowed; otherwise the base station
- 23 shall set the subfield to '0'.
- 24

25 **Table 3.7.2.3.2.33-3. EACH and RCCCH Data Rate and Frame Size**

Subfield	Length (bits)	Subfield Description
RATE_SIZE_1	1	9600 bps, 20 ms frame size
RATE_SIZE_2	1	19200 bps, 20 ms frame size
RATE_SIZE_3	1	19200 bps, 10 ms frame size
RATE_SIZE_4	1	38400 bps, 20 ms frame size
RATE_SIZE_5	1	38400 bps, 10 ms frame size
RATE_SIZE_6	1	38400 bps, 5 ms frame size
RESERVED	2	Reserved

26

27 RESERVED - Reserved bits.

The base station shall include as many bits as required to make the length of the Basic Access Mode record an integral number of octets. The base station shall set each of these bits to '0'.

RA_PARMS_LEN - Length of Reservation Access Mode parameters record.

The base station shall set this field to the total length, in octets, of Reservation Access Mode parameters record included in the message, including the RA_PARMS_LEN and RESERVED fields.

NUM_EACH_RA - Number of Enhanced Access Channels used for the Reservation Access Mode.

The base station shall set this field to the number of Enhanced Access Channels used for the Reservation Access mode.

EACH_RA_RATES -

_SUPPORTED - Supported rate words for the Reservation Access mode on the Enhanced Access Channel.

The base station shall set each bit of the EACH_RA_RATES_SUPPORTED field as follows: the base station shall set the bit to '1' if the corresponding mode in Table 3.7.2.3.2.32-3 is allowed; otherwise the base station shall set the bit to '0'.

NUM_CACH - Number of Common Assignment Channels.

The base station shall set this field to the number of Common Assignment Channels supported by the system.

CACH_CODE_RATE - Code Rate for the Common Assignment Channels.

If the CACH is operating in Spreading Rate 1, the base station shall set this field to '0' if the CACH Code Rate is 1/4 (see 3.1.3.1.2.1 of [2]). The base station shall set this field to '1' if the FCCCH Code Rate is 1/2 (see 3.1.3.1.2.1 of [2]).

If the CACH is operating in Spreading Rate 3, the base station shall set this field to '0'.

The base station shall include NUM_CACH occurrences of the following one field record:

CACH_CODE_CHAN - Code channel index for the Common Assignment Channel.

The base station shall set this field to the code channel index (see [2]) in the range 1 to 256 inclusive that the mobile station is to use on the Common Assignment Channel.

1			
2	NUM_RCCCH	-	Number of Reverse Common Control Channels used for the
3			Reservation Mode.
4			The base station shall set this field to the number of Reverse
5			Common Control Channels used for the Reservation mode.
6	RCCCH_RATES -		
7	_SUPPORTED	-	Supported rate words on the Reverse Common Control
8			Channels.
9			The base station shall set each bit of the
10			RCCCH_RATES_SUPPORTED field as follows: the base station
11			shall set the bit to '1' if the corresponding mode in Table
12			3.7.2.3.2.32-3 is allowed; otherwise the base station shall set
13			the bit to '0'.
14	RCCCH_PREAMBLE-		
15	_ENABLED	-	Preamble enabled indicator for the Reverse Common Control
16			Channel.
17			The base station shall set this field to '1' if RCCCH preambles
18			related information is included in this message; otherwise,
19			the base station shall set this field to '0'.
20	RCCCH_PREAMBLE-		
21	_NUM_FRAC	-	Number of fractional preambles on the Reverse Common
22			Control Channels.
23			If RCCCH_PREAMBLE_ENABLED is set to '1', the base station
24			shall set this field to the number of fractional preambles
25			minus one on the Reverse Common Control Channels;
26			otherwise, the base station shall omit this field.
27	RCCCH_PREAMBLE-		
28	FRAC_DURATION	-	Fractional preamble duration for the Reverse Common
29			Control Channels.
30			If RCCCH_PREAMBLE_ENABLED is set to '1', the base station
31			shall set this field to the fractional preamble duration minus
32			one on a Reverse Common Control Channel, in units of 1.25
33			ms; otherwise, the base station shall omit this field.
34	RCCCH_PREAMBLE_ -		
35	OFF_DURATION	-	Fractional preamble gated-off duration on Reverse Common
36			Control Channels.

If `RCCCH_PREAMBLE_ENABLED` is set to '1', the base station shall set this field to the fractional preamble gated-off duration (in units of 1.25 ms) after the transmission of each fractional preamble on a Reverse Common Control Channel; otherwise, the base station shall omit this field.

`RCCCH_PREAMBLE_` -

`ADD_DURATION` - Additional preamble duration on the Reverse Common Control Channels.

If `RCCCH_PREAMBLE_ENABLED` is set to '1', the base station shall set this field to the additional preamble duration on a Reverse Common Control Channel, in units of 1.25 ms; otherwise, the base station shall omit this field.

`RCCCH_SLOT` - Slot interval for the Reverse Common Control Channels.

The base station shall set this field to N where the slot duration on the Reverse Common Control Channel is $(N+1) \times 1.25$ ms. The base station shall set this field to a value between 0 and 63.

`RCCCH_SLOT_OFFSET1` - First slot offset for the Reverse Common Control Channels.

The base station shall set this field so that Reverse Common Control Channel has a slot offset equal to $(RCCCH_ID \times RCCCH_SLOT_OFFSET2 + RCCCH_SLOT_OFFSET1) \bmod RCCCH_SLOT$, where `RCCCH_ID` is the Reverse Common Control Channel Index. The base station shall set this field to a value between 0 and 63.

`RCCCH_SLOT_OFFSET2` - Second slot offset for the Reverse Common Control Channels.

The base station shall set this field so that Reverse Common Control Channel has a slot offset equal to $(RCCCH_ID \times RCCCH_SLOT_OFFSET2 + RCCCH_SLOT_OFFSET1) \bmod RCCCH_SLOT$, where `RCCCH_ID` is the Reverse Common Control Channel Index. The base station shall set this field to a value between 0 and 63.

`RCCCH_NOM_PWR` - Nominal transmit power offset for the Reverse Common Control Channels.

The base station shall set this field to the correction factor to be used by a mobile station in the open loop power estimate, expressed as a two's complement value in units of 1 dB (see [2]).

`RCCCH_INIT_PWR` - Initial power offset for the Reverse Common Control Access Channels.

1		The base station shall set this field to the correction factor to
2		be used by a mobile station in the open loop power estimate
3		for the initial transmission on a Reverse Common Control
4		Channel, expressed as a two's complement value in units of 1
5		dB (see [2]).
6	RA_PC_DELAY	- Power control delay for the Reverse Common Control
7		Channel.
8		The base station shall set this field to the number of power
9		control bits the mobile is to disregard after initiating
10		transmission on a Reverse Common Control Channel.
11	EACAM_CACH_DELAY	- Maximum time after an Enhanced Access Channel header
12		transmission for receiving a response on the Common
13		Assignment Channel when Reverse Common Control
14		Channel soft handoff has not been requested.
15		The base station shall set this field to the number of complete
16		Common Assignment Channel frames minus one, from the
17		end of the <i>R-EACH Header</i> , for which a mobile station is to
18		wait for the <i>Early Acknowledgement Channel Assignment</i>
19		<i>Message</i> if the mobile station has not requested Reverse
20		Common Control Channel soft handoff .
21	RCCCH_HO-	
22	_SUPPORTED	- Reverse Common Control Channel handoff supported
23		indicator.
24		The base station shall set this field to '1' if Reverse Common
25		Control Channel handoff is supported by the base station;
26		otherwise, the base station shall set this field to '0'.
27	RCCCH_HO_THRESH	- Reverse Common Control Channel soft handoff threshold.
28	If RCCCH_HO_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the	
29	base station shall set this field to:	
30	$\lfloor -20 \times \log_{10} \text{pilot_threshold} \rfloor$	
31	where <i>pilot_threshold</i> is the pilot E_c/I_0 threshold used to determine whether the mobile	
32	station requests Reverse Common Control Channel in soft handoff.	
33	This is a positive value in units of 0.5 dB.	
34	EACAM_PCCAM_DELAY	- Maximum time after an Enhanced Access Channel header
35		transmission for receiving a response on the Common
36		Assignment Channel when Reverse Common Control
37		Channel soft handoff has been requested.

If `RCCCH_HO_SUPPORTED` is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of complete Common Assignment Channel frames minus one, from the end of the *R-EACH Header*, for which a mobile station is to wait for the *Early Acknowledgement Channel Assignment Message* and *Power Control Channel Assignment Message* if the mobile station has requested Reverse Common Control Channel soft handoff.

`NUM_CPCCH` - Number of Common Power Control Channels.

The base station shall set this field to the number of Common Power Control Channels supported.

`CPCCH_RATE` - Power control rate for the Common Power Control Channels.

The base station shall set this field to value shown in Table 3.7.2.3.2.33-4 corresponding to the power control rate for the Common Power Control Channels.

Table 3.7.2.3.2.33-4. CPCCH Power Control Rate

CPCCH_RATE (Binary)	Power Control Rate
00	200 bps
01	400 bps
10	800 bps
11	Reserved

The base station shall include `NUM_CPCCH` occurrences of the following one field record:

`CPCCH_CODE_CHAN` - Code channel index for the Common Power Control Channel.

The base station shall set this field to the code channel index (see [2]) in the range 1 to 128 inclusive that the mobile station is to use on the Common Power Control Channel.

`RA_DROP_THRESH` - Pilot threshold to sense the access process dropout condition in Reservation Access Mode.

The base station shall set this field to:

$$\lfloor -20 \times \log_{10} \text{pilot_threshold} \rfloor$$

where *power_threshold* is the pilot E_c/I_0 value below which the mobile station is to ignore closed loop power control bits sent on the Common Power Control Subchannel.

1	RA_DROP_THRESH		
2	_TIME	-	Timer value for the mobile station to abort power controlled
3			transmissions if pilot E_C/I_0 remains below RA_DROP_THRESH
4			continuously.
5			The base station shall set this field to the time interval for
6			which the pilot E_C/I_0 is continuously below
7			RA_DROP_THRESH, after which the mobile station is to abort
8			transmission on the Enhanced Access Channel or the
9			Reverse Common Control.
10	RA_CPCCH_STEP_UP	-	Common Power Control Channel step size used for the power
11			up command.
12			The base station shall set this field to the step size used for
13			the power up command, in units of 0.5 dB.
14	RA_CPCCH_STEP_DN	-	Common Power Control Channel step size used for the power
15			down command.
16			The base station shall set this field to the step size used for
17			the power down command, in units of 0.5 dB.
18	NUM_PCSCH_RA	-	Number of Power Control Subchannels used for the
19			Reservation Access Mode.
20			The base station shall set this field to the number of Power
21			Control Subchannels used for the Reservation Access Mode.
22	RESERVED	-	Reserved bits.
23			The base station shall include as many bits as required to
24			make the length of the Reservation Access Mode record an
25			integral number of octets. The base station shall set each of
26			these bits to '0'.
27			

3.7.2.3.2.34 Universal Neighbor List Message

MSG_TAG: UNLM

Field	Length (bits)
PILOT_PN	9
CONFIG_MSG_SEQ	6
NUM_RADIO_INTERFACE	4

NUM_RADIO_INTERFACE occurrences of the following record:

RADIO_INTERFACE_TYPE	4
RADIO_INTERFACE_LEN	8
Radio Interface Type -specific fields	8 × RADIO_INTERFACE_LEN

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this base station, in units of 64 PN chips.

CONFIG_MSG_SEQ - Configuration message sequence number.

The base station shall set this field to CONFIG_SEQ (see 3.6.2.2).

NUM_RADIO-
_INTERFACE - Number of interface types.

The base station shall set this field to the number of radio interface types for which neighbors are included in this message.

The base station shall include NUM_RADIO_INTERFACE occurrences of the following record, one occurrence for each radio interface for which neighbors are included in this message.

RADIO-
_INTERFACE_TYPE - The radio interface type.

The base station shall set this field to the radio interface type of this record as specified in Table 3.7.2.3.2.34-1.

Table 3.7.2.3.2.34-1. Radio Interface Type

RADIO_INTERFACE_TYP E (binary)	Descriptions
0000	MC system
0001	Analog system
0010-1111	Reserved

RADIO-
_INTERFACE_LEN

- The length of the Radio Interface Type -specific fields.

The base station shall set this field to the number of octets in the Radio Interface Type -specific fields of this record.

If RADIO_INTERFACE_TYPE is equal to '0000', the base station shall include the following fields:

Field	Length (bits)
PILOT_INC	4
NGHBR_SRCH_MODE	2
SRCH_WIN_N	0 or 4
SRCH_OFFSET_INCL	1
FREQ_FIELDS_INCL	1
USE_TIMING	1
GLOBAL_TIMING_INCL	0 or 1
GLOBAL_TX_DURATION	0 or 4
GLOBAL_TX_PERIOD	0 or 7
NGHBR_SET_ENTRY_INFO	1
NGHBR_SET_ACCESS_INFO	1
NUM_NGHBR	6

NUM_NGHBR occurrences of the following subrecord:

NGHBR_CONFIG	3
NGHBR_PN	9
BCCH_SUPPORT	1
ADD_PILOT_REC_INCL	1
NGHBR_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8 × RECORD_LEN

(continues on next page)

Field	Length (bits)
SEARCH_PRIORITY	0 or 2
SRCH_WIN_NGHR	0 or 4
SRCH_OFFSET_NGHR	0 or 3
FREQ_INCL	0 or 1
NGHR_BAND	0 or 5
NGHR_FREQ	0 or 11
TIMING_INCL	0 or 1
NGHR_TX_OFFSET	0 or 7
NGHR_TX_DURATION	0 or 4
NGHR_TX_PERIOD	0 or 7
ACCESS_ENTRY_HO	0 or 1
ACCESS_HO_ALLOWED	0 or 1

RESERVED	0 – 7 (as needed)
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PILOT_INC - Pilot PN sequence offset index increment.

A mobile station searches for Remaining-Set pilots at pilot PN sequence index values that are multiples of this value.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that mobile stations are to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

The base station shall set this field to a value in the range 1 to 15 inclusive.

NGHR_SRCH_MODE- Search mode.

The base station shall set this field to the value shown in Table 3.7.2.3.2.34-2 corresponding to the search mode.

Table 3.7.2.3.2.34-2. Search Mode Field

Value (binary)	Description
00	No search priorities or search windows
01	Search priorities
10	Search windows
11	Search windows and search priorities

SRCH_WIN_N - Search window size for the Neighbor Set.

If NGHBR_SRCH_MODE = '00' or NGHBR_SRCH_MODE = '01', the base station shall include the field SRCH_WIN_N and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the value shown in Table 2.6.6.2.1-1 corresponding to the search window size to be used by mobile stations for the Neighbor Set.

SRCH_OFFSET_INCL - Neighbor pilot channel search window offset included.

If NGHBR_SRCH_MODE = '10' or '11' and if the SRCH_OFFSET_NGHR field is included in the following records, the base station shall set this bit to '1'; otherwise, the base station shall set this bit to '0'.

FREQ_FIELDS_INCL - Frequency fields included.

If frequency fields are included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

USE_TIMING - Use timing indicator.

If base station timing information is included for neighbor base stations, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

GLOBAL_TIMING-

_INCL - Global timing included.

If USE_TIMING is set to '1', the base station shall include the field GLOBAL_TIMING_INCL and shall set this field as described below; otherwise, the base station shall omit this field.

1		If base station timing information is included globally for all
2		neighbor base stations with TIMING_INCL equal to '1', the
3		base station shall set this field to '1'; otherwise, the base
4		station shall set this field to '0'.
5	GLOBAL_TX-	
6	_DURATION	- Global neighbor transmit time duration.
7		If GLOBAL_TIMING_INCL is included and is set to '1', the base
8		station shall include the field GLOBAL_TX_DURATION and
9		shall set this field as described below; otherwise, the base
10		station shall omit this field.
11		The base station shall set this field to the duration of the
12		base station transmit window, during each period, in units of
13		80 ms. The base station should set this field to a value of 3 or
14		greater.
15	GLOBAL_TX-	
16	_PERIOD	- Global neighbor transmit time period.
17		If GLOBAL_TIMING_INCL is included and is set to '1', the base
18		station shall include the field GLOBAL_TX_PERIOD and shall
19		set this field as described below; otherwise, the base station
20		shall omit this field.
21		The base station shall set this field to duration of the period,
22		in units of 80 ms.
23	NGHBR_SET-	
24	_ENTRY_INFO	- Neighbor Set access entry handoff information included
25		indicator.
26		If the base station is including information on the Neighbor
27		Set access entry handoff, the base station shall set this field
28		to '1'; otherwise, the base station shall set this field to '0'.
29	NGHBR_SET-	
30	_ACCESS_INFO	- Neighbor Set access handoff included indicator.
31		If the base station is including information on the Neighbor
32		Set access handoff or access probe handoff, the base station
33		shall set this field to '1', otherwise, the base station shall set
34		this field to '0'.
35	NUM_NGHR	- Number of neighbor pilot PN sequences.
36		The base station shall set this field to the number of
37		neighbors included in the message.
38		

- 1 The base station shall include one occurrence of the following subrecord for each pilot that
- 2 a mobile station is to place in its Neighbor Set.
- 3

1 NGHBR_CONFIG - Neighbor configuration.

2 The base station shall set this field to the value shown in
3 Table 3.7.2.3.2.34-3 corresponding to the configuration of this
4 neighbor.

5 The base station shall not set this field to '000' if the
6 Broadcast Control Channel coding rate or Broadcast Control
7 Channel walsh code index for the neighbor base station is
8 different from the Broadcast Control Channel coding rate or
9 Broadcast Control Channel walsh code index for the current
10 base station. The base station shall not set this field to '000'
11 if the Forward Common Channel coding rate for the neighbor
12 base station is different from the Forward Common Channel
13 coding rate for the current base station.

14 **Table 3.7.2.3.2.34-3. Neighbor Configuration Field**

Value (binary)	Neighbor Configuration
000	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields, if they are different than the current CDMA frequency assignment and included for this record; otherwise, use the same CDMA frequency assignment on the neighbor base station.
001	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> • Tune to the 9600 bps Primary Paging Channel, with the CDMA frequency assignment determined as follows: Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields, if they are different from the current CDMA frequency assignment and included for this record; otherwise, use the same CDMA frequency assignment on the neighbor base station.

010	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields, the mobile station supports processing of these fields and if they are different than the current CDMA frequency assignment and included for this record; otherwise, use the first CDMA Channel listed in the <i>Extended CDMA Channel List Message</i> transmitted by the current base station.
011	<p>The base station shall set the neighbor configuration to this value if the mobile station is to enter the <i>System Determination Substate</i> of the <i>Mobile Station Initialization State</i> with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2).</p> <p>If the NGHBR_BAND and NGHBR_FREQ fields are included for this record, the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ has a Pilot Channel; otherwise the current CDMA frequency assignment has a Pilot Channel.</p>
100	<p>The base station shall set the neighbor configuration to this value if the mobile station is to perform the following when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2):</p> <ul style="list-style-type: none"> Use the CDMA frequency assignment given by NGHBR_BAND and NGHBR_FREQ fields, if they are different than the current CDMA frequency assignment and included for this record; otherwise, use the same CDMA frequency assignment on the neighbor base station. If the mobile station has not stored configuration parameters for the new Forward Common Control Channel/Broadcast Control Channel, or if the stored information is not current, then after performing idle handoff to the neighbor base station, the mobile station monitors the new Broadcast Control Channel and updates the configuration parameters before attempting to monitor the new Forward Common Control Channel.
101-111	Reserved.

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NGHBR_PN - Neighbor pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this neighbor, in units of 64 PN chips.

BCCH_SUPPORT - BCCH support indicator.

If this neighbor base station supports Broadcast Control Channel, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

1 ADD_PILOT_REC_INCL - Additional pilot information included indicator.

2 The base station shall set this field to '1' if additional pilot

3 information listed in the NGHBR_PILOT_REC_TYPE and

4 RECORD_LEN fields are included. The base station shall set

5 this field to '0' if the corresponding pilot is the common pilot

6 and there is no additional pilot information included.

7 NGHBR_PILOT_REC_TYPE - Neighbor Pilot record type

8 If ADD_PILOT_REC_INCL is set to '1', the base station shall

9 set this field to the NGHBR_PILOT_REC_TYPE value shown in

10 Table 3.7.2.3.2.34-4 corresponding to the type of Pilot Record

11 specified by this record.

12

13 **Table 3.7.2.3.2.34-4. Neighbor Pilot Record Types**

Description	NGHBR_PILOT_REC_TYPE (binary)
1X Common Pilot with Transmit Diversity	000
1X Auxiliary Pilot	001
1X Auxiliary Pilot with Transmit Diversity	010
3X Common Pilot	011
3X Auxiliary Pilot	100
All other NGHBR_PILOT_REC_TYPE values are reserved	

14

15 If ADD_PILOT_REC_INCL is set to '0', the base station shall

16 omit this field.

17 RECORD_LEN - Pilot record length.

18 If ADD_PILOT_REC_INCL is set to '1', the base station shall

19 set this field to the number of octets in the type-specific fields

20 of this pilot record.

21 If ADD_PILOT_REC_INCL is set to '0', the base station shall

22 omit this field.

23 Type-specific fields - Pilot record type-specific fields.

24 If ADD_PILOT_REC_INCL is set to '1', the base station shall

25 include type-specific fields based on the

26 NGHBR_PILOT_REC_TYPE of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

If NGHBR_PILOT_REC_TYPE is equal to '000', the base station shall include the following fields:

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

TD_POWER_LEVEL - TD Transmit Power Level.

The base station shall set this field to the TD transmit power level relative to that of the Forward Pilot Channel as specified in Table 3.7.2.3.2.21-7.

TD_MODE - Transmit Diversity mode.

The base station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

If NGHBR_PILOT_REC_TYPE is equal to '001', the base station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index.

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh Code.

1 The base station shall set this field to the WALSH_LENGTH
 2 value shown in Table 3.7.2.3.2.22-6 corresponding to the
 3 length of the Walsh code for the pilot that is used in as the
 4 Auxiliary pilot.

5 AUX_PILOT_WALSH - Walsh Code for the Auxiliary Pilot.

6 The base station shall set this field to the Walsh code
 7 corresponding to the Auxiliary pilot.

8 RESERVED - Reserved bits.

9 The base station shall set all the bits of this field to '0' to
 10 make the entire record octet-aligned.

11 If NGHBR_PILOT_REC_TYPE is equal to '010', the base station shall include the following
 12 fields:

13

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

14

15 QOF - Quasi-orthogonal function index for the Auxiliary Transmit
 16 Diversity Pilot.

17 The base station shall set this field to the index of the Quasi-
 18 orthogonal function (see Table 3.1.3.1.12-2 of [2]).

19 WALSH_LENGTH - Length of the Walsh Code.

20 The base station shall set this field to the WALSH_LENGTH
 21 value shown in 3.7.2.3.2.22-6 corresponding to the length of
 22 the Walsh code for the pilots that are used as Auxiliary pilot
 23 in the transmit diversity mode.

24 AUX_TD_WALSH - Walsh Code for the Auxiliary Transmit Diversity Pilot.

25 The base station shall set this field to the Walsh code
 26 corresponding to the Auxiliary Transmit Diversity Pilot.

27 AUX_TD-

28 _POWER_LEVEL - Auxiliary Transmit Diversity Pilot Power Level.

The base station shall set this field to the Auxiliary Transmit Diversity Pilot transmit power level relative to that of the Auxiliary Pilot as specified in Table 3.7.2.3.2.22-7.

TD_MODE - Transmit Diversity mode.

The base station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If NGHBR_PILOT_REC_TYPE is equal to '011', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3

SR3_PRIMARY_PILOT - Primary SR3 pilot.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-5 corresponding to the position of the primary SR3 pilot.

SR3_PILOT_POWER1 - Relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

SR3_PILOT_POWER2 - Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

RESERVED - Reserved bits.

The base station shall set this field to '0000000'.

- 1 If NGHBR_PILOT_REC_TYPE is equal to '100', the base station shall include the following
2 fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

- 3 SR3_PRIMARY_PILOT – Primary SR3 pilot.
4
5 The base station shall set this field to the value shown in
6 Table 3.7.2.3.2.26-5 corresponding to the position of the
primary SR3 pilot.
- 7 SR3_PILOT_POWER1 – Relative power level between the primary SR3 pilot and the
8 pilot on the lower frequency of the two remaining SR3
9 frequencies.
10
11 The base station shall set this field to the value shown in
12 Table 3.7.2.3.2.26-6 corresponding to the power level of the
13 primary pilot with respect to the pilot on the lower frequency
of the two remaining SR3 frequencies.
- 14 SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the
15 pilot on the higher frequency of the two remaining SR3
16 frequencies.

1		The base station shall set this field to the value shown in
2		Table 3.7.2.3.2.26-6 corresponding to the power level of the
3		primary pilot with respect to the pilot on the higher frequency
4		of the two remaining SR3 frequencies.
5	QOF	- Quasi-orthogonal function index.
6		The base station shall set this field to the index of the Quasi-
7		orthogonal function (see Table 3.1.3.1.12-2 of [2] on the
8		frequency of the primary pilot.
9	WALSH_LENGTH	- Length of the Walsh Code.
10		The base station shall set this field to the WALSH_LENGTH
11		value shown in Table 3.7.2.3.2.22-6 corresponding to the
12		length of the Walsh code for the pilot that is used as the
13		Auxiliary pilot on the frequency of the primary pilot.
14	AUX_PILOT_WALSH	- Walsh Code for the Auxiliary Pilot.
15		The base station shall set this field to the Walsh code
16		corresponding to the Auxiliary pilot on the frequency of the
17		primary pilot.
18	ADD_INFO_INCL1	- Additional information included for the pilot on the bwer
19		frequency of the two remaining SR3 frequencies.
20		If the additional information for the pilot on the lower
21		frequencies of the two remaining SR3 frequencies is the
22		same as pilot on the primary frequency, the base station shall
23		set this field to '0'; otherwise, the base station shall set this
24		field to '1'.
25	QOF1	- Quasi-orthogonal function index for the pilot on the lower
26		frequency of the two remaining SR3 frequencies.
27		If ADD_INFO_INCL1 is set to '0', the base station shall omit
28		this field; otherwise, the base station shall set this field as
29		follows:
30		The base station shall set this field to the index of the Quasi-
31		orthogonal function (see Table 3.1.3.1.12-2 of [2] on the lower
32		frequency of the two remaining SR3 frequencies.
33	WALSH_LENGTH1	- Length of the Walsh Code for the pilot on the lower frequency
34		of the two remaining SR3 frequencies.
35		If ADD_INFO_INCL1 is set to '0', the base station shall omit
36		this field; otherwise, the base station shall set this field as
37		follows:

1		The base station shall set this field to the WALSH_LENGTH
2		value shown in Table 3.7.2.3.2.22-6 corresponding to the
3		length of the Walsh code for the pilot that is used as the
4		Auxiliary pilot on the lower frequency of the two remaining
5		SR3 frequencies.
6	AUX_PILOT_WALSH1	- Walsh Code for the Auxiliary Pilot on the lower frequency of
7		the two remaining SR3 frequencies.
8		If ADD_INFO_INCL1 is set to '0', the base station shall omit
9		this field; otherwise, the base station shall set this field as
10		follows:
11		The base station shall set this field to the Walsh code
12		corresponding to the Auxiliary pilot on the lower frequency of
13		the two remaining SR3 frequencies.
14	ADD_INFO_INCL2	- Additional information included for the pilot on the higher
15		frequency of the two remaining SR3 frequencies.
16		If the additional information for the pilot on the higher
17		frequencies of the two remaining SR3 frequencies is the
18		same as pilot on the primary frequency, the base station shall
19		set this field to '0'; otherwise, the base station shall set this
20		field to '1'.
21	QOF2	- Quasi-orthogonal function index for the pilot on the higher
22		frequency of the two remaining SR3 frequencies.
23		If ADD_INFO_INCL2 is set to '0', the base station shall omit
24		this field; otherwise, the base station shall set this field as
25		follows:
26		The base station shall set this field to the index of the Quasi-
27		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
28		higher frequency of the two remaining SR3 frequencies.
29	WALSH_LENGTH2	- Length of the Walsh Code for the pilot on the higher
30		frequency of the two remaining SR3 frequencies.
31		If ADD_INFO_INCL2 is set to '0', the base station shall omit
32		this field; otherwise, the base station shall set this field as
33		follows:
34		The base station shall set this field to the WALSH_LENGTH
35		value shown in Table 3.7.2.3.2.22-6 corresponding to the
36		length of the Walsh code for the pilot that is used as the
37		Auxiliary pilot on the higher frequency of the two remaining
38		SR3 frequencies.
39	AUX_PILOT_WALSH2	- Walsh Code for the Auxiliary Pilot on the higher frequency of
40		the two remaining SR3 frequencies.

If ADD_INFO_INCL2 is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the Walsh code corresponding to the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

SEARCH_PRIORITY - Pilot Channel search priority.

If NGHBR_SRCH_MODE = '01' or NGHBR_SRCH_MODE = '11', the base station shall include the field SEARCH_PRIORITY and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the search priority for the Pilot Channel corresponding to NGHBR_PN. The base station shall set the search priority as shown in Table 3.7.2.3.2.34-4.

Table 3.7.2.3.2.34-4. Search Priority Field

Value (binary)	Search Priority
00	Low
01	Medium
10	High
11	Very High

SRCH_WIN_NGHBR - Neighbor pilot channel search window size.

If NGHBR_SRCH_MODE = '10' or NGHBR_SRCH_MODE = '11', the base station shall include the field SRCH_WIN_NGHBR and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the value shown in Table 2.6.6.2.1-1 corresponding to the search window size to be used by mobile stations for this neighbor.

1	SRCH_OFFSET_NGHBR	-	Neighbor pilot channel search window size offset.
2			If SRCH_OFFSET_INCL equals to '1', then the base station
3			shall include the field SRCH_OFFSET_NGHBR and shall set
4			this field as described below; otherwise, the base station shall
5			omit this field.
6			The base station shall set this field to the value shown in
7			Table 2.6.6.2.1-2 corresponding to the search window offset to
8			be used by mobile stations for this neighbor.
9	FREQ_INCL	-	Frequency included indicator.
10			If FREQ_FIELDS_INCL is set to '1', the base station shall
11			include the field FREQ_INCL and shall set this field as
12			described below; otherwise, the base station shall omit this
13			field.
14			If the NGHBR_BAND and NGHBR_FREQ fields are included for
15			this neighbor base station, the base station shall set this bit
16			to '1'. If the NGHBR_BAND and NGHBR_FREQ fields are not
17			included in this assignment record, the base station shall set
18			this bit to '0'.
19	NGHBR_BAND	-	Neighbor band class.
20			If the FREQ_INCL field is included and is set to '1', the base
21			station shall include the field NGHBR_BAND and shall set this
22			field as described below; otherwise, the base station shall
23			omit this field.
24			The base station shall set this field to the CDMA band class,
25			as specified in [30], corresponding to the CDMA frequency
26			assignment for the CDMA Channel containing the Broadcast
27			Control Channel/Forward Common Control Channel the
28			mobile station is to search.
29	NGHBR_FREQ	-	Neighbor frequency assignment.
30			If the FREQ_INCL field is omitted or is set to '0', the base
31			station shall omit this field.
32			If the FREQ_INCL field is included and is set to '1' and the
33			corresponding neighbor has a 1X neighbor pilot record type,
34			the base station shall set this field to the CDMA Channel
35			number, in the specified CDMA band class, corresponding to
36			the CDMA frequency assignment for the CDMA Channel
37			containing the Broadcast Control Channel/Forward Common
38			Control Channel the mobile station is to search.

1			If the <code>FREQ_INCL</code> field is included and is set to '1' and the
2			corresponding neighbor has a 3X neighbor pilot record type,
3			the base station shall set this field to the CDMA Channel
4			number, in the specified CDMA band class, corresponding to
5			the center SR3 frequency assignment containing the
6			Broadcast Control Channel/Forward Common Control
7			Channel the mobile station is to search.
8	<code>TIMING_INCL</code>	-	Timing included indicator.
9			If <code>USE_TIMING</code> is set to '1', the base station shall include the
10			field <code>TIMING_INCL</code> and set this field as described below;
11			otherwise, the base station shall omit this field.
12			If base station timing information is included for this
13			neighbor base station, the base station shall set this field to
14			'1'; otherwise, the base station shall set this field to '0'.
15	<code>NGHBR_TX_OFFSET</code>	-	Neighbor transmit time offset.
16			If <code>TIMING_INCL</code> is included and is set to '1', the base station
17			shall include the field <code>NGHBR_TX_OFFSET</code> and shall set this
18			field as described below; otherwise, the base station shall
19			omit this field.
20			The base station shall set this field to the time offset, in
21			units of 80 ms, from the beginning of the neighbor timing
22			period to the beginning of the first base station transmit
23			window within the period. The beginning of the neighbor
24			timing period occurs when $\lfloor t/4 \rfloor \bmod (16384) = 0$.
25	<code>NGHBR_TX_DURATION</code>	-	Neighbor transmit time duration.
26			If <code>TIMING_INCL</code> is included and is set to '1' and
27			<code>GLOBAL_TIMING_INCL</code> is set to '0', the base station shall
28			include the field <code>NGHBR_TX_DURATION</code> and shall set this
29			field as described below; otherwise, the base station shall
30			omit this field.
31			The base station shall set this field to duration of the base
32			station transmit window, during each period, in units of
33			80 ms. The base station should set this field to a value of 3 or
34			greater.
35	<code>NGHBR_TX_PERIOD</code>	-	Neighbor transmit time period.
36			If <code>TIMING_INCL</code> is included and is set to '1' and
37			<code>GLOBAL_TIMING_INCL</code> is set to '0', the base station shall
38			include the field <code>NGHBR_TX_PERIOD</code> and shall set this field
39			as described below; otherwise, the base station shall omit this
40			field.

1		The base station shall set this field to duration of the period,
2		in units of 80 ms.
3	ACCESS_ENTRY_HO	- Access entry handoff permitted when entering the System
4		Access State.
5		If NGHBR_SET_ENTRY_INFO is equal to '1', the base station
6		shall include the field ACCESS_ENTRY_HO and shall set this
7		field as described below; otherwise, the base station shall
8		omit this field.
9		The base station shall set this field to '1' if the mobile station
10		is permitted to perform an access entry handoff to the base
11		station associated with the corresponding pilot between the
12		time it receives a message on the Paging Channel when in
13		the <i>Mobile Station Idle State</i> and it enters the <i>System Access</i>
14		<i>State</i> to respond to the message; otherwise, the base station
15		shall set this field to '0'.
16	ACCESS_HO_ALLOWED	- Access handoff and access probe handoff permitted for the
17		corresponding pilot while in the <i>System Access State</i> .
18		If NGHBR_SET_ACCESS_INFO is equal to '1', the base station
19		shall include the field ACCESS_HO_ALLOWED and shall set
20		this field as described below; otherwise, the base station shall
21		omit this field.
22		The base station shall set this field to '1' if the mobile station
23		is permitted to perform an access handoff or access probe
24		handoff to the base station associated with the corresponding
25		pilot when the mobile station is in the <i>System Access State</i>
26		(see 2.6.3.1.8 and 2.6.3.1.9); otherwise, the base station shall
27		set this field to '0'.
28	RESERVED	- Reserved bits.
29		The base station shall add reserved bits as needed in order to
30		make the length of the entire RADIO_INTERFACE_TYPE
31		record equal to an integer number of octets. The base station
32		shall set these bits to '0'.
33	If RADIO_INTERFACE_TYPE is equal to '0001', the base station shall include the following	
34	fields:	

Field	Length (bits)
NUM_ANALOG_NGHBR	3

NUM_ANALOG_NGHBR occurrences of the following subrecord:

BAND_CLASS	5
SYS_A_B	2

RESERVED	0 – 7 (as needed)
----------	-------------------

NUM_ANALOG_NGHBR - Number of neighboring analog systems.

The base station shall set this field to the number of neighboring analog systems included in the message.

The base station shall include one occurrence of the following subrecord for each neighboring analog system included in the message:

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

SYS_A_B - System A/B.

If BAND_CLASS is set to '00000', the base station shall set this field to the value shown in Table 3.7.2.3.2.34-5 corresponding to the availability of neighboring analog systems; otherwise, the base station shall set this field to '00'.

Table 3.7.2.3.2.34-5. Cellular System A/B

Cellular System A/B	Value (Binary)
RESERVED	00
System A	01
System B	10
System A and B	11

RESERVED - Reserved bits.

1 The base station shall add reserved bits as needed in order to
2 make the length of the entire RADIO_INTERFACE_TYPE
3 record equal to an integer number of octets. The base station
4 shall set these bits to '0'.

5

6

3.7.2.3.2.35 Security Mode Command Message

MSG_TAG: SMCM

Field	Length (bits)
SIG_ENCRYPT_MODE	3
KEY_SIZE	3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4

- SIG_ENCRYPT_MODE** - Common channel encryption mode indicator.
- The base station shall set it to signaling message encryption mode, as shown in Table 3.7.4.5-1.
- KEY_SIZE** - Key Size used for user information and signaling encryption
- The base station shall set this field to the key-size for user information encryption and signaling encryption according to Table 3.7.4.5-2.
- USE_NEW_KEY** - Use new encryption key indication
- The base station shall include this field if either of the UI_ENCRYPT_MODE or SIG_ENCRYPT_MODE is not equal to '000'. If included, the base station shall set this field to '0' to indicate that the stored encryption key to be used by the mobile station. Otherwise, the base station shall set this field to '1' to indicate that the new encryption key to be used by the mobile station.
- KEY_SEQ** - Encryption key sequence number.
- The base station shall only include this field if USE_NEW_KEY is included and is set to '0', the base station shall include this field and shall set it to the encryption key sequence number to be used by the mobile station.
- The base station shall only include this field if USE_NEW_KEY is included and is set to '0', the base station shall include this field and shall set it to the encryption key sequence number to be used by the mobile station.

3.7.2.3.2.36 Universal Page Message

MSG_TAG: UPM

When Layer 3 at the base station sends a PDU corresponding to the *Universal Page Message* to Layer 2, it also sends the UPM Common fields to Layer 2. These UPM Common fields and PDUs are used by Layer 2 to assemble the Layer 2 PDU or PDUs corresponding to the *Universal Page Message* (see 3.1.2.3 of [4]).

UPM Common Fields:

Field	Length (bits)
CONFIG_MSG_SEQ	6
ACC_MSG_SEQ	6
READ_NEXT_SLOT	1
READ_NEXT_SLOT_BCAST	1

PDU Format for a mobile station-addressed page:

Field	Length (bits)
SERVICE_OPTION	16
ADD_FIELDS_INCL	1
ADD_LEN	0 or 4
ADD_RECORD	0 or $8 \times \text{ADD_LEN}$

PDU Format for a mobile station-directed message announcement:

Field	Length (bits)
-	0

PDU Format for an enhanced broadcast page:

Field	Length (bits)
BCCH_INDEX	3
TIME_OFFSET	10
REPEAT_INCL	1
REPEAT_TIME_OFFSET	0 or 5
ADD_FIELDS_INCL	1
ADD_LEN	0 or 4
ADD_RECORD	0 or 8 × ADD_LEN

- 1
- 2 CONFIG_MSG_SEQ - Configuration message sequence number.
- 3 The base station shall set this field to CONFIG_SEQ
- 4 (see 3.6.2.2).
- 5 ACC_MSG_SEQ - Access parameters message sequence number.
- 6 The base station shall set this field to ACC_CONFIG_SEQ
- 7 (see 3.6.2.2).
- 8 READ_NEXT_SLOT - Pages carried into next slot indicator.
- 9 If all messages and records directed to mobile stations
- 10 operating in the slotted mode and active in this slot, are
- 11 included in this slot, the base station shall set this field to '1';
- 12 otherwise, the base station shall set this field to '0'.
- 13 READ_NEXT-
- 14 _SLOT_BCAST - Enhanced Broadcast Pages carried into next slot indicator.
- 15 If all enhanced broadcast pages directed to mobile stations
- 16 operating in the slotted mode and active in this slot to receive
- 17 enhanced broadcast pages are included in this slot, the base
- 18 station shall set this field to '1'; otherwise, the base station
- 19 shall set this field to '0'.
- 20 SERVICE_OPTION - Service option.
- 21 The base station shall set this field to the service option code
- 22 shown in TSB58-B, corresponding to the requested service
- 23 option.

1	ADD_FIELDS_INCL	-	Additional Fields Included.
2			If additional fields are included, the base station shall set this
3			field to '1'; otherwise, the base station shall set this field to
4			'0'. The base station shall set this field to '0'.
5	ADD_LEN	-	Length of the additional record.
6			If ADD_FIELDS_INCL is set to '1', the base station shall set
7			ADD_LEN to the length of the additional record in octets;
8			otherwise the base station shall omit this field.
9	ADD_RECORD	-	Additional record.
10			If ADD_FIELDS_INCL is set to '1', the base station shall set
11			this field to all zeroes such that the length is 8 X ADD_LEN
12			bits.
13	BCCH_INDEX	-	BCCH index.
14			The base station shall set this field to the index of the BCCH
15			to which the mobile station is being redirected.
16	TIME_OFFSET	-	BCCH offset.
17			The base station shall set this field to one less than the time
18			offset, in units of 40 ms, from the beginning of the slot in
19			which this message began to the beginning of the Broadcast
20			Control Channel slot to which the mobile station is being
21			directed.
22	REPEAT_TIME-		
23	_OFFSET	-	BCCH offset of repeat.
24			The base station shall set this field to one less than the time
25			offset, in units of 40 ms, from the time specified by
26			TIME_OFFSET to the beginning of the Broadcast Control
27			Channel slot to which the mobile station is being directed for
28			a repeat of the broadcast message.
29			

- 1 3.7.3 f-dsch
- 2 During Traffic Channel operation, the base station sends signaling messages to the mobile
- 3 station using the f-dsch.
- 4 3.7.3.1 Reserved
- 5 3.7.3.2 Reserved
- 6

3.7.3.3 PDU Formats on the f-dsch

The signaling messages sent over the f-dsch are summarized in Table 3.7.3.3-1.

Table 3.7.3.3-1. f-dsch Messages (Part 1 of 2)

Message Name	MSG_TAG	Section Number
<i>Order Message</i>	ORDRM	3.7.3.3.2.1
<i>Authentication Challenge Message</i>	AUCM	3.7.3.3.2.2
<i>Alert With Information Message</i>	AWIM	3.7.3.3.2.3
<i>Data Burst Message</i>	DBM	3.7.3.3.2.4
<i>Analog Handoff Direction Message</i>	AHDM	3.7.3.3.2.6
<i>In-Traffic System Parameters Message</i>	ITSPM	3.7.3.3.2.7
<i>Neighbor List Update Message</i>	NLUM	3.7.3.3.2.8
<i>Send Burst DTMF Message</i>	BDTMFM	3.7.3.3.2.9
<i>Power Control Parameters Message</i>	PCNPM	3.7.3.3.2.10
<i>Retrieve Parameters Message</i>	RTPM	3.7.3.3.2.11
<i>Set Parameters Message</i>	STPM	3.7.3.3.2.12
<i>SSD Update Message</i>	SSDUM	3.7.3.3.2.13
<i>Flash With Information Message</i>	FWIM	3.7.3.3.2.14
<i>Mobile Station Registered Message</i>	MSRM	3.7.3.3.2.15
<i>Status Request Message</i>	STRQM	3.7.3.3.2.16
<i>Extended Handoff Direction Message</i>	EHDM	3.7.3.3.2.17
<i>Service Request Message</i>	SRQM	3.7.3.3.2.18
<i>Service Response Message</i>	SRPM	3.7.3.3.2.19
<i>Service Connect Message</i>	SCM	3.7.3.3.2.20
<i>Service Option Control Message</i>	SOCM	3.7.3.3.2.21
<i>TMSI Assignment Message</i>	TASM	3.7.3.3.2.22
<i>Service Redirection Message</i>	SRDM	3.7.3.3.2.23
<i>Supplemental Channel Assignment Message</i>	SCAM	3.7.3.3.2.24
<i>Power Control Message</i>	PCNM	3.7.3.3.2.25

Table 3.7.3.3-1. f-dsch Messages (Part 2 of 2)

Message Name	MSG_TAG	Section Number
<i>Extended Neighbor List Update Message</i>	ENLUM	3.7.3.3.2.26
<i>Candidate Frequency Search Request Message</i>	CFSRQM	3.7.3.3.2.27
<i>Candidate Frequency Search Control Message</i>	CFSCNM	3.7.3.3.2.28
<i>Power Up Function Message</i>	PUFM	3.7.3.3.2.29
<i>Power Up Function Completion Message</i>	PUFCM	3.7.3.3.2.30
<i>General Handoff Direction Message</i>	GHDM	3.7.3.3.2.31
<i>Resource Allocation Message</i>	RAM	3.7.3.3.2.32
<i>Resource Allocation Mini Message</i>	RAMM	3.7.3.3.2.33
<i>Extended Release Message</i>	ERM	3.7.3.3.2.34
<i>Extended Release Mini Message</i>	ERMM	3.7.3.3.2.35
<i>Universal Handoff Direction Message</i>	UHDM	3.7.3.3.2.36
<i>Extended Supplemental Channel Assignment Message</i>	ESCAM	3.7.3.3.2.37
<i>Forward Supplemental Channel Assignment Mini Message</i>	FSCAMM	3.7.3.3.2.38
<i>Reverse Supplemental Channel Assignment Mini Message</i>	RSCAMM	3.7.3.3.2.39
<i>Mobile Assisted Burst Operation Parameters Message</i>	MABOPM	3.7.3.3.2.40
<i>User Zone Reject Message</i>	UZRM	3.7.3.3.2.41
<i>User Zone Update Message</i>	UZUM	3.7.3.3.2.42
<i>Call Assignment Message</i>	CLAM	3.7.3.3.2.43
<i>Extended Alert With Information Message</i>	EAWIM	3.7.3.3.2.44
<i>Extended Flash With Information Message</i>	EFWIM	3.7.3.3.2.45
<i>Security Mode Command Message</i>	SMCM	3.7.3.3.2.46

3.7.3.3.1 Reserved

3.7.3.3.2 Message Body Contents

The following sections specify the contents of the message body for each message that may be sent on the f-dsch.

3.7.3.3.2.1 Order Message

MSG_TAG: ORDRM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
ORDER	6
ADD_RECORD_LEN	3
Order-specific fields (if used)	$8 \times \text{ADD_RECORD_LEN}$
CON_REF_INCL	0 or 1
CON_REF	0 or 8

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this order.

If an explicit action time can be specified for this order code, as shown in Table 3.7.4-1, the base station may set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the order is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

ORDER - Order code.

The base station shall set this field to the ORDER code for this type of *Order Message* (see 3.7.4).

ADD_RECORD_LEN - Additional record length.

The base station shall set this field to the number of octets in the order-specific fields included in this message.

Order-specific fields - Order-specific fields.

The base station shall include order-specific fields as specified in 3.7.4.

CON_REF_INCL - Connection reference included indicator.

1 If the order carried by this message is not a Call Control order
2 (see 3.6.8), the base station shall omit this field; otherwise,
3 the base station shall include this field and set it as follows:

4 The base station shall set this field to '1' if the connection
5 reference field is included in this message; otherwise, it
6 shall set this field to '0'.

7 CON_REF – Connection reference.

8 If the CON_REF_INCL field is set to '0', the base station shall
9 omit this field; otherwise, the base station shall include this
10 field and shall set it to the value of the connection reference
11 assigned to the service option connection of the call, to which
12 this message corresponds.

1 3.7.3.3.2.2 Authentication Challenge Message

2 MSG_TAG: AUCM

3

Field	Length (bits)
RANDU	24

4

5 RANDU - Random challenge data.

6 The base station shall set this field as specified in 2.3.12.1.4.

7

3.7.3.3.2.3 Alert With Information Message

MSG_TAG: AWIM

Field	Length (bits)
Zero or more occurrences of the following record:	
RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

The base station shall include occurrences of the following three-field record as specified in 3.7.5.

RECORD_TYPE - Information record type.

The base station shall set this field as specified in 3.7.5.

RECORD_LEN - Information record length.

The base station shall set this field to the number of octets in the type-specific fields included in this record.

Type-specific fields - Type-specific fields.

The base station shall include type-specific fields as specified in 3.7.5.

3.7.3.3.2.4 Data Burst Message

MSG_TAG: DBM

Field	Length (bits)
MSG_NUMBER	8
BURST_TYPE	6
NUM_MSGS	8
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHAR _i	8
-------------------	---

MSG_NUMBER - Message number.

The base station shall set this field to the number of this message within the data burst stream.

BURST_TYPE - Data burst type.

The base station shall set the value of this field for the type of this data burst as defined in [30]. If the base station sets this field equal to '111110', it shall set the first two CHAR_i fields of this message equal to the EXTENDED_BURST_TYPE_INTERNATIONAL field as described in the definition of CHAR_i below. If the base station sets this field equal to '111111', it shall set the first two CHAR_i fields of this message equal to the EXTENDED_BURST_TYPE as described in the definition of CHAR_i below.

NUM_MSGS - Number of messages in the data burst stream.

The base station shall set this field to the number of messages in this data burst stream.

NUM_FIELDS - Number of characters in this message.

The base station shall set this field to the number of occurrences of the CHAR_i field included in this message.

CHAR_i - Character.

The base station shall include NUM_FIELDS occurrences of this field. The base station shall set these fields to the corresponding octet of the data burst stream.

If the BURST_TYPE field of this message is equal to '111110', the first two CHARi octets shall represent a 16 bit EXTENDED_BURST_TYPE_INTERNATIONAL field, which is encoded as shown below. The first ten bits of this field contain a binary mapping of the Mobile Country Code (MCC) associated with the national standards organization administering the use of the remaining octets of the message. Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the EXTENDED_BURST_TYPE_INTERNATIONAL field shall specify the COUNTRY_BURST_TYPE. The base station shall set the value of the COUNTRY_BURST_TYPE according to the type of this data burst as defined in standards governed by the country where this data burst type is to be used.

Field	Length (bits)
Mobile Country Code	10
COUNTRY_BURST_TYPE	6
Remaining CHARi fields	$8 \times (\text{NUM_FIELDS} - 2)$

If the BURST_TYPE field of this message is equal to '111111', the first two CHARi octets shall represent a single, 16 bit, EXTENDED_BURST_TYPE field, as shown below. The base station shall set the value of the EXTENDED_BURST_TYPE field according to the type of this data burst as defined in [30].

Field	Length (bits)
EXTENDED_BURST_TYPE (first two CHARi fields)	16
Remaining CHARi fields	$8 \times (\text{NUM_FIELDS} - 2)$

1 3.7.3.3.2.5 Reserved

2 No text.

3

3.7.3.3.2.6 Analog Handoff Direction Message

MSG_TAG: AHDM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
SID	15
VMAC	3
ANALOG_CHAN	11
SCC	2
MEM	1
AN_CHAN_TYPE	2
DSCC_MSB	1
BAND_CLASS	5
CON_REF_INCL	1
CON_REF	0 or 8

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the handoff is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

SID - System identification of the analog system.

The base station shall set this field to the system identification number for the analog system (see [6]).

VMAC - Voice mobile station attenuation code.

This field indicates the mobile station's power level associated with the designated voice channel.

- 1 The base shall set this field to the MAC value shown in Table
 2 2.1.2-1 of [12] corresponding to the nominal power for this
 3 mobile station.
- 4 **ANALOG_CHAN** - Analog voice channel number.
- 5 The base station shall set this field to the channel number of
 6 the analog voice channel, as specified in Table 2.1.1-1 of [12].
- 7 **SCC** - SAT color code.
- 8 This indicates the supervisory audio tone associated with the
 9 designated analog voice channel.
- 10 The base station shall set this field to the SAT value shown
 11 in Table 3.7.1-2 of [12] and 2.4.1 of [12].
- 12 If the assignment is to a narrow analog channel, the base station
 13 shall set this field to the two least significant bits of the DSCC.
- 14 **MEM** - Message encryption mode indicator.
- 15 To enable analog control message encryption on the assigned
 16 forward and reverse analog voice channels, the base station
 17 shall set this bit to '1'. To disable analog control message
 18 encryption, the base station shall set this bit to '0'.
- 19 **AN_CHAN_TYPE** - Analog voice channel type.
- 20 The base station shall set this field to the analog channel
 21 type as specified in Table 3.7.3.3.2.6-1. If the mobile station
 22 does not have narrow analog capability, the base station shall
 23 set this field to '00'.
 24

Table 3.7.3.3.2.6-1. Analog Channel Type

Description	Analog Ch	AN_CHAN_TYPE (Binary)
Wide channel on ANALOG_CHAN	N	00
Narrow channel 10 kHz below ANALOG_CHAN	NL	01
Narrow channel 10 kHz above ANALOG_CHAN	NU	10
Narrow channel centered on ANALOG_CHAN	NM	11

26

- 27 **DSCC_MSB** - Digital supervisory audio tone color code most significant bit.

1 The base station shall set this field to '0' when directing
2 handoff to a wide analog channel. The base station shall set
3 this field to the most significant bit of the DSCC when
4 directing handoff to a narrow analog channel.

5 BAND_CLASS - Band class.

6 The base station shall set this field according to values
7 defined in [30].

8 CON_REF_INCL - Connection reference included indicator.

9 The base station shall set this field to '1' if the connection
10 reference field is included in this message; otherwise, it
11 shall set this field to '0'.

12 CON_REF - Connection reference.

13 If the CON_REF_INCL field is set to '0', the base station shall
14 omit this field; otherwise, the base station shall include this
15 field and shall set it to the value of the connection reference
16 assigned to the service option connection of the call which is
17 to be transferred to the analog system.

18

3.7.3.3.2.7 In-Traffic System Parameters Message

MSG_TAG: ITSPM

Field	Length (bits)
SID	15
NID	16
SRCH_WIN_A	4
SRCH_WIN_N	4
SRCH_WIN_R	4
T_ADD	6
T_DROP	6
T_COMP	4
T_TDROP	4
NGHBR_MAX_AGE	4
P_REV	8
SOFT_SLOPE	6
ADD_INTERCEPT	6
DROP_INTERCEPT	6
PACKET_ZONE_ID	8
EXTENSION	1
T_MULCHAN	0 or 3
BEGIN_PREAMBLE	0 or 3
RESUME_PREAMBLE	0 or 3
T_SLOTTED_INCL	1
T_SLOTTED	0 or 8
ENC_SUPPORTED	1
SIG_ENCRYPT_SUP	0 or 8
UI_ENCRYPT_SUP	0 or 8

SID - System identification.

The base station shall set this field to the system identification number for this cellular system (see 2.6.5.2).

1	NID	-	Network identification.
2			This field serves as a sub-identifier of a system as defined by
3			the owner of the SID.
4			The base station shall set this field to the network
5			identification number for this network (see 2.6.5.2).
6	SRCH_WIN_A	-	Search window size for the Active Set and Candidate Set.
7			The base station shall set this field to the window size
8			parameter shown in Table 2.6.6.2.1-1 corresponding to the
9			number of PN chips that the mobile station is to search for
10			pilots in the Active Set and Candidate Set.
11	SRCH_WIN_N	-	Search window size for the Neighbor Set.
12			The base station shall set this field to the window size
13			parameter shown in Table 2.6.6.2.1-1 corresponding to the
14			number of PN chips that the mobile station is to search for
15			pilots in the Neighbor Set.
16	SRCH_WIN_R	-	Search window size for the Remaining Set.
17			The base station shall set this field to the window size
18			parameter shown in Table 2.6.6.2.1-1 corresponding to the
19			number of PN chips that the mobile station is to search for
20			pilots in the Remaining Set.
21	T_ADD	-	Pilot detection threshold.
22			This value is used by the mobile station to trigger the
23			transfer of a pilot from the Neighbor Set or Remaining Set to
24			the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
25			the <i>Pilot Strength Measurement Message</i> or <i>Extended Pilot</i>
26			<i>Strength Measurement Message</i> initiating the handoff process
27			(see 2.6.6.2.5.2).
28			The base station shall set this field to the pilot detection
29			threshold, expressed as an unsigned binary number equal to
30			$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.
31	T_DROP	-	Pilot drop threshold.
32			This value is used by the mobile station to start a handoff
33			drop timer for pilots in the Active Set and the Candidate Set
34			(see 2.6.6.2.3).
35			The base station shall set this field to the pilot drop threshold,
36			expressed as an unsigned binary number equal to
37			$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.

1	T_COMP	-	Active Set versus Candidate Set comparison threshold.
2			The mobile station transmits a <i>Pilot Strength Measurement</i>
3			<i>Message</i> or an <i>Extended Pilot Strength Measurement Message</i>
4			when the strength of a pilot in the Candidate Set exceeds
5			that of a pilot in the Active Set by this margin (see
6			2.6.6.2.5.2).
7			The base station shall set this field to the threshold
8			Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.
9	T_TDROP	-	Drop timer value.
10			Timer value after which an action is taken by the mobile
11			station for a pilot that is a member of the Active Set or
12			Candidate Set, and whose strength has not become greater
13			than T_DROP. If the pilot is a member of the Active Set, a
14			<i>Pilot Strength Measurement Message</i> or an <i>Extended Pilot</i>
15			<i>Strength Measurement Message</i> is issued. If the pilot is a
16			member of the Candidate Set, it will be moved to the Neighbor
17			Set.
18			The base station shall set this field to the T_TDROP value
19			shown in Table 2.6.6.2.3-1 corresponding to the drop timer
20			value to be used by the mobile station.
21	NGHBR_MAX_AGE	-	Maximum age for retention of Neighbor Set members.
22			The mobile station drops neighbor set members whose AGE
23			count exceeds this field.
24			The base station shall set this field to the Neighbor Set
25			maximum age retention value (see 2.6.6.2.6.3).
26	P_REV	-	Protocol revision level.
27			The base station shall set this field to the base station
28			protocol revision level.
29	SOFT_SLOPE	-	The slope in the inequality criterion for adding a pilot to the
30			Active Set, or dropping a pilot from the Active Set (see
31			2.6.6.2.3 and 2.6.6.2.5.2).
32			The base station shall set this field as an unsigned binary
33			number.
34	ADD_INTERCEPT	-	The intercept in the inequality criterion for adding a pilot to
35			the Active Set (see 2.6.6.2.5.2).
36			The base station shall set this field as a two's complement
37			signed binary number, in units of dB.
38	DROP_INTERCEPT	-	The intercept in the inequality criterion for dropping a pilot
39			from the Active Set (see 2.6.6.2.3).

1		The base station shall set this field as a two's complement
2		signed binary number, in units of dB.
3	PACKET_ZONE_ID	- Packet data services zone identifier.
4		If the base station supports a packet data service zone, the
5		base station shall set this field to its non-zero packet data
6		services zone identifier.
7		If the base station does not support a packet data service
8		zone, the base station shall set this field to '00000000'.
9	EXTENSION	- Indicator that extension fields are present.
10		If Reverse Supplemental Code Channel or Reverse Supple-
11		mental Channel system parameters are included in this
12		message, the base station shall set this field to '1'; otherwise,
13		the base station shall set this field to '0'.
14	T_MULCHAN	- <i>Supplemental Channel Request Message</i> pilot strength reporting
15		offset.
16		If EXTENSION is set to '1', the base station shall include this
17		field and set this field to the threshold offset that the mobile
18		station is to use when reporting neighbor pilot strength
19		measurements in a <i>Supplemental Channel Request Message</i> .
20		The mobile station is to interpret this field as an offset to
21		T_ADD ranging from 0.5 dB (corresponding to T_MULCHAN =
22		'000') to 4.0 dB (corresponding to T_MULCHAN = '111') in 0.5
23		dB increments.
24	BEGIN_PREAMBLE	- Number of preamble frames on Reverse Supplemental Code
25		Channels at the beginning of transmission on Reverse
26		Supplemental Code Channel.
27		If EXTENSION is set to '1', the base station shall include this
28		field and set this field to the number of Reverse Supplemental
29		Code Channel preamble frames that the mobile station is to
30		send when beginning transmission on Reverse Supplemental
31		Code Channels.
32	RESUME_PREAMBLE	- Number of preamble frames on Reverse Supplemental Code
33		Channels at the resumption of transmission.
34		If EXTENSION is set to '1', the base station shall include this
35		field and set this field to the number of Reverse Supplemental
36		Code Channel preamble frames that the mobile station is to
37		send when resuming transmission on a Reverse
38		Supplemental Code Channel following an autonomous
39		suspension of transmission on an allocated Supplemental
40		Code Channel.

1	T_SLOTTED_INCL	-	Slotted timer value included indicator.
2			The base station shall set this field to '1' if the slotted timer
3			value is included; otherwise, the base station shall set this
4			field to '0'.
5	T_SLOTTED	-	Slotted timer value
6			If T_SLOTTED_INCL is set to '1', the base station shall
7			include this field and set this field to the value of the
8			T _{MS_Slotted} timer to be used by the mobile station in units of
9			80 ms.
10	ENC_SUPPORTED	-	Encryption fields included.
11			The base station shall set this field to '1' in the encryption
12			related fields are included; otherwise the base station shall
13			set this field to '0'.
14	SIG_ENCRYPT_SUP	-	Signaling Encryption supported indicator.
15			The base station shall include this field only
16			ENC_SUPPORTED is equal to '1'. If this field is included, this
17			field indicates which signaling encryption algorithms are
18			supported by the mobile station.
19			This field consists of the subfields shown in Table 2.7.1.3.2.1-
20			4.
21	UI_ENCRYPT_SUP	-	User information Encryption supported indicator.
22			The base station shall include this field only
23			ENC_SUPPORTED is equal to '1'. If this field is included, the
24			base station shall set this field to indicate the supported user
25			information encryption algorithms.
26			This field consists of the subfields shown in Table 2.7.1.3.2.4-
27			7.
28			The base station shall set each subfield to '1' if the
29			corresponding user information encryption algorithm is
30			supported by the base station; otherwise, the base station
31			shall set the subfield to '0'.
32			
33			

3.7.3.3.2.8 Neighbor List Update Message

MSG_TAG: NLUM

Field	Length (bits)
PILOT_INC	4

One to 20 occurrences of the following field:

NGHBR_PN	9
----------	---

PILOT_INC - Pilot PN sequence offset index increment.

The mobile station searches for Remaining Set pilots at pilot PN sequence offset index values that are multiples of this value.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that the mobile station is to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

NGHBR_PN - Neighbor pilot PN sequence offset index.

The base station shall include one occurrence of this field for each pilot in its neighbor list. The base station shall set this field to the pilot's PN sequence offset, in units of 64 PN chips. The base station shall include no more than 20 occurrences of this field.

3.7.3.3.2.9 Send Burst DTMF Message

MSG_TAG: BDTMFM

Field	Length (bits)
NUM_DIGITS	8
DTMF_ON_LENGTH	3
DTMF_OFF_LENGTH	3

NUM_DIGITS occurrences of the following field:

DIGIT _i	4
--------------------	---

CON_REF_INCL	1
CON_REF	0 or 8

NUM_DIGITS - Number of DTMF digits.

The base station shall set this field to the number of DTMF digits included in this message.

DTMF_ON_LENGTH - DTMF pulse width code.

The base station shall set this field to the DTMF_ON_LENGTH value shown in Table 2.7.2.3.2.7-1 corresponding to the requested pulse width of the DTMF pulse to be generated by the mobile station.

DTMF_OFF_LENGTH - DTMF interdigit interval code.

The base station shall set this field to the DTMF_OFF_LENGTH value shown in Table 2.7.2.3.2.7-2 corresponding to the requested minimum interdigit interval between DTMF pulses to be generated by the mobile station.

DIGIT_i - DTMF digit.

The base station shall include one occurrence of this field for each DTMF digit to be generated by the mobile station. The base station shall set each occurrence of this field to the code value shown in Table 2.7.1.3.2.4-4 corresponding to the dialed digit.

CON_REF_INCL - Connection reference included indicator.

1 The base station shall set this field to '1' if the connection
2 reference field is included in this message; otherwise, it
3 shall set this field to '0'.

4 CON_REF – Connection reference.

5 If the CON_REF_INCL field is set to '0', the base station shall
6 omit this field; otherwise, the base station shall include this
7 field and shall set it to the value of the connection reference
8 assigned to the service option connection of the call, to which
9 this message corresponds.

3.7.3.3.2.10 Power Control Parameters Message

MSG_TAG: PCNPM

Field	Length (bits)
PWR_REP_THRESH	5
PWR_REP_FRAMES	4
PWR_THRESH_ENABLE	1
PWR_PERIOD_ENABLE	1
PWR_REP_DELAY	5

PWR_REP_THRESH - Power control reporting threshold.

The base station shall set this field to the number of bad frames (see [2]) to be received in a measurement period on the channel which carries the Power Control Subchannel before the mobile station is to generate a *Power Measurement Report Message* (see 2.6.4.1.1). If the base station sets PWR_THRESH_ENABLE to '1', it shall not set this field to '00000'.

PWR_REP_FRAMES - Power control reporting frame count.

The base station shall set this field to the value such that the number given by

$$\lfloor 2^{(PWR_REP_FRAMES/2)} \times 5 \rfloor \text{ frames}$$

is the number of frames over which the mobile station is to count frame errors.

PWR_THRESH_ENABLE - Threshold report mode indicator.

If the mobile station is to generate threshold *Power Measurement Report Messages*, the base station shall set this field to '1'. If the mobile station is not to generate threshold *Power Measurement Report Messages*, the base station shall set this field to '0'.

PWR_PERIOD_ENABLE - Periodic report mode indicator.

If the mobile station is to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '1'. If the mobile station is not to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '0'.

1 PWR_REP_DELAY - Power report delay.

2 The period that the mobile station waits following a *Power*

3 *Measurement Report Message* before restarting frame counting

4 for power control purposes.

5 The base station shall set this field to the power report delay

6 value, in units of 4 frames (see 2.6.4.1.1).

7

1 3.7.3.3.2.11 Retrieve Parameters Message

2 MSG_TAG: RTPM

3

Field	Length (bits)
-------	---------------

One or more occurrences of the following field:

PARAMETER_ID	16
--------------	----

4

5 PARAMETER_ID - Parameter identification.

6 The base station can request the mobile station to report any
7 parameter specified in Table E-1.8 The base station shall include one occurrence of this field for
9 each parameter requested. The base station shall set this
10 field to the parameter identification number specified in
11 Table E-1 corresponding to the parameter requested.

12

3.7.3.3.2.12 Set Parameters Message

MSG_TAG: STPM

Field	Length (bits)
-------	---------------

One or more occurrences of the following record:

PARAMETER_ID	16
PARAMETER_LEN	10
PARAMETER	PARAMETER_LEN + 1

The base station shall include one occurrence of the following three-field record for each parameter to be set.

PARAMETER_ID - Parameter identification.

The base station shall set this field to the identification shown in Table E-1 corresponding to the settable parameter to be set.

PARAMETER_LEN - Parameter length.

The base station shall set this field to the length shown in Table E-1 corresponding to the parameter to be set.

PARAMETER - Parameter value.

The base station shall set this field to the value of the parameter specified by the PARAMETER_ID field.

1 3.7.3.3.2.13 SSD Update Message

2 MSG_TAG: SSDUM

3

Field	Length (bits)
RANDSSD	56

4

5 RANDSSD - Random data.

6 The base station shall set this field as specified in 2.3.12.1.5.

7

3.7.3.3.2.14 Flash With Information Message

MSG_TAG: FWIM

Field	Length (bits)
One or more occurrences of the following record:	
RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

The base station shall include occurrences of the following three-field record as specified in 3.7.5.

RECORD_TYPE - Information record type.

The base station shall set this field as specified in 3.7.5.

RECORD_LEN - Information record length.

The base station shall set this field to the number of octets in the type-specific fields included in this record.

Type-specific fields - Type-specific fields.

The base station shall include type-specific fields as specified in 3.7.5.

3.7.3.3.2.15 Mobile Station Registered Message

MSG_TAG: MSRM

Field	Length (bits)
SID	15
NID	16
REG_ZONE	12
TOTAL_ZONES	3
ZONE_TIMER	3
MULT_SIDS	1
MULT_NIDS	1
BASE_LAT	22
BASE_LONG	23
REG_DIST	11

SID - System identification.

The base station shall set this field to the system identification number for this system.

NID - Network identification.

This field serves as a sub-identifier of a system as defined by the owner of the SID.

The base station shall set this field to the network identification number for this network. The NID value of 65,535 is reserved.

REG_ZONE - Registration zone.

The base station shall set this field to its registration zone number (see 2.6.5.1.5).

TOTAL_ZONES - Number of registration zones to be retained.

The base station shall set this field to the number of registration zones the mobile station is to retain for purposes of zone-based registration (see 2.6.5.1.5).

If zone-based registration is to be disabled, the base station shall set this field to '000'.

1	ZONE_TIMER	-	Zone timer length.
2			The base station shall set this field to the ZONE_TIMER value
3			shown in Table 3.7.2.3.2.1-1 corresponding to the length of
4			the zone registration timer to be used by mobile stations.
5	MULT_SIDS	-	Multiple SID storage indicator.
6			If mobile stations may store entries of SID_NID_LIST
7			containing different SIDs, the base station shall set this field
8			to '1'; otherwise the base station shall set this field to '0'.
9	MULT_NIDS	-	Multiple NID storage indicator.
10			If mobile stations may store multiple entries of SID_NID_LIST
11			having the same SID (with different NIDs), the base station
12			shall set this field to '1'; otherwise the base station shall set
13			this field to '0'.
14	BASE_LAT	-	Base station latitude.
15			The base station shall set this field to its latitude in units of
16			0.25 second, expressed as a two's complement signed number
17			with positive numbers signifying North latitudes. The base
18			station shall set this field to a value in the range -1296000 to
19			1296000 inclusive (corresponding to a range of -90° to +90°).
20	BASE_LONG	-	Base station longitude.
21			The base station shall set this field to its longitude in units of
22			0.25 second, expressed as a two's complement signed number
23			with positive numbers signifying East longitude. The base
24			station shall set this field to a value in the range -2592000 to
25			2592000 inclusive (corresponding to a range of -180° to
26			+180°).
27	REG_DIST	-	Registration distance.
28			If mobile stations are to perform distance-based registration,
29			the base station shall set this field to the non-zero "distance"
30			beyond which the mobile station is to re-register (see
31			2.6.5.1.4). If mobile stations are not to perform distance-
32			based registration, the base station shall set this field to 0.
33			

3.7.3.3.2.16 Status Request Message

MSG_TAG: STRQM

Field	Length (bits)
QUAL_INFO_TYPE	8
QUAL_INFO_LEN	3
Type-specific fields	$8 \times \text{QUAL_INFO_LEN}$
NUM_FIELDS	4

NUM_FIELDS occurrences of the following field:

RECORD_TYPE	8
-------------	---

QUAL_INFO_TYPE - Qualification information type.

The base station shall set this field to the value shown in Table 3.7.2.3.2.15-1 to show the inclusion of qualification information in the type-specific fields.

QUAL_INFO_LEN - Qualification information length.

The base station shall set this field to the number of octets included in the type-specific fields of the qualification information.

Type-specific fields - Type-specific fields.

The base station shall set these fields to the qualification information according to the QUAL_INFO_TYPE field.

If QUAL_INFO_TYPE is equal to '00000000', the type-specific fields are omitted.

If QUAL_INFO_TYPE is equal to '00000001', the base station shall use the following fixed-length format for the type-specific fields:

Type-specific Field	Length (bits)
BAND_CLASS	5
RESERVED	3

If QUAL_INFO_TYPE is equal to '00000010', the base station shall use the following fixed-length format for the type-specific fields:

Type-specific Field	Length (bits)
BAND_CLASS	5
OP_MODE	8
RESERVED	3

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

OP_MODE - Operating mode.

The base station shall set this field as shown in Table 3.7.2.3.2.15-3 to specify the operating mode qualification information.

RESERVED - Reserved bits.

The base station shall set this field to '000'.

NUM_FIELDS - Number of requested record fields in this message.

The base station shall set this field to the number of occurrences of RECORD_TYPE in this message.

The base station shall only request the status information records qualified by the included qualification information in this message. The base station shall include one occurrence of the following field for each information record that is requested:

RECORD_TYPE - Information record type.

The base station shall set this field to the record type value shown in Table 3.7.2.3.2.15-2 corresponding to the information record requested.

1 3.7.3.3.2.17 Extended Handoff Direction Message

2 MSG_TAG: EHDM

3

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
HDM_SEQ	2
SEARCH_INCLUDED	1
SRCH_WIN_A	0 or 4
T_ADD	0 or 6
T_DROP	0 or 6
T_COMP	0 or 4
T_TDROP	0 or 4
HARD_INCLUDED	1
FRAME_OFFSET	0 or 4
PRIVATE_LCM	0 or 1
RESET_L2	0 or 1
RESET_FPC	0 or 1
SERV_NEG_TYPE	0 or 1
ENCRYPT_MODE	0 or 2
NOM_PWR_EXT	0 or 1
NOM_PWR	0 or 4
NUM_PREAMBLE	0 or 3
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11

4

(continues on next page)

5

Field	Length (bits)
ADD_LENGTH	3
Additional fields	8 × ADD_LENGTH

One or more occurrences of the following record:

PILOT_PN	9
PWR_COMB_IND	1
CODE_CHAN	8

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the handoff is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

HDM_SEQ - *Extended Handoff Direction Message* sequence number.

This field is used by the mobile station in the *Power Measurement Report Message* to identify the order in which the reported pilot strengths are sent.

The base station shall set this field as specified in 2.6.6.2.2.2.

SEARCH_INCLUDED - Pilot search parameters included.

If the mobile station is to change its pilot search parameters, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

SRCH_WIN_A - Search window size for the Active Set and Candidate Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field SRCH_WIN_A and set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the number of PN chips that the mobile station is to search for pilots in the Active Set and Candidate Set; otherwise, the base station shall omit this field.

1 T_ADD - Pilot detection threshold.

2 This value is used by the mobile station to trigger the
3 transfer of a pilot from the Neighbor Set or Remaining Set to
4 the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
5 the *Pilot Strength Measurement Message* or *Extended Pilot*
6 *Strength Measurement Message* initiating the handoff process
7 (see 2.6.6.2.5.2).

8 If SEARCH_INCLUDED is set to '1', the base station shall
9 include the field T_ADD and set this field to the pilot
10 detection threshold, expressed as an unsigned binary number
11 equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station
12 shall omit this field.

13 T_DROP - Pilot drop threshold.

14 This value is used by mobile stations to start a handoff drop
15 timer for pilots in the Active Set and the Candidate Set (see
16 2.6.6.2.3).

17 If SEARCH_INCLUDED is set to '1', the base station shall
18 include the field T_DROP and set this field to the pilot drop
19 threshold, expressed as an unsigned binary number equal to
20 $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit
21 this field.

22 T_COMP - Active Set versus Candidate Set comparison threshold.

23 The mobile station transmits a *Pilot Strength Measurement*
24 *Message* or an *Extended Pilot Strength Measurement Message*
25 when the strength of a pilot in the Candidate Set exceeds
26 that of a pilot in the Active Set by this margin (see
27 2.6.6.2.5.2).

28 If SEARCH_INCLUDED is set to '1', the base station shall
29 include the field T_COMP and set this field to the threshold
30 Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB;
31 otherwise, the base station shall omit this field.

32 T_TDROP - Drop timer value.

33 Timer value after which an action is taken by the mobile
34 station for a pilot that is a member of the Active Set or
35 Candidate Set, and whose strength has not become greater
36 than T_DROP. If the pilot is a member of the Active Set, a
37 *Pilot Strength Measurement Message* or an *Extended Pilot*
38 *Strength Measurement Message* is issued. If the pilot is a
39 member of the Candidate Set, it will be moved to the Neighbor
40 Set.

1		If SEARCH_INCLUDED is set to '1', the base station shall
2		include the field T_TDROP and set this field to the T_TDROP
3		value shown in Table 2.6.6.2.3-1 corresponding to the drop
4		timer value to be used by the mobile station; otherwise, the
5		base station shall omit this field.
6	HARD_INCLUDED	- Hard handoff parameters included.
7		If the mobile station is to change FRAME_OFFSET,
8		PRIVATE_LCM, ENCRYPT_MODE, SERV_NEG_TYPE,
9		NOM_PWR_EXT, NUM_PREAMBLE, NOM_PWR, BAND_CLASS,
10		or CDMA_FREQ, or the mobile station is to perform a reset of
11		the acknowledgment procedures, or the mobile station is to
12		reset Forward Traffic Channel power control counters, the
13		base station shall set this field to '1'; otherwise, the base
14		station shall set this field to '0'.
15	FRAME_OFFSET	- Frame offset.
16		The Forward and Reverse Traffic Channel frames are delayed
17		$\text{FRAME_OFFSET} \times 1.25$ ms relative to system timing (see [2]).
18		If HARD_INCLUDED is set to '1', the base station shall include
19		the field FRAME_OFFSET and set it to the Forward and
20		Reverse Traffic Channel frame offset; otherwise, the base
21		station shall omit this field.
22	PRIVATE_LCM	- Private long code mask indicator.
23		This field is used to change the long code mask after a hard
24		handoff.
25		If HARD_INCLUDED is set to '1', the base station shall include
26		the field PRIVATE_LCM and set it as described below;
27		otherwise, the base station shall omit this field.
28		If the private long code mask is to be used after the handoff,
29		the base station shall set this field to '1'; otherwise, the base
30		station shall set this field to '0'.
31	RESET_L2	- Reset acknowledgment procedures command.
32		This field is used to reset acknowledgment processing in the
33		mobile station.
34		If HARD_INCLUDED is set to '1', the base station shall include
35		the field RESET_L2 and set it as described below; otherwise,
36		the base station shall omit this field.
37		If the field is included and the mobile station is to reset its
38		acknowledgment procedures, the base station shall set this
39		field to '1'; otherwise, the base station shall set this field to
40		'0'.

1	RESET_FPC	-	Reset Forward Traffic Channel power control.
2			This field is used to reset the Forward Traffic Channel power
3			control counters.
4			If HARD_INCLUDED is set to '1', the base station shall include
5			the field RESET_FPC and set it as described below; otherwise,
6			the base station shall omit this field.
7			The base station shall set this field to '0' if the Forward Traffic
8			Channel power control counters are to be maintained after
9			completion of the handoff. If the counters are to be initialized
10			as specified in 2.6.4.1.1.1, then the base station shall set this
11			field to '1'.
12	SERV_NEG_TYPE	-	Service negotiation type.
13			If HARD_INCLUDED is set to '1', the base station shall include
14			the field SERV_NEG_TYPE and set it as described below;
15			otherwise, the base station shall omit this field.
16			If the mobile station is to use service negotiation, the base
17			station shall set this field to '1'. If the mobile station is to use
18			service option negotiation, the base station shall set this field
19			to '0'.
20	ENCRYPT_MODE	-	Message encryption mode.
21			If HARD_INCLUDED is set to '1', the base station shall include
22			the field ENCRYPT_MODE and set it to the ENCRYPT_MODE
23			value shown in Table 3.7.2.3.2.8-2 corresponding to the
24			encrypting mode that is to be used for messages sent on the
25			Forward and Reverse Traffic Channels, as specified
26			in 2.3.12.2; otherwise, the base station shall omit this field.
27	NOM_PWR_EXT	-	Extended nominal transmit power.
28			If HARD_INCLUDED is set to '1', the base station shall include
29			this field and set it as described below; otherwise, the base
30			station shall omit this field.
31			If this field is included, a Band Class 0 base station shall set
32			this field to '0'.
33			If this field is included, a Band Class 1 base station shall set
34			this field to '1' if the correction factor to be used by the mobile
35			station in the open loop power estimate is between -24 dB
36			and -9 dB inclusive; otherwise (the correction factor is in the
37			range -8 dB to 7 dB inclusive), the base station shall set this
38			field to '0'.
39	NOM_PWR	-	Nominal transmit power offset.

If HARD_INCLUDED is set to '1', the base station shall include the field NOM_PWR and set it to the correction factor to be used by the mobile station in the open loop power estimate, expressed as a two's complement value in units of 1 dB (see [2]); otherwise, the base station shall omit this field.

NUM_PREAMBLE - Traffic Channel preamble length.

If HARD_INCLUDED is set to '0', the base station shall omit the NUM_PREAMBLE field; otherwise, the base station shall include this field and set it to the length of Traffic Channel preamble that the mobile station is to send when performing a handoff; as follows:

If, after the handoff, radio configuration 1 or radio configuration 2 is to be used, the base station shall set NUM_PREAMBLE to the Traffic Channel preamble length in 20 ms units; otherwise, the base station shall set NUM_PREAMBLE to the value shown in Table 3.7.3.3.2.17-1 corresponding to the Traffic Channel preamble length in 1.25 ms units.

Table 3.7.3.3.2.17-1. Dedicated Traffic Channel Preamble Length

NUM_PREAMBLE	Preamble Length in 1.25 ms Increments
0	0
1	2
2	4
3	6
4	8
5	10
6	12
7	16

BAND_CLASS - Band class.

If HARD_INCLUDED is set to '1', the base station shall include the field BAND_CLASS and set it to the CDMA band class corresponding to the CDMA frequency assignment for the CDMA Channel as specified in [30]; otherwise, the base station shall omit this field.

CDMA_FREQ - Frequency assignment.

If HARD_INCLUDED is set to '1', the base station shall include the field CDMA_FREQ and set it to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA frequency assignment for the CDMA Channel as specified in [2]; otherwise, the base station shall omit this field.

ADD_LENGTH - Number of octets in the additional fields.

The base station shall set this field to the number of octets included in the Additional fields. If Additional fields are not included in this message, the base station shall set this field to '000'.

Additional fields - Additional fields.

If the ADD_LENGTH field is not equal to '000', the base station shall include the following fields as additional fields.

Field	Length (bits)
P_REV	8

P_REV - Protocol revision level.

The base station shall set this field to the base station protocol revision level that the mobile station is to use after completion of the handoff.

The base station shall include one occurrence of the following three-field record for each member of the mobile station's new Active Set.

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this pilot in units of 64 PN chips.

PWR_COMB_IND - Power control symbol combining indicator.

If the Forward Traffic Channel associated with this pilot will carry the same closed-loop power control subchannel bits as that of the previous pilot in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. For the first occurrence of this record in the message, the base station shall set this field to '0'.

CODE_CHAN - Code channel index.

1 The base station shall set this field to the code channel index
2 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to
3 use as the Forward Fundamental Channel associated with this
4 pilot. If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is
5 used, the base station shall set this field in the range 1 to 63
6 inclusive. If Radio Configuration 4, 6 or 8 is used, the base
7 station shall set this field in the range 1 to 127 inclusive. If Radio
8 Configuration 7 or 9 is used, the base station shall set this field
9 in the range 1 to 255 inclusive.
10

3.7.3.3.2.18 Service Request Message

MSG_TAG: SRQM

Field	Length (bits)
SERV_REQ_SEQ	3
REQ_PURPOSE	4

Zero or one occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

SERV_REQ_SEQ - Service request sequence number.

The base station shall set this field to the service request sequence number pertaining to this request message as specified in 3.6.4.1.2.1.1.

REQ_PURPOSE - Request purpose.

The base station shall set this field to the appropriate REQ_PURPOSE code from Table 3.7.3.3.2.18-1 to indicate the purpose of the message.

Table 3.7.3.3.2.18-1. REQ_PURPOSE Codes

REQ_PURPOSE (binary)	Meaning
0001	Indicates that the purpose of this message is to reject a proposed service configuration.
0010	Indicates that the purpose of this message is to propose a service configuration.
All other REQ_PURPOSE codes are reserved.	

If the REQ_PURPOSE code is set to '0010', the base station shall include one occurrence of the following three-field record to specify the proposed service configuration; otherwise, the base station shall not include the following record.

1	RECORD_TYPE	-	Information record type.
2			The base station shall set this field to the record type value
3			shown in Table 3.7.5-1 corresponding to the Service
4			Configuration information record.
5	RECORD_LEN	-	Information record length.
6			The base station shall set this field to the number of octets
7			included in the type-specific fields of the Service
8			Configuration information record.
9	Type-specific fields	-	Type-specific fields.
10			The base station shall set these fields as specified in 3.7.5.7
11			for the Service Configuration information record.
12			

3.7.3.3.2.19 Service Response Message

MSG_TAG: SRPM

Field	Length (bits)
SERV_REQ_SEQ	3
RESP_PURPOSE	4

Zero or one occurrence of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

SERV_REQ_SEQ - Service request sequence number.

The base station shall set this field to the value of the SERV_REQ_SEQ field in the *Service Request Message* to which it is responding.

RESP_PURPOSE - Response purpose.

The base station shall set this field to the appropriate RESP_PURPOSE code from Table 3.7.3.3.2.19-1 to indicate the purpose of the message.

Table 3.7.3.3.2.19-1. RESP_PURPOSE Codes

RESP_PURPOSE (binary)	Meaning
0001	Indicates that the purpose of the message is to reject a proposed service configuration.
0010	Indicates that the purpose of the message is to propose a service configuration.
All other RESP_PURPOSE codes are reserved.	

If the RESP_PURPOSE code is set to '0010', the base station shall include one occurrence of the following three-field record to specify the proposed service configuration; otherwise, the base station shall not include the following record.

1	RECORD_TYPE	-	Information record type.
2			The base station shall set this field to the record type value
3			shown in Table 3.7.5-1 corresponding to the Service
4			Configuration information record.
5	RECORD_LEN	-	Information record length.
6			The base station shall set this field to the number of octets
7			included in the type-specific fields of the Service
8			Configuration information record.
9	Type-specific fields	-	Type-specific fields.
10			The base station shall set these fields as specified in 3.7.5.7
11			for the Service Configuration information record.
12			

1 3.7.3.3.2.20 Service Connect Message

2 MSG_TAG: SCM

3

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
SERV_CON_SEQ	3
RESERVED	4
USE_OLD_SERV_CONFIG	1

Zero or one occurrence of the following three-field record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

Zero or one occurrence of the following three-field record:

RECORD_TYPE	8
RECORD_LEN	8
Type -specific fields	8 × RECORD_LEN

CC_INFO_INCL	0 or 1
NUM_CALLS_ASSIGN	0 or 8

NUM_CALLS_ASSIGN occurrences of the following variable length record:

CON_REF	8
RESPONSE_IND	1
TAG	0 or 4
BYPASS_ALERT_ANSWER	0 or 1

4

5 USE_TIME - Use action time indicator.

6 This field indicates whether an explicit action time is
7 specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the specified service configuration is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

SERV_CON_SEQ - Connect sequence number.

The base station shall set this field to the connect sequence number pertaining to this connect message as specified in 3.6.4.1.2.1.2.

RESERVED - Reserved bits.

The base station shall set this field to '00000'.

USE_OLD-

_SERV_CONFIG - Use stored service configuration indicator.

This field may be used by the base station to instruct the mobile station to use the stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record) if the 16-bit CRC computed over the new service configuration (see 2.6.11) matches the SYNC_ID that the mobile station has reported in the *Origination Message* or *Page Response Message*.

If MOB_P_REV is less than seven or if a service configuration has been sent successfully to the mobile station upon entering the *Traffic Channel Substate*, the base station shall set this field to '0'; otherwise, the mobile station shall set this field as follows:

If the base station is to direct the mobile station to use the stored service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record), the base station shall set this field to '1'; otherwise the base station shall set this field to '0'.

If USE_OLD_SERV_CONFIG is equal to '1', the base station shall omit the following record; otherwise the base station shall include one occurrence of the following three-field record to specify the service configuration.

1	RECORD_TYPE	-	Information record type.
2			The base station shall set this field to the record type value
3			shown in Table 3.7.5-1 corresponding to the Service
4			Configuration information record.
5	RECORD_LEN	-	Information record length.
6			The base station shall set this field to the number of octets
7			included in the type-specific fields of the Service
8			Configuration information record.
9	Type-specific fields	-	Type-specific fields.
10			The base station shall set these fields as specified in 3.7.5.7
11			for the Service Configuration information record.
12			
13	If USE_OLD_SERV_CONFIG is equal to '1', the base station shall omit the following record;		
14	otherwise the base station shall include one occurrence of the following three-field record		
15	to specify the non-negotiable service configuration parameters.		
16	RECORD_TYPE	-	Information record type.
17			The base station shall set this field to the record type value
18			shown in Table 3.7.5-1 corresponding to the Non-Negotiable
19			Service Configuration information record.
20	RECORD_LEN	-	Information record length.
21			The base station shall set this field to the number of octets
22			included in the type-specific fields of the Non-Negotiable
23			Service Configuration information record.
24	Type-specific fields	-	Type-specific fields.
25			The base station shall set these fields as specified in 3.7.5.20
26			for the Non-Negotiable Service Configuration information
27			record.
28	CC_INFO_INCL	-	Call Control information included indicator.
29			If the USE_OLD_SERV_CONFIG field is set to '1', the base
30			station shall omit this field; otherwise, the base station shall
31			include this field and set it as follows:
32			The base station shall set this field to '1' if Call Control
33			related parameters (to assign new call(s)) are included in this
34			message; otherwise, the base station shall set this field to '0'.
35	NUM_CALLS_ASSIGN	-	Number of call assignments.
36			If the CC_INFO_INCL field is not included or is included but is

set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the number of new call assignments included in this message.

The base station shall include NUM_CALLS_ASSIGN occurrences of the following variable length record.

CON_REF - Connection reference.

The base station shall set this field to the connection reference of the service option connection corresponding to this call.

RESPONSE_IND - Response indicator.

The base station shall set this field to '1' if this call assignment is a response to an *Enhanced Origination Message* from the mobile station; otherwise, the base station shall set this field to '0'.

TAG - Transaction identifier.

If the RESPONSE_IND field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the value of the TAG field received in the *Enhanced Origination Message* to which this call assignment is the response.

BYPASS_ALERT-

_ANSWER - Bypass alert indicator.

If the RESPONSE_IND field is set to '1', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

If the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile Station Answer Substate* for this call, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

3.7.3.3.2.21 Service Option Control Message

MSG_TAG: SOCM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
CON_REF	8
SERVICE_OPTION	16
CTL_REC_LEN	8
Type -specific fields	$8 \times \text{CTL_REC_LEN}$

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

CON_REF - Service option connection reference.

The base station shall set this field to the reference for the service option connection.

SERVICE_OPTION - Service option.

The base station shall set this field to the service option in use with the service option connection.

CTL_REC_LEN - Service option control record length.

The base station shall set this field to the number of octets included in the type-specific fields of this service option control record.

1 Type-specific fields - Type-specific fields.
2
3 The base station shall set these fields as specified by the
4 requirements for the service option, which are defined
5 external to this specification. See relevant service option
6 specification.

3.7.3.3.2.22 TMSI Assignment Message

MSG_TAG: TASM

Field	Length (bits)
TMSI_ZONE_LEN	4
TMSI_ZONE	$8 \times \text{TMSI_ZONE_LEN}$
TMSI_CODE	32
TMSI_EXP_TIME	24

TMSI_ZONE_LEN - TMSI zone length.

The base station shall set this field to the number of octets included in the TMSI_ZONE. The base station shall set this field to a value in the range 1 to 8 inclusive.

TMSI_ZONE - TMSI zone.

The base station shall set this field to the TMSI zone number, as specified in [27].

TMSI_CODE - Temporary mobile station identity code.

The base station shall set this field to the 32-bit TMSI code assigned to the mobile station.

If the base station is to deassign the TMSI, the base station shall set all the bits in this field to '1'.

TMSI_EXP_TIME - TMSI expiration time.

The base station shall set this field to the System Time in the units of $80 \text{ ms} \times 2^{12}$ when the TMSI is to expire.

3.7.3.3.2.23 Service Redirection Message

MSG_TAG: SRDM

Field	Length (bits)
RETURN_IF_FAIL	1
DELETE_TMSI	1
REDIRECT_TYPE	1

One or more occurrences of the following field:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × RECORD_LEN

RETURN_IF_FAIL - Return if fail indicator.

The base station shall set this field to '1' if the mobile station is required to return to the system from which it is being redirected upon failure to obtain service using the redirection criteria specified in this message; otherwise, the base station shall set this field to '0'.

DELETE_TMSI - Delete TMSI indicator.

The base station shall set this field to '1' if the mobile station is required to delete the TMSI assigned to the mobile station; otherwise, the base station shall set this field to '0'.

REDIRECT_TYPE - Redirect indicator.

The base station shall set this field to the REDIRECT_TYPE value shown in Table 3.7.2.3.2.16-1 corresponding to the redirection type.

The base station shall include one occurrence of the following record:

RECORD_TYPE - Redirection record type.

The base station shall set this field to the RECORD_TYPE value shown in Table 3.7.2.3.2.16-2 corresponding to the type of redirection specified by this record.

RECORD_LEN - Redirection record length.

If RECORD_TYPE equals to '00000000', the base station shall set this field to '00000000'; otherwise, the base station shall set this field to the number of octets in the type-specific fields of this redirection record.

Type-specific fields - Redirection record type-specific fields.

The base station shall include type-specific fields based on the RECORD_TYPE of this redirection record.

If RECORD_TYPE is equal to '00000000', the base station shall not include the type-specific fields.

If RECORD_TYPE is equal to '00000001', the base station shall include the following fields:

Field	Length (bits)
EXPECTED_SID	15
IGNORE_CDMA	1
SYS_ORDERING	3
RESERVED	5

EXPECTED_SID - Expected SID.

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

IGNORE_CDMA - Ignore CDMA Available indicator.

The base station shall set this field to '1' to indicate that the mobile station is to ignore the *CDMA Capability Message* on the analog system to which it is being redirected. The base station shall set this field to '0' to indicate that the mobile station may discontinue service on the system to which it is being redirected if the mobile station receives a *CDMA Capability Message* with CDMA_AVAIL equal to '1', and the preferred mode of the mobile station is CDMA.

SYS_ORDERING - System ordering.

The base station shall set this field to the SYS_ORDERING value shown in Table 3.7.2.3.2.16-3 corresponding to the order in which the mobile station is to attempt to obtain service on an analog system.

RESERVED - Reserved bits.

The base station shall set this field to '00000'.

If RECORD_TYPE is equal to '00000010', the base station shall include the following fields:

Subfield	Length (bits)
BAND_CLASS	5
EXPECTED_SID	15
EXPECTED_NID	16
RESERVED	4
NUM_CHANS	4

NUM_CHANS occurrences of the following field:

CDMA_CHAN	11
-----------	----

RESERVED	0-7 (as needed)
----------	-----------------

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class, as specified in [30].

EXPECTED_SID - Expected SID.

If the base station is redirecting the mobile station to a specific system, the base station shall set this field to the SID of that system; otherwise, the base station shall set this field to 0.

EXPECTED_NID - Expected NID.

If the base station is redirecting the mobile station to a specific network, the base station shall set this field to the NID of that network; otherwise, the base station shall set this field to 65535.

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

NUM_CHANS - Number of CDMA Channels.

The base station shall set this field to the number of occurrences of the CDMA_CHAN field in this record.

1	CDMA_CHAN	-	CDMA Channel number.
2			For each CDMA Channel on which the mobile station is to
3			attempt to acquire a CDMA system, the base station shall
4			include one occurrence of this field specifying the associated
5			CDMA Channel number.
6	RESERVED	-	Reserved bits.
7			The base station shall add reserved bits as needed in order to
8			make the length of the entire record equal to an integer
9			number of octets. The base station shall set these bits to '0'.
10			

3.7.3.3.2.24 Supplemental Channel Assignment Message

MSG_TAG: SCAM

Field	Length (bits)
USE_RETRY_DELAY	1
RETRY_DELAY	0 or 8
REV_INCLUDED	1

Include the following record only if REV_INCLUDED is set to '1':

REV_DTX_DURATION	4
EXPL_REV_START_TIME	1
REV_START_TIME	0 or 6
USE_REV_DURATION	1
REV_DURATION	0 or 8
USE_REV_HDM_SEQ	1
REV_LINKED_HDM_SEQ	0 or 2
NUM_REV_CODES	3
USE_T_ADD_ABORT	1
USE_SCRM_SEQ_NUM	1
SCRM_SEQ_NUM	0 or 4
REV_PARS_INCLUDED	1
T_MULCHAN	0 or 3
BEGIN_PREAMBLE	0 or 3
RESUME_PREAMBLE	0 or 3

FOR_INCLUDED	1
--------------	---

(continues on next page)

1

Field	Length (bits)
-------	---------------

Include the following record only if FOR_INCLUDED is set to '1':

FOR_SUP_CONFIG	2
EXPL_FOR_START_TIME	1
FOR_START_TIME	0 or 6
USE_FOR_DURATION	1
FOR_DURATION	0 or 8
USE_FOR_HDM_SEQ	1
FOR_LINKED_HDM_SEQ	0 or 2

Include the following fields and records only if FOR_INCLUDED is set to '1' and FOR_SUP_CONFIG is set to '10' or '11':

NUM_SUP_PILOTS	3
NUM_FOR_SUP	3

Include NUM_SUP_PILOTS occurrences of the following record only if FOR_INCLUDED is set to '1' and FOR_SUP_CONFIG is set to '10' or '11':

PILOT_PN	9
EXPL_CODE_CHAN	1

If EXPL_CODE_CHAN is set to '1', for each PILOT_PN include NUM_FOR_SUP occurrences of the following field:

SUP_CODE_CHAN	0 or 8
---------------	--------

If EXPL_CODE_CHAN is set to '0', the following field is included:

BASE_CODE_CHAN	0 or 8
----------------	--------

2

3 **USE_RETRY_DELAY** - Assign or Retry Indicator.

4 The base station shall set this field to '1' to indicate that this
5 message contains a retry delay time; otherwise, the base
6 station shall set this field to '0' to indicate that no
7 RETRY_DELAY has been included.

8 **RETRY_DELAY** - *Supplemental Channel Request Message* retry delay.

If USE_RETRY_DELAY is set to '1', the base station shall include and set this field to the duration of the delay interval in units of 320 ms (4 frames) from the next 80 ms system time boundary during which the mobile station is not permitted to send a *Supplemental Channel Request Message*. The base station shall set RETRY_DELAY to '11111111' to indicate that the mobile station is to refrain from sending *Supplemental Channel Request Messages* indefinitely.

REV_INCLUDED - Reverse Supplemental Code Channel configuration indicator.

The base station shall set this field to '1' to indicate that this message contains assignment information for Reverse Supplemental Code Channels; otherwise, the base station shall set this field to '0'.

If REV_INCLUDED is set to '1', then the base station shall include the following fields, otherwise the base station shall omit the following fields:

REV_DTX_DURATION - Reverse Discontinuous Transmission Duration.

The base station shall set this field to the maximum duration of time in units of 20 ms that the mobile station is allowed to stop transmission on a Reverse Supplemental Code Channel within the reverse assignment duration. The base station shall set this field to '0000' if the mobile station is to stop using a Reverse Supplemental Code Channel once it has stopped transmitting on that Reverse Supplemental Channel. The base station shall set this field to '1111' if the mobile station is allowed to resume transmission on a Reverse Supplemental Code Channel at any time within the reverse assignment duration.

EXPL_REV_START_TIME - Explicit Reverse Supplemental Code Channel assignment start time indicator.

This field indicates whether a start time for the specified Reverse Supplemental Channel Assignment is specified in this message. If a REV_START_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. If EXPL_REV_START_TIME is set to '1', then the base station shall set USE_REV_HDM_SEQ to '0'.

REV_START_TIME - Explicit start time for Reverse Supplemental Code Channel assignment.

1			If EXPL_REV_START_TIME is included and set to '1', the base
2			station shall include and set this field to the System Time, in
3			units of 80 ms (modulo 64), at which the mobile station may
4			start transmitting on the specified number of Reverse
5			Supplemental Code Channels. If EXPL_REV_START_TIME is
6			omitted or set to '0', the base station shall omit this field.
7	USE_REV_DURATION	-	Use reverse duration indicator.
8			The base station shall set this field to '1' if the
9			REV_DURATION field is included in the message; otherwise,
10			the base station shall set this field to '0'. If the mobile station
11			is granted permission to transmit on Reverse Supplemental
12			Code Channels (i.e., NUM_REV_CODES is not '000') then a
13			value of '0' for this field indicates an infinite Reverse
14			Supplemental Code Channel assignment duration (i.e., the
15			mobile station may transmit on Reverse Supplemental Code
16			Channels until it receives a subsequent <i>Supplemental</i>
17			<i>Channel Assignment Message</i> or a <i>General Handoff Direction</i>
18			<i>Message</i> that specifies an updated REV_DURATION or an
19			updated value of NUM_REV_CODES).
20	REV_DURATION	-	Duration of Reverse Supplemental Code Channel
21			assignment.
22			The base station shall include this field only if the
23			USE_REV_DURATION field is included and set to '1'. If this
24			field is included, this field indicates the allocated duration, in
25			units of 80 ms, during which the mobile station may transmit
26			on Reverse Supplemental Code Channels.
27	USE_REV_HDM_SEQ	-	Use Reverse <i>General Handoff Direction Message</i> sequence
28			number indicator.
29			The base station shall set this field to '1' to indicate that this
30			Reverse Supplemental Code Channel assignment shall take
31			effect at the same time as a corresponding <i>General Handoff</i>
32			<i>Direction Message</i> ; otherwise, the base station shall set this
33			field to '0'. If USE_REV_HDM_SEQ is set to '1', then the base
34			station shall set EXPL_REV_START_TIME to '0'.
35	REV_LINKED_HDM_SEQ	-	Sequence number of the reverse linked <i>General Handoff</i>
36			<i>Direction Message</i> .
37			If USE_REV_HDM_SEQ is included and set to '1', then the base
38			station shall set this field to the sequence number of the
39			<i>General Handoff Direction Message</i> (HDM_SEQ) to which this
40			Reverse Supplemental Code Channel assignment is linked.
41	NUM_REV_CODES	-	Number of Reverse Supplemental Code Channels.

1		The base station shall set this field to the number of Reverse
2		Supplemental Code Channels that are assigned to the mobile
3		station.
4	USE_T_ADD_ABORT	- Reverse use T_ADD abort indicator.
5		The base station shall set this field to '1' to indicate that the
6		mobile station is to utilize the T_ADD Reverse Supplemental
7		Code Channel abort feature for this reverse assignment;
8		otherwise, the base station shall set this field to '0'.
9	USE_SCRM_SEQ_NUM	- Use <i>Supplemental Channel Request Message</i> sequence number
10		indicator.
11		The base station shall set this field to '1' if the
12		SCRM_SEQ_NUM field is included in this message; otherwise,
13		the base station shall set this field to '0'.
14	SCRM_SEQ_NUM	- <i>Supplemental Channel Request Message</i> sequence number.
15		If USE_SCRM_SEQ_NUM is set to '1', the base station shall set
16		this field to the sequence number corresponding to the
17		SCRM_SEQ_NUM field in a <i>Supplemental Channel Request</i>
18		<i>Message</i> to which the mobile station is to match this
19		message; otherwise, the base station shall omit this field.
20	REV_PARMS_INCLUDED	- Reverse additional parameters included flag.
21		The base station shall set this field to '1' if the following three
22		fields (T_MULCHAN, BEGIN_PREAMBLE, and
23		RESUME_PREAMBLE) are included in this message;
24		otherwise, the base station shall set this field to '0'.
25	T_MULCHAN	- <i>Supplemental Channel Request Message</i> pilot strength reporting
26		offset.
27		If REV_PARMS_INCLUDED is set to '1', the base station shall
28		include this field and set this field to the threshold offset that
29		the mobile station is to use when reporting neighbor pilot
30		strength measurements in a <i>Supplemental Channel Request</i>
31		<i>Message</i> . The mobile station is to interpret this field as an
32		offset to T_ADD ranging from 0.5 dB (corresponding to
33		T_MULCHAN = '000') to 4.0 dB (corresponding to T_MULCHAN
34		= '111') in 0.5 dB increments.
35	BEGIN_PREAMBLE	- Number of preamble frames on Reverse Supplemental Code
36		Channels at the beginning of transmission on Reverse
37		Supplemental Code Channel.

1			If REV_PARMS_INCLUDED is set to '1', the base station shall
2			include this field and set this field to the number of Reverse
3			Supplemental Code Channel preamble frames that the mobile
4			station is to send when beginning transmission on Reverse
5			Supplemental Code Channels.
6	RESUME_PREAMBLE	-	Number of preamble frames on Reverse Supplemental Code
7			Channels at the resumption of transmission.
8			If REV_PARMS_INCLUDED is set to '1', the base station shall
9			include this field and set this field to the number of Reverse
10			Supplemental Code Channel preamble frames that the mobile
11			station is to send when resuming transmission on a Reverse
12			Supplemental Code Channel following an autonomous
13			suspension of transmission on an allocated Supplemental
14			Code Channel.
15	FOR_INCLUDED	-	Forward Supplemental Code Channel configuration indicator.
16			The base station shall set this field to '1' to indicate that this
17			message contains assignment information for Forward
18			Supplemental Code Channels; otherwise, the base station
19			shall set this field to '0'.
20			If FOR_INCLUDED is set to '1', then the base station shall
21			include the remaining fields in this message, otherwise the
22			base station shall omit all of the following except for
23			RESERVED.
24	FOR_SUP_CONFIG	-	Forward Supplemental Code Channel configuration indicator.
25			The base station shall set this field to '00' to indicate that the
26			mobile station is to stop processing the Forward Supplemental
27			Code Channels at the implicit action time of the message.
28			The base station shall set this field to '01' to indicate that the
29			mobile station is to start processing the Forward
30			Supplemental Code Channels in the Code Channel List at the
31			implicit, explicit, or linked start time specified by this
32			message (see 2.6.6.2.5.1).
33			The base station shall set this field to '10' if the Forward
34			Supplemental Code Channels are specified in the message
35			and the mobile station is to update its Code Channel List and
36			stop processing the Forward Supplemental Code Channels at
37			the implicit action time of the message.

The base station shall set this field to '11' if the Forward Supplemental Code Channels are specified in the message and the mobile station is to start processing the Forward Supplemental Code Channels at the implicit, explicit, or linked start time specified by this message (see 2.6.6.2.5.1).

EXPL_FOR_START_TIME - Explicit forward start time indicator.

This field indicates whether an explicit Forward Supplemental Code Channel start time is specified in this message.

The base station shall include this field only if FOR_SUP_CONFIG is set to '01' or '11'. If a FOR_START_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. If EXPL_FOR_START_TIME is set to '1', then the base station shall set USE_FOR_HDM_SEQ to '0'.

The following field is included only if EXPL_FOR_START_TIME is included and set to '1':

FOR_START_TIME - Start time of the Forward Supplemental Code Channel assignment.

The base station shall include this field only if FOR_SUP_CONFIG is set to '01' or '11'. If the EXPL_FOR_START_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the mobile station is to start processing the Forward Supplemental Code Channels. If EXPL_FOR_START_TIME is set to '0' the base station shall omit this field.

USE_FOR_DURATION - Use forward duration indicator.

The base station shall set this field to '1' if FOR_DURATION is included in the message; otherwise, the base station shall set this field to '0'.

1			If FOR_SUP_CONFIG is set to '01' or '11', then the base station
2			may set this field to '0' to indicate that the mobile station is
3			to be assigned an infinite Forward Supplemental Code
4			Channel assignment duration (i.e., the mobile station is to
5			continue processing Forward Supplemental Code Channels
6			until it receives a subsequent <i>Supplemental Channel</i>
7			<i>Assignment Message</i> or a <i>General Handoff Direction Message</i>
8			that specifies an updated FOR_DURATION). Otherwise, the
9			base station may set this field to '1' to indicate that the
10			mobile station is to be given a Forward Supplemental Code
11			Channel assignment for the duration specified by the
12			FOR_DURATION field.
13			If FOR_SUP_CONFIG is set to '00' or '10', then the base station
14			shall set USE_FOR_DURATION to '0'.
15	FOR_DURATION	-	Duration of Forward Supplemental Code Channel assignment.
16			The base station shall include this field only if
17			USE_FOR_DURATION is included and set to '1'. If this field is
18			included, this field indicates allocated duration, in units of 80
19			ms, during which the mobile station is to process the Forward
20			Supplemental Code Channels.
21	USE_FOR_HDM_SEQ	-	Use Forward <i>General Handoff Direction Message</i> sequence
22			number indicator.
23			This field indicates whether processing of the Forward
24			Supplemental Code Channels shall take effect at the same
25			time as a corresponding <i>General Handoff Direction Message</i> .
26			The base station shall include this field only if
27			FOR_SUP_CONFIG is equal to '01' or '11'. If this message is
28			linked with a <i>General Handoff Direction Message</i> , the base
29			station shall set this field to '1'; otherwise, the base station
30			shall set this field to '0'. If USE_FOR_HDM_SEQ is set to '1',
31			then the base station shall set EXPL_FOR_START_TIME to '0'.
32	FOR_LINKED_HDM_SEQ	-	Sequence number of the <i>General Handoff Direction Message</i> .
33			If the USE_FOR_HDM_SEQ field is included and set to '1', the
34			base station shall set this field to the sequence number of the
35			<i>General Handoff Direction Message</i> (HDM_SEQ) to which this
36			Forward Supplemental Code Channel assignment is linked;
37			otherwise, if USE_FOR_HDM_SEQ is not included or is set to
38			'0', then base station shall omit this field.
39	NUM_SUP_PILOTS	-	Number of pilots in the Active Set which have at least one
40			associated Supplemental Code Channel.

If FOR_SUP_CONFIG is included and is set to '10' or '11', the base station shall include this field and shall set this field to the number of pilots for which there is at least one associated Supplemental Code Channel. This field shall not be included if FOR_SUP_CONFIG is omitted or is set to '01' or '00'.

NUM_FOR_SUP - Number of Forward Supplemental Code Channels.

If FOR_SUP_CONFIG is included and is set to '10' or '11', the base station shall include this field and shall set this field to the number of Forward Supplemental Code Channels assigned to the mobile station. NUM_FOR_SUP shall not exceed the maximum number of Forward Supplemental Code Channels for the negotiated multiplex option. This field shall not be included if FOR_SUP_CONFIG is omitted or is set to '01' or '00'.

If FOR_SUP_CONFIG is included and is set to '10' or '11', the base station shall include NUM_SUP_PILOTS occurrences of the following record, one for each pilot for which there is at least one associated Supplemental Code Channel:

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this pilot in units of 64 PN chips.

EXPL_CODE_CHAN - Explicit code channel indicator

The base station shall set this field to '1' to indicate explicit assignment of each Forward Supplemental Code Channel. The base station shall set this field to '0' if the mobile station is to use NUM_FOR_SUP successive code channels beginning with index BASE_CODE_CHAN (i.e., BASE_CODE_CHAN through BASE_CODE_CHAN + NUM_FOR_SUP - 1). In both cases (i.e., the explicit code channel list format and range format), the order of the code channel indices is the same for all the pilots specified in this message (i.e., the *i*th code channel index in the list for each pilot PN sequence offset indicates the appropriate code channel to be used for the *i*th Forward Supplemental Code Channel).

If EXPL_CODE_CHAN is set to '1', then the base station shall include NUM_FOR_SUP occurrences of the following field, one for each pilot which has been included:

SUP_CODE_CHAN - Supplemental Code Channel index

The base station shall set this field to the code channel index (see [2]) in the range 1 to 63 inclusive of the Supplemental Code Channel associated with this pilot.

If EXPL_CODE_CHAN is set to '0' then the base station shall include the following field:

1 BASE_CODE_CHAN - Base code channel index.

2 If EXPL_CODE_CHAN is equal to '0' the base station shall

3 include this field and set it to the base code channel index

4 (see [2]) in the range of 1 to (63 - NUM_FOR_SUP + 1),

5 inclusive, that the mobile station is to use as the first

6 Forward Supplemental Code Channel associated with this

7 pilot. The mobile station is to use NUM_FOR_SUP successive

8 code channels beginning with index BASE_CODE_CHAN (i.e.,

9 BASE_CODE_CHAN through BASE_CODE_CHAN +

10 NUM_FOR_SUP - 1) for the Forward Supplemental Code

11 Channels associated with this pilot.

12 The base station shall not include this field if

13 EXPL_CODE_CHAN is equal to '1' or if EXPL_CODE_CHAN is

14 not included.

15

3.7.3.3.2.25 Power Control Message

MSG_TAG: PCNM

Field	Length (bits)
PWR_CNTL_STEP	3
USE_TIME	1
ACTION_TIME	0 or 6
FPC_INCL	1
FPC_MODE	0 or 3
FPC_PRI_CHAN	0 or 1
FPC_OLPC_FCH_INCL	0 or 1
FPC_FCH_FER	0 or 5
FPC_FCH_MIN_SETPT	0 or 8
FPC_FCH_MAX_SETPT	0 or 8
FPC_OLPC_DCCH_INCL	0 or 1
FPC_DCCH_FER	0 or 5
FPC_DCCH_MIN_SETPT	0 or 8
FPC_DCCH_MAX_SETPT	0 or 8
FPC_SEC_CHAN	0 or 1
NUM_SUP	0 or 2

Include NUM_SUP occurrence of the following five fields:

SCH_ID	1
FPC_SCH_FER	5
FPC_SCH_MIN_SETPT	8
FPC_SCH_MAX_SETPT	8

FPC_THRESH_INCL	0 or 1
-----------------	--------

(continues on next page)

1

Field	Length (bits)
FPC_SETPT_THRESH	0 or 8
FPC_THRESH_SCH_INCL	0 or 1
FPC_SETPT_THRESH_SCH	0 or 8
RPC_INCL	1
RPC_NUM_REC	0 or 2

If RPC INCL is set to '1', RPC_NUM_REC occurrences of the following record:

RPC_ADJ_REC_TYPE	4
RPC_ADJ_REC_LEN	5
Type-specific fields	8× RPC_ADJ_REC_LEN

2

3

PWR_CNTL_STEP - Power control step size

4

5

6

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8

9

10

Table 3.7.3.3.2.25-1. Closed Loop Power Control Step Size

PWR_CNTL_STEP (binary)	Power Control Step Size (dB nominal)
000	1
001	0.5
010	0.25
All other PWR_CNTL_STEP values are reserved.	

11

USE_TIME - Use action time indicator.

12

13

This field indicates whether an ACTION_TIME is specified in this message.

14

15

16

If an ACTION_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

17

ACTION_TIME - Action time.

1			If the USE_TIME field is set to '1', the base station shall set
2			this field to the System Time, in units of 80 ms (modulo 64),
3			at which the message is to take effect. If the USE_TIME field
4			is set to '0' the base station shall omit this field.
5	FPC_INCL	-	Forward Link Power Control parameter included indicator.
6			If the forward power control related information is included in
7			this message, the base station shall set this field to '1';
8			otherwise, the base station shall set this field to '0'.
9	FPC_MODE	-	Forward Power Control Operation Mode Indicator
10			If FPC_INCL is set to '0' the base station shall omit this field;
11			otherwise, the base station shall set this field as follows:
12			The base station shall set the value to the forward power
13			control operation mode as specified in Table 2.1.3.1.11-1 of
14			[2].
15	FPC_PRI_CHAN	-	Power Control Subchannel indicator.
16			If FPC_INCL is set to '0' the base station shall omit this field;
17			otherwise, the base station shall set this field as follows:
18			The base station shall set this field to '0' if the mobile station
19			is to perform the primary inner loop estimation on the
20			received Forward Fundamental Channel and the base station
21			is to multiplex the Power Control Subchannel on the Forward
22			Fundamental Channel. The base station shall set this field
23			to '1' if the mobile station is to perform the primary inner loop
24			estimation on the received Forward Dedicated Control
25			Channel and the base station is to multiplex the Power
26			Control Subchannel on the Forward Dedicated Control
27			Channel.
28			If only the Fundamental Channel is assigned, the base
29			station shall set this field to '0'. If only the Dedicated Control
30			Channel is assigned, the base station shall set this field to
31			'1'.
32	FPC_OLPC_FCH_INCL	-	Fundamental Channel Outer Loop Power Control parameter
33			included indicator.
34			If FPC_INCL is set to '0' the base station shall omit this field;
35			otherwise, the base station shall set this field as follows:
36			If the forward link fundamental channel outer loop power
37			control parameters are included in this message, the base
38			station shall set this field to '1'; otherwise, the base station
39			shall set this field to '0'.
40	FPC_FCH_FER	-	Fundamental channel target Frame Error Rate.

If FPC_OLPC_FCH_INCL is included and set to '1', the base station shall set this field to the target Frame Error Rate on the Forward Fundamental Channel, as specified in Table 3.7.3.3.2.25-2; otherwise, the base station shall omit this field.

Table 3.7.3.3.2.25-2. Target Frame Error Rate

FER (Binary)	Frame Error Rate
00000	0.2%
00001-10100	0.5% -10% (in units of 0.5%)
10101-11001	11% - 15% (in units of 1.0%)
11010-11110	18% - 30% (in units of 3.0%)
11111	Reserved

FPC_FCH_MIN_SETPT - Minimum Fundamental Channel Outer Loop Eb/Nt setpoint

If FPC_OLPC_FCH_INCL is included and set to '1', the base station shall set this field to minimum Fundamental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB; otherwise, the base station shall omit this field.

The base station shall set this field to '11111111', when it directs the mobile station to set this Eb/No setpoint to the current setpoint used at the mobile station on this channel.

FPC_FCH_MAX_SETPT - Maximum Fundamental Channel Outer Loop Eb/Nt setpoint

If FPC_OLPC_FCH_INCL is included and set to '1', the base station shall set this field to maximum Fundamental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB; otherwise, the base station shall omit this field.

The base station shall set this field to '11111111', when it directs the mobile station to set this Eb/No setpoint to the current setpoint used at the mobile station on this channel.

FPC_OLPC_DCCH_INCL - Dedicated Control Channel Outer Loop Power Control parameter included indicator.

If FPC_INCL is set to '0' the base station shall omit this field; otherwise, the base station shall set this field as follows:

If the forward link Dedicated Control Channel outer loop power control parameters are included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FPC_DCCH_FER - Dedicated Control Channel target Frame Error Rate.

1		If FPC_OLPC_DCCH_INCL is included and set to '1', the base
2		station shall set this field to the target Frame Error Rate on
3		the Forward Dedicated Control Channel, as specified in Table
4		3.7.3.3.2.25-2; otherwise, the base station shall omit this
5		field.
6	FPC_DCCH_MIN_SETPT	- Minimum Dedicated Control Channel Outer Loop Eb/Nt
7		setpoint.
8		If FPC_OLPC_DCCH_INCL is included and set to '1', the base
9		station shall set this field to minimum Dedicated Control
10		Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB;
11		otherwise, the base station shall omit this field.
12		The base station shall set this field to '11111111', when it
13		directs the mobile station to set this Eb/No setpoint to the
14		current setpoint used at the mobile station on this channel.
15	FPC_DCCH_MAX_SETPT	- Maximum Dedicated Control Channel Outer Loop Eb/Nt
16		setpoint.
17		If FPC_OLPC_DCCH_INCL is included and set to '1', the base
18		station shall set this field to maximum Dedicated Control
19		Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB;
20		otherwise, the base station shall omit this field.
21		The base station shall set this field to '11111111', when it
22		directs the mobile station to set this Eb/No setpoint to the
23		current setpoint used at the mobile station on this channel.
24	FPC_SEC_CHAN	- Master Supplemental channel index.
25		If FPC_INCL is set to '1' and FPC_MODE is set to '001' or '010',
26		the base station shall set this field to the master
27		Supplemental Channel index; otherwise, the base station
28		shall omit this field.
29	NUM_SUP	- Number of Supplemental Channels.
30		If FPC_INCL is set to '0' the base station shall omit this field;
31		otherwise, the base station shall set this field to the total
32		number of the Supplemental Channels.
33	The base station shall include NUM_SUP occurrences of the following record:	
34	SCH_ID	- Supplemental channel index.
35		The base station shall set this field to the Supplemental
36		Channel index.
37	FPC_SCH_FER	- Supplemental channel target Frame Error Rate.

1			The base station shall set this field to the target Frame Error
2			Rate on the Supplemental Channel, as specified in Table
3			3.7.3.3.2.25-2.
4	FPC_MIN_SCH_SETPT	-	Minimum Supplemental Channel outer loop Eb/Nt setpoint.
5			The base station shall set this field to minimum
6			Supplemental Channel Outer Loop Eb/Nt setpoint, in units of
7			0.125 dB.
8			The base station shall set this field to '11111111', when it
9			directs the mobile station to set this Eb/No setpoint to the
10			current setpoint used at the mobile station on this channel.
11	FPC_MAX_SCH_SETPT	-	Maximum Supplemental Channel outer loop Eb/Nt setpoint.
12			The base station shall set this field to maximum
13			Supplemental Channel Outer Loop Eb/Nt setpoint, in units of
14			0.125 dB.
15			The base station shall set this field to '11111111', when it
16			directs the mobile station to set this Eb/No setpoint to the
17			current setpoint used at the mobile station on this channel.
18	FPC_THRESH_INCL	-	Setpoint Report Threshold included indicator.
19			If FPC_SETPT_THRESH is included in this message, the base
20			station shall set this field to '1'; otherwise, the base station
21			shall set this field to '0'.
22	FPC_SETPT_THRESH	-	Setpoint Report Threshold.
23			If FPC_THRESH_INCL is set to '1', the base station shall set
24			the value to FPC_SETPT_THRESH (in units of 0.125 dB) above
25			which the outer loop report message will be sent by the
26			mobile station; otherwise, the base station shall omit this
27			field.
28	FPC_THRESH_SCH_INCL	-	SCH Setpoint Report Threshold included indicator.
29			If FPC_SETPT_THRESH_SCH is included in this message, the
30			base station shall set this field to '1'; otherwise, the base
31			station shall set this field to '0'.
32	FPC_SETPT-		
33	_THRESH_SCH	-	SCH Setpoint Report Threshold.
34			If FPC_THRESH_SCH_INCL is set to '1', the base station shall
35			set the value to FPC_SETPT_THRESH_SCH (in units of 0.125
36			dB) above which the outer loop report message will be sent by
37			the mobile station; otherwise, the base station shall omit this
38			field.

1 RPC_INCL - Reverse Link Power Control parameter included indicator.

2 If the reverse power control related information is included in
3 this message, the base station shall set this field to '1';
4 otherwise, the base station shall set this field to '0'.

5 RPC_NUM_REC - Number of records for Reverse Link Power Control.

6 If RPC_INCL is set to '0', the base station shall omit this field;
7 otherwise, the base station shall set this field to one less
8 than the number of records included in this message.

9 If RPC_NUM_REC is included in this message, the base station shall include
10 RPC_NUM_REC occurrences of the following record:

11 RPC_ADJ_REC_TYPE - Reverse Link Power Control adjustment record type.

12 The base station shall set this field to the value shown in
13 Table 3.7.2.3.2.25-3 corresponding to the type of adjustment
14 that is to be used.

15 **Table 3.7.3.3.2.25-3. RPC_ADJ_REC_TYPE and**
16 **RPC_ADJ_REC_LEN fields**

Description	RPC_ADJ_REC_TYP E (binary)	RPC_ADJ_REC_LE N
Reverse Channel Adjustment Gain	0000	2-5
Attribute Adjustment Gain for Basic Rates	0001	2-26
Attribute Adjustment Gain for Higher Rates	0010	2-30
All other values are reserved.		

17
18 RPC_ADJ_REC_LEN - Reverse Link Power Control adjustment record length.

19 The base station shall set this field to the number of octets in
20 the type-specific fields of this adjustment record as given in
21 Table 3.7.2.3.2.25-3.

22 Type-specific fields - Reverse Link Power Control adjustment record type-specific
23 fields.

24 The base station shall include type-specific fields based on
25 the RPC_ADJ_REC_TYPE of this adjustment record, as
26 specified as below.

If RPC_ADJ_REC_TYPE is equal to '0000', the base station shall set type-specific fields as specified in Table 3.7.2.3.2.25-4.

**Table 3.7.2.3.2.25-4. Type Specific Fields for
RECORD_TYPE = '0000'**

Fields	Length (Bits)
FCH_INCL	1
FCH_CHAN_ADJ_GAIN	0 or 8
DCCH_INCL	1
DCCH_CHAN_ADJ_GAIN	0 or 8
SCH0_INCL	1
SCH0_CHAN_ADJ_GAIN	0 or 8
SCH1_INCL	1
SCH1_CHAN_ADJ_GAIN	0 or 8
RESERVED	0-7 (if needed)

FCH_INCL - FCH channel adjustment gain included indicator.

If FCH_CHAN_ADJ_GAIN is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FCH_CHAN_ADJ_GAIN - Channel adjustment gain for Reverse Fundamental Channel.

If FCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set each field to the value of the gain adjustment that the mobile station is to make for the Reverse Fundamental Channel. The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB. The base station shall set the value in the range from -48 to 48 inclusive.

DCCH_INCL - DCCH channel adjustment gain included indicator.

If DCCH_CHAN_ADJ_GAIN is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

DCCH_CHAN_ADJ_GAIN - Channel adjustment gain for the Reverse Dedicated Control Channel.

1 If DCCH_INCL is set to '0', the base station shall omit this
2 field; otherwise, the base station shall set each field to the
3 value of the gain adjustment that the mobile station is to
4 make for the Reverse Dedicated Control Channel. The base
5 station shall set this field to the correction factor expressed
6 as a two's complement value in units of 0.125 dB. The base
7 station shall set the value in the range from -48 to 48
8 inclusive.

9 SCH0_INCL - SCH0 channel adjustment gain included indicator.

10 If SCH0_CHAN_ADJ_GAIN is included in this message, the
11 base station shall set this field to '1'; otherwise, the base
12 station shall set this field to '0'.

13 SCH0_CHAN_ADJ_GAIN - Channel adjustment gain for Reverse Supplemental Channel
14 0.

15 If SCH0_INCL is set to '0', the base station shall omit this
16 field; otherwise, the base station shall set each field to the
17 value of the gain adjustment that the mobile station is to
18 make for the Reverse Supplemental Channel 0. The base
19 station shall set this field to the correction factor expressed
20 as a two's complement value in units of 0.125 dB. The base
21 station shall set the value in the range from -48 to 48
22 inclusive.

23 SCH1_INCL - SCH1 channel adjustment gain included indicator.

24 If SCH1_CHAN_ADJ_GAIN is included in this message, the
25 base station shall set this field to '1'; otherwise, the base
26 station shall set this field to '0'.

27 SCH1_CHAN_ADJ_GAIN - Channel adjustment gain for Reverse Supplemental Channel
28 1.

29 If SCH1_INCL is set to '0', the base station shall omit this
30 field; otherwise, the base station shall set each field to the
31 value of the gain adjustment that the mobile station is to
32 make for the Supplemental Channel 1. The base station
33 shall set this field to the correction factor expressed as a two's
34 complement value in units of 0.125 dB. The base station
35 shall set the value in the range from -48 to 48 inclusive.

36 RESERVED - Reserved bits.

37 The base station shall add reserved bits as needed in order to
38 make the length of the entire record equal to an integer
39 number of octets. The base station shall set these bits to '0'.

40 If RPC_ADJ_REC_TYPE is equal to '0001', the base station shall set type-specific fields as

1 specified in Table 3.7.2.3.2.25-5.

2 **Table 3.7.2.3.2.25-5. Type Specific Fields for**
 3 **RECORD_TYPE = '0001'**

Fields	Length (Bits)
RL_ATT_ADJ_GAIN_TYPE	1
RC3_RC5_20MS_INCL	1
RL_ATT_ADJ_GAIN_1500	0 or 8
RL_ATT_ADJ_GAIN_2700	0 or 8
RL_ATT_ADJ_GAIN_4800	0 or 8
RL_ATT_ADJ_GAIN_9600	0 or 8
RC4_RC6_20MS_INCL	1
RL_ATT_ADJ_GAIN_1800	0 or 8
RL_ATT_ADJ_GAIN_3600	0 or 8
RL_ATT_ADJ_GAIN_7200	0 or 8
RL_ATT_ADJ_GAIN_14400	0 or 8
5MS_INCL	1
RL_ATT_ADJ_GAIN_9600_5MS	0 or 8
RC3_RC5_40MS_INCL	1
RL_ATT_ADJ_GAIN_1350_40MS	0 or 8
RL_ATT_ADJ_GAIN_2400_40MS	0 or 8
RL_ATT_ADJ_GAIN_4800_40MS	0 or 8
RL_ATT_ADJ_GAIN_9600_40MS	0 or 8
RC4_RC6_40MS_INCL	1
RL_ATT_ADJ_GAIN_1800_40MS	0 or 8
RL_ATT_ADJ_GAIN_3600_40MS	0 or 8
RL_ATT_ADJ_GAIN_7200_40MS	0 or 8
RL_ATT_ADJ_GAIN_14400_40MS	0 or 8
RC3_RC5_80MS_INCL	1
RL_ATT_ADJ_GAIN_1200_80MS	0 or 8
RL_ATT_ADJ_GAIN_2400_80MS	0 or 8
RL_ATT_ADJ_GAIN_4800_80MS	0 or 8

4 (continues on next page)

5

Fields	Length (Bits)
RL_ATT_ADJ_GAIN_9600_80MS	0 or 8
RC4_RC6_80MS_INCL	1
RL_ATT_ADJ_GAIN_1800_80MS	0 or 8
RL_ATT_ADJ_GAIN_3600_80MS	0 or 8
RL_ATT_ADJ_GAIN_7200_80MS	0 or 8
RL_ATT_ADJ_GAIN_14400_80MS	0 or 8

RESERVED	0-7 (if needed)
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RL_ATT_ADJ-

_GAIN_TYPE - Reverse Link Attribute Adjustment Gain value type indicator.

If the following fields are set to the nominal attribute gain adjustment values that the mobile station is to use for the transmission attributes (relative to Nominal_Attribute_Gain specified in Table 2.1.2.3.3.2-1 of [2]), the base station shall set this field to '0'. If the following fields are set to the pilot reference level adjustment values that the mobile station is to use for the transmission attributes (relative to Pilot_Reference_Level specified in Table 2.1.2.3.3.2-1 of [2]), the base station shall set this field to '1'.

RC3_RC5-

_20MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 20 ms frame included indicator.

If Reverse Link Attribute adjustment Gain for Radio Configuration 3 or 5 of 20 ms frame is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RL_ATT_ADJ_GAIN_1500 - Reverse Link Attribute Adjustment Gain for the transmission rate 1500 bits/s.

If RC3_RC5_20MS_INCL is set to '0', the base station shall omit this field.

1		If RC3_RC5_20MS_INCL is set to '1' and
2		RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
3		set this field to the value of the nominal attribute gain
4		adjustment that the mobile station is to make for the
5		transmission attributes with transmission rate 1500 bits/s,
6		convolution code and 20ms frame. The base station shall set
7		the value in the range from -48 to 48 inclusive.
8		If RC3_RC5_20MS_INCL is set to '1' and
9		RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
10		set this field to the value of the pilot reference level
11		adjustment that the mobile station is to make for the
12		transmission attributes with transmission rate 1500 bits/s,
13		convolution code and 20ms frame. The base station shall set
14		the value in the range from 0 to 63 inclusive.
15		The base station shall set this field to the correction factor
16		expressed as a two's complement value in units of 0.125 dB.
17	RL_ATT_ADJ_GAIN_2700 -	Reverse Link Attribute Adjustment Gain for the transmission
18		rate 2700 bits/s.
19		If RC3_RC5_20MS_INCL is set to '0', the base station shall
20		omit this field.
21		If RC3_RC5_20MS_INCL is set to '1' and
22		RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
23		set this field to the value of the nominal attribute gain
24		adjustment that the mobile station is to make for the
25		transmission attributes with transmission rate 2700 bits/s,
26		convolution code and 20ms frame. The base station shall set
27		the value in the range from -48 to 48 inclusive.
28		If RC3_RC5_20MS_INCL is set to '1' and
29		RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
30		set this field to the value of the pilot reference level
31		adjustment that the mobile station is to make for the
32		transmission attributes with transmission rate 2700 bits/s,
33		convolution code and 20ms frame. The base station shall set
34		the value in the range from 0 to 63 inclusive.
35		The base station shall set this field to the correction factor
36		expressed as a two's complement value in units of 0.125 dB.
37	RL_ATT_ADJ_GAIN_4800 -	Reverse Link Attribute Gain Adjustment for the transmission
38		rate 4800 bits/s.
39		If RC3_RC5_20MS_INCL is set to '0', the base station shall
40		omit this field.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 4800 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 4800 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN_9600 - Reverse Link Attribute Gain Adjustment for the transmission rate 9600 bits/s.

If RC3_RC5_20MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 9600 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 9600 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RC4_RC6-
_20MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 20ms frame included indicator.

1 If Reverse Link Attribute Adjustment Gain for Radio
2 Configuration 4 or 6 of 20ms frame is included in this
3 message, the base station shall set this field to '1'; otherwise,
4 the base station shall set this field to '0'.

5 RL_ATT_ADJ_GAIN_1800 - Reverse Link Attribute Gain Adjustment for the transmission
6 rate 1800 bits/s.

7 If RC4_RC6_20MS_INCL is set to '0', the base station shall
8 omit this field.

9 If RC4_RC6_20MS_INCL is set to '1' and
10 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
11 set this field to the value of the nominal attribute gain
12 adjustment that the mobile station is to make for the
13 transmission attributes with transmission rate 1800 bits/s,
14 convolution code and 20ms frame. The base station shall set
15 the value in the range from -48 to 48 inclusive.

16 If RC4_RC6_20MS_INCL is set to '1' and
17 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
18 set this field to the value of the pilot reference level
19 adjustment that the mobile station is to make for the
20 transmission attributes with transmission rate 1800 bits/s,
21 convolution code and 20ms frame. The base station shall set
22 the value in the range from 0 to 63 inclusive.

23 The base station shall set this field to the correction factor
24 expressed as a two's complement value in units of 0.125 dB.

25 RL_ATT_ADJ_GAIN_3600 - Reverse Link Attribute Adjustment Gain for the transmission
26 rate 3600 bits/s.

27 If RC4_RC6_20MS_INCL is set to '0', the base station shall
28 omit this field.

29 If RC4_RC6_20MS_INCL is set to '1' and
30 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
31 set this field to the value of the nominal attribute gain
32 adjustment that the mobile station is to make for the
33 transmission attributes with transmission rate 3600 bits/s,
34 convolution code and 20ms frame. The base station shall set
35 the value in the range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 3600 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN_7200 - Reverse Link Attribute Adjustment Gain for the transmission rate 7200 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 7200 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 7200 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN_14400- Reverse Link Attribute Adjustment Gain for the transmission rate 14400 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 14400 bits/s, convolution code and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

1			If RC4_RC6_20MS_INCL is set to '1' and
2			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
3			set this field to the value of the pilot reference level
4			adjustment that the mobile station is to make for the
5			transmission attributes with transmission rate 14400 bits/s,
6			convolution code and 20ms frame. The base station shall set
7			the value in the range from 0 to 63 inclusive.
8			The base station shall set this field to the correction factor
9			expressed as a two's complement value in units of 0.125 dB.
10	5MS_INCL	-	5ms frame Reverse Link Attribute Adjustment Gain included
11			indicator.
12			If Reverse Link Attribute Adjustment Gain for 5ms frame is
13			included in this message, the base station shall set this field
14			to '1'; otherwise, the base station shall set this field to '0'.
15	RL_ATT_ADJ_GAIN-		
16	_9600_5MS	-	Reverse Link Attribute Adjustment Gain for the transmission
17			rate 9600 bits/s with 5ms frame.
18			If 5MS_INCL is set to '0', the base station shall omit this field.
19			If 5MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set
20			to '0', the base station shall set this field to the value of the
21			nominal attribute gain adjustment that the mobile station is
22			to make for the transmission attributes with transmission
23			rate 9600 bits/s, convolution code and 5ms frame. The base
24			station shall set the value in the range from -48 to 48
25			inclusive.
26			If 5MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set
27			to '1', the base station shall set this field to the value of the
28			pilot reference level adjustment that the mobile station is to
29			make for the transmission attributes with transmission rate
30			9600 bits/s, convolution code and 5ms frame. The base
31			station shall set the value in the range from 0 to 63
32			inclusive.
33			The base station shall set this field to the correction factor
34			expressed as a two's complement value in units of 0.125 dB.
35	RC3_RC5_40MS_INCL	-	Reverse Link Attribute Adjustment Gain for Radio
36			Configuration 3 or 5 of 40 ms frame included indicator.
37			If Reverse Link Attribute adjustment Gain for Radio
38			Configuration 3 or 5 of 40 ms frame is included in this
39			message, the base station shall set this field to '1'; otherwise,
40			the base station shall set this field to '0'.

1 RL_ATT_ADJ_GAIN-

2 _1350_40MS - Reverse Link Attribute Adjustment Gain for the transmission
3 rate 1350 bits/s.

4 If RC3_RC5_40MS_INCL is set to '0', the base station shall
5 omit this field.

6 If RC3_RC5_40MS_INCL is set to '1' and
7 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
8 set this field to the value of the nominal attribute gain
9 adjustment that the mobile station is to make for the
10 transmission attributes with transmission rate 1350 bits/s,
11 convolution code and 40ms frame. The base station shall set
12 the value in the range from -48 to 48 inclusive.

13 If RC3_RC5_40MS_INCL is set to '1' and
14 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
15 set this field to the value of the pilot reference level
16 adjustment that the mobile station is to make for the
17 transmission attributes with transmission rate 1350 bits/s,
18 convolution code and 40ms frame. The base station shall set
19 the value in the range from 0 to 63 inclusive.

20 The base station shall set this field to the correction factor
21 expressed as a two's complement value in units of 0.125 dB.

22 RL_ATT_ADJ_GAIN-

23 _2400_40MS - Reverse Link Attribute Adjustment Gain for the transmission
24 rate 2400 bits/s.

25 If RC3_RC5_40MS_INCL is set to '0', the base station shall
26 omit this field.

27 If RC3_RC5_40MS_INCL is set to '1' and
28 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
29 set this field to the value of the nominal attribute gain
30 adjustment that the mobile station is to make for the
31 transmission attributes with transmission rate 2400 bits/s,
32 convolution code and 40ms frame. The base station shall set
33 the value in the range from -48 to 48 inclusive.

34 If RC3_RC5_40MS_INCL is set to '1' and
35 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
36 set this field to the value of the pilot reference level
37 adjustment that the mobile station is to make for the
38 transmission attributes with transmission rate 2400 bits/s,
39 convolution code and 40ms frame. The base station shall set
40 the value in the range from 0 to 63 inclusive.

1			The base station shall set this field to the correction factor
2			expressed as a two's complement value in units of 0.125 dB.
3	RL_ATT_ADJ_GAIN-		
4	_4800_40MS	-	Reverse Link Attribute Gain Adjustment for the transmission
5			rate 4800 bits/s.
6			If RC3_RC5_40MS_INCL is set to '0', the base station shall
7			omit this field.
8			If RC3_RC5_40MS_INCL is set to '1' and
9			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
10			set this field to the value of the nominal attribute gain
11			adjustment that the mobile station is to make for the
12			transmission attributes with transmission rate 4800 bits/s,
13			convolution code and 40ms frame. The base station shall set
14			the value in the range from -48 to 48 inclusive.
15			If RC3_RC5_40MS_INCL is set to '1' and
16			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
17			set this field to the value of the pilot reference level
18			adjustment that the mobile station is to make for the
19			transmission attributes with transmission rate 4800 bits/s,
20			convolution code and 40ms frame. The base station shall set
21			the value in the range from 0 to 63 inclusive.
22			The base station shall set this field to the correction factor
23			expressed as a two's complement value in units of 0.125 dB.
24	RL_ATT_ADJ_GAIN-		
25	_9600_40MS	-	Reverse Link Attribute Gain Adjustment for the transmission
26			rate 9600 bits/s.
27			If RC3_RC5_40MS_INCL is set to '0', the base station shall
28			omit this field.
29			If RC3_RC5_40MS_INCL is set to '1' and
30			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
31			set this field to the value of the nominal attribute gain
32			adjustment that the mobile station is to make for the
33			transmission attributes with transmission rate 9600 bits/s,
34			convolution code and 40ms frame. The base station shall set
35			the value in the range from -48 to 48 inclusive.

If RC3_RC5_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 9600 bits/s, convolution code and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RC4_RC6_40MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 40ms frame included indicator.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 40ms frame is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RL_ATT_ADJ_GAIN-

_1800_40MS - Reverse Link Attribute Gain Adjustment for the transmission rate 1800 bits/s.

If RC4_RC6_40MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 1800 bits/s, convolution code and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 1800 bits/s, convolution code and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_3600_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 3600 bits/s.

1			If RC4_RC6_40MS_INCL is set to '0', the base station shall
2			omit this field.
3			If RC4_RC6_40MS_INCL is set to '1' and
4			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
5			set this field to the value of the nominal attribute gain
6			adjustment that the mobile station is to make for the
7			transmission attributes with transmission rate 3600 bits/s,
8			convolution code and 40ms frame. The base station shall set
9			the value in the range from -48 to 48 inclusive.
10			If RC4_RC6_40MS_INCL is set to '1' and
11			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
12			set this field to the value of the pilot reference level
13			adjustment that the mobile station is to make for the
14			transmission attributes with transmission rate 3600 bits/s,
15			convolution code and 40ms frame. The base station shall set
16			the value in the range from 0 to 63 inclusive.
17			The base station shall set this field to the correction factor
18			expressed as a two's complement value in units of 0.125 dB.
19	RL_ATT_ADJ_GAIN-		
20	_7200_40MS	-	Reverse Link Attribute Adjustment Gain for the transmission
21			rate 7200 bits/s.
22			If RC4_RC6_40MS_INCL is set to '0', the base station shall
23			omit this field.
24			If RC4_RC6_40MS_INCL is set to '1' and
25			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
26			set this field to the value of the nominal attribute gain
27			adjustment that the mobile station is to make for the
28			transmission attributes with transmission rate 7200 bits/s,
29			convolution code and 40ms frame. The base station shall set
30			the value in the range from -48 to 48 inclusive.
31			If RC4_RC6_40MS_INCL is set to '1' and
32			NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
33			this field to the value of the pilot reference level adjustment
34			that the mobile station is to make for the transmission
35			attributes with transmission rate 7200 bits/s, convolution
36			code and 40ms frame. The base station shall set the value in
37			the range from 0 to 63 inclusive.
38			The base station shall set this field to the correction factor
39			expressed as a two's complement value in units of 0.125 dB.
40	RL_ATT_ADJ_GAIN-		

1 _14400_40MS - Reverse Link Attribute Adjustment Gain for the transmission
2 rate 14400 bits/s.

3 If RC4_RC6_40MS_INCL is set to '0', the base station shall
4 omit this field.

5 If RC4_RC6_40MS_INCL is set to '1' and
6 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
7 set this field to the value of the nominal gain adjustment that
8 the mobile station is to make for the transmission attributes
9 with transmission rate 14400 bits/s, convolution code and
10 40ms frame. The base station shall set the value in the
11 range from -48 to 48 inclusive.

12 If RC4_RC6_40MS_INCL is set to '1' and
13 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
14 set this field to the value of the pilot reference level
15 adjustment that the mobile station is to make for the
16 transmission attributes with transmission rate 14400 bits/s,
17 convolution code and 40ms frame. The base station shall set
18 the value in the range from 0 to 63 inclusive.

19 The base station shall set this field to the correction factor
20 expressed as a two's complement value in units of 0.125 dB.

21 RC3_RC5_80MS_INCL - Reverse Link Attribute Adjustment Gain for Radio
22 Configuration 3 or 5 of 80 ms frame included indicator.

23 If Reverse Link Attribute adjustment Gain for Radio
24 Configuration 3 or 5 of 80 ms frame is included in this
25 message, the base station shall set this field to '1'; otherwise,
26 the base station shall set this field to '0'.

27 RL_ATT_ADJ_GAIN-

28 _1200_80MS - Reverse Link Attribute Adjustment Gain for the transmission
29 rate 1200 bits/s.

30 If RC3_RC5_80MS_INCL is set to '0', the base station shall
31 omit this field.

32 If RC3_RC5_80MS_INCL is set to '1' and
33 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
34 set this field to the value of the nominal attribute gain
35 adjustment that the mobile station is to make for the
36 transmission attributes with transmission rate 1200 bits/s,
37 convolution code and 80ms frame. The base station shall set
38 the value in the range from -48 to 48 inclusive.

1			If RC3_RC5_80MS_INCL is set to '1' and
2			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
3			set this field to the value of the pilot reference level
4			adjustment that the mobile station is to make for the
5			transmission attributes with transmission rate 1200 bits/s,
6			convolution code and 80ms frame. The base station shall set
7			the value in the range from 0 to 63 inclusive.
8			The base station shall set this field to the correction factor
9			expressed as a two's complement value in units of 0.125 dB.
10	RL_ATT_ADJ_GAIN-		
11	_2400_80MS	-	Reverse Link Attribute Adjustment Gain for the transmission
12			rate 2400 bits/s.
13			If RC3_RC5_80MS_INCL is set to '0', the base station shall
14			omit this field.
15			If RC3_RC5_80MS_INCL is set to '1' and
16			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
17			set this field to the value of the nominal attribute gain
18			adjustment that the mobile station is to make for the
19			transmission attributes with transmission rate 2400 bits/s,
20			convolution code and 80ms frame. The base station shall set
21			the value in the range from -48 to 48 inclusive.
22			If RC3_RC5_80MS_INCL is set to '1' and
23			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
24			set this field to the value of the pilot reference level
25			adjustment that the mobile station is to make for the
26			transmission attributes with transmission rate 2400 bits/s,
27			convolution code and 80ms frame. The base station shall set
28			the value in the range from 0 to 63 inclusive.
29			The base station shall set this field to the correction factor
30			expressed as a two's complement value in units of 0.125 dB.
31	RL_ATT_ADJ_GAIN-		
32	_4800_80MS	-	Reverse Link Attribute Gain Adjustment for the transmission
33			rate 4800 bits/s.
34			If RC3_RC5_80MS_INCL is set to '0', the base station shall
35			omit this field.

If RC3_RC5_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 4800 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 4800 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_9600_80MS - Reverse Link Attribute Gain Adjustment for the transmission rate 9600 bits/s.

If RC3_RC5_80MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 9600 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 9600 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RC4_RC6_80MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 80ms frame included indicator.

1			If Reverse Link Attribute Adjustment Gain for Radio
2			Configuration 4 or 6 of 80ms frame is included in this
3			message, the base station shall set this field to '1'; otherwise,
4			the base station shall set this field to '0'.
5	RL_ATT_ADJ_GAIN-		
6	_1800_80MS	-	Reverse Link Attribute Gain Adjustment for the transmission
7			rate 1800 bits/s.
8			If RC4_RC6_80MS_INCL is set to '0', the base station shall
9			omit this field.
10			If RC4_RC6_80MS_INCL is set to '1' and
11			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
12			set this field to the value of the nominal attribute gain
13			adjustment that the mobile station is to make for the
14			transmission attributes with transmission rate 1800 bits/s,
15			convolution code and 80ms frame. The base station shall set
16			the value in the range from -48 to 48 inclusive.
17			If RC4_RC6_80MS_INCL is set to '1' and
18			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
19			set this field to the value of the pilot reference level
20			adjustment that the mobile station is to make for the
21			transmission attributes with transmission rate 1800 bits/s,
22			convolution code and 80ms frame. The base station shall set
23			the value in the range from 0 to 63 inclusive.
24			The base station shall set this field to the correction factor
25			expressed as a two's complement value in units of 0.125 dB.
26	RL_ATT_ADJ_GAIN-		
27	_3600_80MS	-	Reverse Link Attribute Adjustment Gain for the transmission
28			rate 3600 bits/s.
29			If RC4_RC6_80MS_INCL is set to '0', the base station shall
30			omit this field.
31			If RC4_RC6_80MS_INCL is set to '1' and
32			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
33			set this field to the value of the nominal attribute gain
34			adjustment that the mobile station is to make for the
35			transmission attributes with transmission rate 3600 bits/s,
36			convolution code and 80ms frame. The base station shall set
37			the value in the range from -48 to 48 inclusive.

If RC4_RC6_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 3600 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_7200_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 7200 bits/s.

If RC4_RC6_80MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 7200 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_80MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 7200 bits/s, convolution code and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_14400_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 14400 bits/s.

If RC4_RC6_80MS_INCL is set to '0', the base station shall omit this field.

1 If RC4_RC6_80MS_INCL is set to '1' and
 2 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 3 set this field to the value of the nominal gain adjustment that
 4 the mobile station is to make for the transmission attributes
 5 with transmission rate 14400 bits/s, convolution code and
 6 80ms frame. The base station shall set the value in the
 7 range from -48 to 48 inclusive.

8 If RC4_RC6_40MS_INCL is set to '1' and
 9 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 10 set this field to the value of the pilot reference level
 11 adjustment that the mobile station is to make for the
 12 transmission attributes with transmission rate 14400 bits/s,
 13 convolution code and 80ms frame. The base station shall set
 14 the value in the range from 0 to 63 inclusive.

15 The base station shall set this field to the correction factor
 16 expressed as a two's complement value in units of 0.125 dB.

17 RESERVED - Reserved bits.

18 The base station shall add reserved bits as needed in order to
 19 make the length of the entire record equal to an integer
 20 number of octets. The base station shall set these bits to '0'.

21 If RPC_ADJ_REC_TYPE is equal to '0010', the base station shall set type-specific fields as
 22 specified in Table 3.7.2.3.2.25-6.

**Table 3.7.2.3.2.25-6. Type Specific Fields for
RECORD_TYPE = '0010'**

Fields	Length (Bits)
CODE_TYPE	1
RL_ATT_ADJ_GAIN_TYPE	1
RC3_RC5_20MS_INCL	1
RL_ATT_ADJ_GAIN_19200	0 or 8
RL_ATT_ADJ_GAIN_38400	0 or 8
RL_ATT_ADJ_GAIN_76800	0 or 8
RL_ATT_ADJ_GAIN_153600	0 or 8
RL_ATT_ADJ_GAIN_307200	0 or 8
RL_ATT_ADJ_GAIN_614400	0 or 8
RC4_RC6_20MS_INCL	1
RL_ATT_ADJ_GAIN_28800	0 or 8
RL_ATT_ADJ_GAIN_57600	0 or 8
RL_ATT_ADJ_GAIN_115200	0 or 8
RL_ATT_ADJ_GAIN_230400	0 or 8
RL_ATT_ADJ_GAIN_460800	0 or 8
RL_ATT_ADJ_GAIN_1036800	0 or 8
RC3_RC5_40MS_INCL	1
RL_ATT_ADJ_GAIN_19200_40MS	0 or 8
RL_ATT_ADJ_GAIN_38400_40MS	0 or 8
RL_ATT_ADJ_GAIN_76800_40MS	0 or 8
RL_ATT_ADJ_GAIN_153600_40MS	0 or 8
RL_ATT_ADJ_GAIN_307200_40MS	0 or 8
RC4_RC6_40MS_INCL	1
RL_ATT_ADJ_GAIN_28800_40MS	0 or 8
RL_ATT_ADJ_GAIN_57600_40MS	0 or 8
RL_ATT_ADJ_GAIN_115200_40MS	0 or 8

(continues on next page)

Fields	Length (Bits)
RL_ATT_ADJ_GAIN_230400_40MS	0 or 8
RL_ATT_ADJ_GAIN_518400_40MS	0 or 8
RC3_RC5_80MS_INCL	1
RL_ATT_ADJ_GAIN_19200_80MS	0 or 8
RL_ATT_ADJ_GAIN_38400_80MS	0 or 8
RL_ATT_ADJ_GAIN_76800_80MS	0 or 8
RC4_RC6_80MS_INCL	1
RL_ATT_ADJ_GAIN_28800_80MS	0 or 8
RL_ATT_ADJ_GAIN_57600_80MS	0 or 8
RL_ATT_ADJ_GAIN_115200_80MS	0 or 8
RL_ATT_ADJ_GAIN_259200_80MS	0 or 8

RESERVED	0-7 (if needed)
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CODE_TYPE - Coding type indicator.

If the following corresponding gain adjustment fields apply for the convolutional code, the base station shall set this field to '0'. If the following corresponding gain adjustment fields apply for the Turbo code, the base station shall set this field to '1'.

RL_ATT_ADJ-

_GAIN_TYPE - Reverse Link Attribute adjustment Gain value type indicator.

If the following corresponding gain adjustment fields are set to the value of the nominal attribute gain adjustment that the mobile station is to make for the corresponding transmission attributes (relative to Nominal_Attribute_Gain specified in Table 2.1.2.3.3-1 of [2]), the base station shall set this field to '0'. If the following corresponding gain adjustment fields are set to the value of the pilot reference level adjustment that the mobile station is to use for the corresponding transmission attributes (relative to Pilot_Reference_Level specified in Table 2.1.2.3.3-1 of [2]), the base station shall set this field to '1'.

RC3_RC5-

_20MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 20ms frame included indicator.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 20ms frame is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RL_ATT_ADJ_GAIN-

_19200 - Reverse Link Attribute Adjustment Gain for the transmission rate 19200 bits/s.

If RC3_RC5_20MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 19200 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 19200 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_38400 - Reverse Link Attribute Adjustment Gain for the transmission rate 38400 bits/s.

If RC3_RC5_20MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 38400 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

1 If RC3_RC5_20MS_INCL is set to '1' and
 2 NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
 3 this field to the value of the pilot reference level adjustment
 4 that the mobile station is to make for the transmission
 5 attributes with transmission rate 38400 bits/s and 20ms
 6 frame. The base station shall set the value in the range from
 7 0 to 63 inclusive.

8 The base station shall set this field to the correction factor
 9 expressed as a two's complement value in units of 0.125 dB.

10 RL_ATT_ADJ_GAIN-

11 _76800 - Reverse Link Attribute Adjustment Gain for the transmission
 12 rate 76800 bits/s.

13 If RC3_RC5_20MS_INCL is set to '0', the base station shall
 14 omit this field.

15 If RC3_RC5_20MS_INCL is set to '1' and
 16 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 17 set this field to the value of the nominal attribute gain
 18 adjustment that the mobile station is to make for the
 19 transmission attributes with transmission rate 76800 bits/s,
 20 and 20ms frame. The base station shall set the value in the
 21 range from -48 to 48 inclusive.

22 If RC3_RC5_20MS_INCL is set to '1' and
 23 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 24 set this field to the value of the pilot reference level
 25 adjustment that the mobile station is to make for the
 26 transmission attributes with transmission rate 76800 bits/s
 27 and 20ms frame. The base station shall set the value in the
 28 range from 0 to 63 inclusive.

29 The base station shall set this field to the correction factor
 30 expressed as a two's complement value in units of 0.125 dB.

31 RL_ATT_ADJ_GAIN-

32 _153600 - Reverse Link Attribute Adjustment Gain for the transmission
 33 rate 153600 bits/s.

34 If RC3_RC5_20MS_INCL is set to '0', the base station shall
 35 omit this field.

If RC3_RC5_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 153600 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 153600 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_307200 - Reverse Link Attribute Adjustment Gain for the transmission rate 307200 bits/s.

If RC3_RC5_20MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 307200 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 307200 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_614400 - Reverse Link Attribute Adjustment Gain for the transmission rate 614400 bits/s.

1 If RC3_RC5_20MS_INCL is set to '0', the base station shall
 2 omit this field.

3 If RC3_RC5_20MS_INCL is set to '1' and
 4 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 5 set this field to the value of the nominal attribute gain
 6 adjustment that the mobile station is to make for the
 7 transmission attributes with transmission rate 614400
 8 bits/s, and 20ms frame. The base station shall set the value
 9 in the range from -48 to 48 inclusive.

10 If RC3_RC5_20MS_INCL is set to '1' and
 11 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 12 set this field to the value of the pilot reference level
 13 adjustment that the mobile station is to make for the
 14 transmission attributes with transmission rate 614400 bits/s
 15 and 20ms frame. The base station shall set the value in the
 16 range from 0 to 63 inclusive.

17 The base station shall set this field to the correction factor
 18 expressed as a two's complement value in units of 0.125 dB.

19 RC4_RC6-
 20 _20MS_INCL - Reverse Link Attribute Adjustment Gain for Radio
 21 Configuration 4 or 6 of 20ms frame included indicator.

22 If Reverse Link Attribute Adjustment Gain for Radio
 23 Configuration 4 or 6 of 20ms frame is included in this
 24 message, the base station shall set this field to '1'; otherwise,
 25 the base station shall set this field to '0'.

26 RL_ATT_ADJ_GAIN-
 27 _28800 - Reverse Link Attribute Adjustment Gain for the transmission
 28 rate 28800 bits/s.

29 If RC4_RC6_20MS_INCL is set to '0', the base station shall
 30 omit this field.

31 If RC4_RC6_20MS_INCL is set to '1' and
 32 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 33 set this field to the value of the nominal attribute gain
 34 adjustment that the mobile station is to make for the
 35 transmission attributes with transmission rate 28800 bits/s,
 36 and 20ms frame. The base station shall set the value in the
 37 range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 28800 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_57600 - Reverse Link Attribute Adjustment Gain for the transmission rate 57600 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 57600 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 57600 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_115200 - Reverse Link Attribute Adjustment Gain for the transmission rate 115200 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

1 If RC4_RC6_20MS_INCL is set to '1' and
 2 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 3 set this field to the value of the nominal attribute gain
 4 adjustment that the mobile station is to make for the
 5 transmission attributes with transmission rate 115200
 6 bits/s, and 20ms frame. The base station shall set the value
 7 in the range from -48 to 48 inclusive.

8 If RC4_RC6_20MS_INCL is set to '1' and
 9 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 10 set this field to the value of the pilot reference level
 11 adjustment that the mobile station is to make for the
 12 transmission attributes with transmission rate 115200 bits/s
 13 and 20ms frame. The base station shall set the value in the
 14 range from 0 to 63 inclusive.

15 The base station shall set this field to the correction factor
 16 expressed as a two's complement value in units of 0.125 dB.

17 RL_ATT_ADJ_GAIN-

18 _230400 - Reverse Link Attribute Adjustment Gain for the transmission
 19 rate 230400 bits/s.

20 If RC4_RC6_20MS_INCL is set to '0', the base station shall
 21 omit this field.

22 If RC4_RC6_20MS_INCL is set to '1' and
 23 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 24 set this field to the value of the nominal attribute gain
 25 adjustment that the mobile station is to make for the
 26 transmission attributes with transmission rate 230400
 27 bits/s, and 20ms frame. The base station shall set the value
 28 in the range from -48 to 48 inclusive.

29 If RC4_RC6_20MS_INCL is set to '1' and
 30 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 31 set this field to the value of the pilot reference level
 32 adjustment that the mobile station is to make for the
 33 transmission attributes with transmission rate 230400 bits/s
 34 and 20ms frame. The base station shall set the value in the
 35 range from 0 to 63 inclusive.

36 The base station shall set this field to the correction factor
 37 expressed as a two's complement value in units of 0.125 dB.

38 RL_ATT_ADJ_GAIN-

39 _460800 - Reverse Link Attribute Adjustment Gain for the transmission
 40 rate 460800 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 460800 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 460800 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_1036800 - Reverse Link Attribute Adjustment Gain for the transmission rate 1036800 bits/s.

If RC4_RC6_20MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 1036800 bits/s, and 20ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_20MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 1306800 bits/s and 20ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RC3_RC5_40MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 40ms frame included indicator.

1			If Reverse Link Attribute Adjustment Gain for Radio
2			Configuration 3 or 5 of 40ms frame is included in this
3			message, the base station shall set this field to '1'; otherwise,
4			the base station shall set this field to '0'.
5	RL_ATT_ADJ_GAIN-		
6	_19200_40MS	-	Reverse Link Attribute Adjustment Gain for the transmission
7			rate 19200 bits/s.
8			If RC3_RC5_40MS_INCL is set to '0', the base station shall
9			omit this field.
10			If RC3_RC5_40MS_INCL is set to '1' and
11			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
12			set this field to the value of the nominal attribute gain
13			adjustment that the mobile station is to make for the
14			transmission attributes with transmission rate 19200 bits/s,
15			and 40ms frame. The base station shall set the value in the
16			range from -48 to 48 inclusive.
17			If RC3_RC5_40MS_INCL is set to '1' and
18			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
19			set this field to the value of the pilot reference level
20			adjustment that the mobile station is to make for the
21			transmission attributes with transmission rate 19200 bits/s
22			and 40ms frame. The base station shall set the value in the
23			range from 0 to 63 inclusive.
24			The base station shall set this field to the correction factor
25			expressed as a two's complement value in units of 0.125 dB.
26	RL_ATT_ADJ_GAIN-		
27	_38400_40MS	-	Reverse Link Attribute Adjustment Gain for the transmission
28			rate 38400 bits/s.
29			If RC3_RC5_40MS_INCL is set to '0', the base station shall
30			omit this field.
31			If RC3_RC5_40MS_INCL is set to '1' and
32			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
33			set this field to the value of the nominal attribute gain
34			adjustment that the mobile station is to make for the
35			transmission attributes with transmission rate 38400 bits/s,
36			and 40ms frame. The base station shall set the value in the
37			range from -48 to 48 inclusive.

If RC3_RC5_20MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 38400 bits/s and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_76800_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 76800 bits/s.

If RC3_RC5_40MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 76800 bits/s, and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 76800 bits/s and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_153600_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 153600 bits/s.

If RC3_RC5_40MS_INCL is set to '0', the base station shall omit this field.

1			If RC3_RC5_40MS_INCL is set to '1' and
2			NORM_ATT_GAIN_TYPE is set to '0', the base station shall set
3			this field to the value of the nominal attribute gain
4			adjustment that the mobile station is to make for the
5			transmission attributes with transmission rate 153600
6			bits/s, and 40ms frame. The base station shall set the value
7			in the range from -48 to 48 inclusive.
8			If RC3_RC5_40MS_INCL is set to '1' and
9			NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
10			this field to the value of the pilot reference level adjustment
11			that the mobile station is to make for the transmission
12			attributes with transmission rate 153600 bits/s and 40ms
13			frame. The base station shall set the value in the range from
14			0 to 63 inclusive.
15			The base station shall set this field to the correction factor
16			expressed as a two's complement value in units of 0.125 dB.
17	RL_ATT_ADJ_GAIN-		
18	_307200_40MS	-	Reverse Link Attribute Adjustment Gain for the transmission
19			rate 307200 bits/s.
20			If RC3_RC5_40MS_INCL is set to '0', the base station shall
21			omit this field.
22			If RC3_RC5_40MS_INCL is set to '1' and
23			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
24			set this field to the value of the nominal attribute gain
25			adjustment that the mobile station is to make for the
26			transmission attributes with transmission rate 307200
27			bits/s, and 40ms frame. The base station shall set the value
28			in the range from -48 to 48 inclusive.
29			If RC3_RC5_40MS_INCL is set to '1' and
30			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
31			set this field to the value of the pilot reference level
32			adjustment that the mobile station is to make for the
33			transmission attributes with transmission rate 307200 bits/s
34			and 40ms frame. The base station shall set the value in the
35			range from 0 to 63 inclusive.
36			The base station shall set this field to the correction factor
37			expressed as a two's complement value in units of 0.125 dB.
38	RC4_RC6_40MS_INCL	-	Reverse Link Attribute Adjustment Gain for Radio
39			Configuration 4 or 6 of 40ms frame included indicator.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 40ms frame is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RL_ATT_ADJ_GAIN-

_28800_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 28800 bits/s.

If RC4_RC6_40MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 28800 bits/s, and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_40MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 28800 bits/s and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_57600_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 57600 bits/s.

If RC4_RC6_40MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_40MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 57600 bits/s, and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

1 If RC4_RC6_40MS_INCL is set to '1' and
 2 NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
 3 this field to the value of the pilot reference level adjustment
 4 that the mobile station is to make for the transmission
 5 attributes with transmission rate 57600 bits/s and 40ms
 6 frame. The base station shall set the value in the range from
 7 0 to 63 inclusive.

8 The base station shall set this field to the correction factor
 9 expressed as a two's complement value in units of 0.125 dB.

10 RL_ATT_ADJ_GAIN-

11 _115200_40MS - Reverse Link Attribute Adjustment Gain for the transmission
 12 rate 115200 bits/s.

13 If RC4_RC6_40MS_INCL is set to '0', the base station shall
 14 omit this field.

15 If RC4_RC6_40MS_INCL is set to '1' and
 16 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 17 set this field to the value of the nominal attribute gain
 18 adjustment that the mobile station is to make for the
 19 transmission attributes with transmission rate 115200
 20 bits/s, and 40ms frame. The base station shall set the value
 21 in the range from -48 to 48 inclusive.

22 If RC4_RC6_40MS_INCL is set to '1' and
 23 RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
 24 set this field to the value of the pilot reference level
 25 adjustment that the mobile station is to make for the
 26 transmission attributes with transmission rate 115200 bits/s
 27 and 40ms frame. The base station shall set the value in the
 28 range from 0 to 63 inclusive.

29 The base station shall set this field to the correction factor
 30 expressed as a two's complement value in units of 0.125 dB.

31 RL_ATT_ADJ_GAIN-

32 _230400_40MS - Reverse Link Attribute Adjustment Gain for the transmission
 33 rate 230400 bits/s.

34 If RC4_RC6_40MS_INCL is set to '0', the base station shall
 35 omit this field.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 230400 bits/s, and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 230400 bits/s and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_518400_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 518400 bits/s.

If RC4_RC6_40MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 518400 bits/s, and 40ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_40MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 518400 bits/s and 40ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RC3_RC5_80MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 80ms frame included indicator.

1			If Reverse Link Attribute Adjustment Gain for Radio
2			Configuration 3 or 5 of 80ms frame is included in this
3			message, the base station shall set this field to '1'; otherwise,
4			the base station shall set this field to '0'.
5	RL_ATT_ADJ_GAIN-		
6	_19200_80MS	-	Reverse Link Attribute Adjustment Gain for the transmission
7			rate 19200 bits/s.
8			If RC3_RC5_80MS_INCL is set to '0', the base station shall
9			omit this field.
10			If RC3_RC5_80MS_INCL is set to '1' and
11			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
12			set this field to the value of the nominal attribute gain
13			adjustment that the mobile station is to make for the
14			transmission attributes with transmission rate 19200 bits/s,
15			and 80ms frame. The base station shall set the value in the
16			range from -48 to 48 inclusive.
17			If RC3_RC5_80MS_INCL is set to '1' and
18			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
19			set this field to the value of the pilot reference level
20			adjustment that the mobile station is to make for the
21			transmission attributes with transmission rate 19200 bits/s
22			and 80ms frame. The base station shall set the value in the
23			range from 0 to 63 inclusive.
24			The base station shall set this field to the correction factor
25			expressed as a two's complement value in units of 0.125 dB.
26	RL_ATT_ADJ_GAIN-		
27	_38400_80MS	-	Reverse Link Attribute Adjustment Gain for the transmission
28			rate 38400 bits/s.
29			If RC3_RC5_80MS_INCL is set to '0', the base station shall
30			omit this field.
31			If RC3_RC5_80MS_INCL is set to '1' and
32			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
33			set this field to the value of the nominal attribute gain
34			adjustment that the mobile station is to make for the
35			transmission attributes with transmission rate 38400 bits/s,
36			and 80ms frame. The base station shall set the value in the
37			range from -48 to 48 inclusive.

If RC3_RC5_80MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 38400 bits/s and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_76800_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 76800 bits/s.

If RC3_RC5_80MS_INCL is set to '0', the base station shall omit this field.

If RC3_RC5_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 76800 bits/s, and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC3_RC5_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 76800 bits/s and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

_153600_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 153600 bits/s.

If RC3_RC5_80MS_INCL is set to '0', the base station shall omit this field.

1 If RC3_RC5_80MS_INCL is set to '1' and
 2 NORM_ATT_GAIN_TYPE is set to '0', the base station shall set
 3 this field to the value of the nominal attribute gain
 4 adjustment that the mobile station is to make for the
 5 transmission attributes with transmission rate 153600
 6 bits/s, and 80ms frame. The base station shall set the value
 7 in the range from -48 to 48 inclusive.

8 If RC3_RC5_80MS_INCL is set to '1' and
 9 NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
 10 this field to the value of the pilot reference level adjustment
 11 that the mobile station is to make for the transmission
 12 attributes with transmission rate 153600 bits/s and 80ms
 13 frame. The base station shall set the value in the range from
 14 0 to 63 inclusive.

15 The base station shall set this field to the correction factor
 16 expressed as a two's complement value in units of 0.125 dB.

17 RC4_RC6_80MS_INCL - Reverse Link Attribute Adjustment Gain for Radio
 18 Configuration 4 or 6 of 80ms frame included indicator.

19 If Reverse Link Attribute Adjustment Gain for Radio
 20 Configuration 4 or 6 of 80ms frame is included in this
 21 message, the base station shall set this field to '1'; otherwise,
 22 the base station shall set this field to '0'.

23 RL_ATT_ADJ_GAIN-
 24 _28800_80MS - Reverse Link Attribute Adjustment Gain for the transmission
 25 rate 28800 bits/s.

26 If RC4_RC6_80MS_INCL is set to '0', the base station shall
 27 omit this field.

28 If RC4_RC6_80MS_INCL is set to '1' and
 29 RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
 30 set this field to the value of the nominal attribute gain
 31 adjustment that the mobile station is to make for the
 32 transmission attributes with transmission rate 28800 bits/s,
 33 and 80ms frame. The base station shall set the value in the
 34 range from -48 to 48 inclusive.

35 If RC4_RC6_80MS_INCL is set to '1' and
 36 NORM_ATT_GAIN_TYPE is set to '1', the base station shall set
 37 this field to the value of the pilot reference level adjustment
 38 that the mobile station is to make for the transmission
 39 attributes with transmission rate 28800 bits/s and 80ms
 40 frame. The base station shall set the value in the range from
 41 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

57600_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 57600 bits/s.

If RC4_RC6_80MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_80MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 57600 bits/s, and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

If RC4_RC6_80MS_INCL is set to '1' and NORM_ATT_GAIN_TYPE is set to '1', the base station shall set this field to the value of the pilot reference level adjustment that the mobile station is to make for the transmission attributes with transmission rate 57600 bits/s and 80ms frame. The base station shall set the value in the range from 0 to 63 inclusive.

The base station shall set this field to the correction factor expressed as a two's complement value in units of 0.125 dB.

RL_ATT_ADJ_GAIN-

115200_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 115200 bits/s.

If RC4_RC6_80MS_INCL is set to '0', the base station shall omit this field.

If RC4_RC6_80MS_INCL is set to '1' and RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall set this field to the value of the nominal attribute gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 115200 bits/s, and 80ms frame. The base station shall set the value in the range from -48 to 48 inclusive.

1			If RC4_RC6_80MS_INCL is set to '1' and
2			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
3			set this field to the value of the pilot reference level
4			adjustment that the mobile station is to make for the
5			transmission attributes with transmission rate 115200 bits/s
6			and 80ms frame. The base station shall set the value in the
7			range from 0 to 63 inclusive.
8			The base station shall set this field to the correction factor
9			expressed as a two's complement value in units of 0.125 dB.
10	RL_ATT_ADJ_GAIN-		
11	_259200_80MS	-	Reverse Link Attribute Adjustment Gain for the transmission
12			rate 259200 bits/s.
13			If RC4_RC6_80MS_INCL is set to '0', the base station shall
14			omit this field.
15			If RC4_RC6_80MS_INCL is set to '1' and
16			RL_ATT_ADJ_GAIN_TYPE is set to '0', the base station shall
17			set this field to the value of the nominal attribute gain
18			adjustment that the mobile station is to make for the
19			transmission attributes with transmission rate 259200
20			bits/s, and 80ms frame. The base station shall set the value
21			in the range from -48 to 48 inclusive.
22			If RC4_RC6_80MS_INCL is set to '1' and
23			RL_ATT_ADJ_GAIN_TYPE is set to '1', the base station shall
24			set this field to the value of the pilot reference level
25			adjustment that the mobile station is to make for the
26			transmission attributes with transmission rate 259200 bits/s
27			and 80ms frame. The base station shall set the value in the
28			range from 0 to 63 inclusive.
29			The base station shall set this field to the correction factor
30			expressed as a two's complement value in units of 0.125 dB.
31	RESERVED	-	Reserved bits.
32			The base station shall add reserved bits as needed in order to
33			make the length of the entire record equal to an integer
34			number of octets. The base station shall set these bits to '0'.
35			

3.7.3.3.2.26 Extended Neighbor List Update Message

MSG_TAG: ENLUM

Field	Length (bits)
PILOT_INC	4
NGHBR_SRCH_MODE	2
SRCH_WIN_N	4
USE_TIMING	1
GLOBAL_TIMING_INCL	0 or 1
GLOBAL_TX_DURATION	0 or 4
GLOBAL_TX_PERIOD	0 or 7
NUM_NGHBR	6

NUM_NGHBR occurrences of the following field:

NGHBR_PN	9
SEARCH_PRIORITY	0 or 2
SRCH_WIN_NGHBR	0 or 4
TIMING_INCL	0 or 1
NGHBR_TX_OFFSET	0 or 7
NGHBR_TX_DURATION	0 or 4
NGHBR_TX_PERIOD	0 or 7

SRCH_OFFSET_INCL	1
------------------	---

NUM_NGHBR occurrences of the following record:

ADD_PILOT_REC_INCL	1
NGHBR_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or $8 \times \text{RECORD_LEN}$
SRCH_OFFSET_NGHBR	0 or 3

PILOT_INC - Pilot PN sequence offset index increment.

A mobile station searches for Remaining Set pilots at pilot PN sequence index values that are multiples of this value.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that mobile stations are to use for searching the Remaining Set. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

The base station shall set this field to a value in the range 1 to 15 inclusive.

NGHBR_SRCH_MODE - Search mode.

The base station shall set this field to the value specified in Table 3.7.3.3.2.26-1 corresponding to the search mode.

Table 3.7.3.3.2.26-1. NGHBR_SRCH_MODE Field

Value (binary)	Description
00	No search priorities or search windows
01	Search priorities
10	Search windows
11	Search windows and search priorities

SRCH_WIN_N - Default search window size for the Neighbor Set.

The base station shall set this field to the value specified in Table 2.6.6.2.1-1 corresponding to the default search window size to be used by the mobile station for its Neighbor Set. The mobile station uses the default search window size for all pilots in its Neighbor Set when the search window is not specified for each pilot individually (NGHBR_SRCH_MODE is set to a value other than '10' and '11').

USE_TIMING - Use timing indicator.

If base station timing information is included for neighbor base stations, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

GLOBAL_TIMING-

_INCL - Global timing included.

If USE_TIMING is set to '1', the base station shall include the field GLOBAL_TIMING_INCL and set this field as described below; otherwise, the base station shall omit this field.

If base station timing information is included globally for all neighbor base stations with TIMING_INCL equal to '1', the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

GLOBAL_TX-

_DURATION - Global neighbor transmit time duration.

If GLOBAL_TIMING_INCL is included and is set to '1', the base station shall include the field GLOBAL_TX_DURATION and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the duration of the base station transmit window, during each period, in units of 80 ms. The base station should set this field to a value of 3 or greater.

GLOBAL_TX-

_PERIOD - Global neighbor transmit time period.

If GLOBAL_TIMING_INCL is included and is set to '1', the base station shall include the field GLOBAL_TX_PERIOD and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to duration of the period, in units of 80 ms.

NUM_NGHR - Number of neighbor pilot PN sequences.

The base station shall set this field to the number of neighbors included in the message.

The base station shall include one occurrence of the following record for each pilot that a mobile station is to place in its Neighbor Set

NGHR_PN - Neighbor pilot PN sequence offset index.

The base station shall include one occurrence of this field for each pilot in its neighbor list. The base station shall set this field to the pilot's PN sequence offset, in units of 64 PN chips.

SEARCH_PRIORITY - Pilot Channel search priority.

If NGHR_SRCH_MODE is set to '01' or '11', then the base station shall set this field to the search priority for this neighbor. The base station shall set the search priority as specified in Table 3.7.3.3.2.26-2. If NGHR_SRCH_MODE is set to any other value, the base station shall omit this field.

Table 3.7.3.3.26-2. SEARCH_PRIORITY Field

Value (binary)	Search Priority
00	Low
01	Medium
10	High
11	Very High

SRCH_WIN_NGHR - Neighbor pilot channel search window size.

If NGHR_SRCH_MODE is set to '10' or '11', then the base station shall set this field to the value specified in Table 2.6.6.2.1-1 corresponding to the search window size to be used by the mobile stations for this neighbor. If NGHR_SRCH_MODE is set to any other value, the base station shall omit this field.

TIMING_INCL - Timing included indicator.

If USE_TIMING is set to '1', the base station shall include the field TIMING_INCL and set this field as described below; otherwise, the base station shall omit this field.

If base station timing information is included for this neighbor base station, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

NGHR_TX_OFFSET - Neighbor transmit time offset.

If TIMING_INCL is included and is set to '1', the base station shall include the field NGHR_TX_OFFSET and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the time offset, in units of 80 ms, from the beginning of the neighbor timing period to the beginning of the first base station transmit window within the period. The beginning of the neighbor timing period occurs when $\lfloor t/4 \rfloor \bmod (16384) = 0$.

NGHR_TX_DURATION - Neighbor transmit time duration.

If TIMING_INCL is included and is set to '1' and GLOBAL_TIMING_INCL is set to '0', the base station shall include the field NGHR_TX_DURATION and set this field as described below; otherwise, the base station shall omit this field.

1 The base station shall set this field to duration of the base
2 station transmit window, during each period, in units of
3 80 ms. The base station should set this field to a value of 3 or
4 greater.

5 NGHBR_TX_PERIOD - Neighbor transmit time period.

6 If TIMING_INCL is included and is set to '1' and
7 GLOBAL_TIMING_INCL is set to '0', the base station shall
8 include the field NGHBR_TX_PERIOD and set this field as
9 described below; otherwise, the base station shall omit this
10 field.

11 The base station shall set this field to duration of the period,
12 in units of 80 ms.

13 SRCH_OFFSET_INCL - Neighbor pilot channel search window offset included.

14 If NGHBR_SRCH_MODE = '10' or '11' and if the
15 SRCH_OFFSET_NGHBR field is included in the following
16 records, the base station shall set this bit to '1'; otherwise,
17 the base station shall set this bit to '0'.

18 The base station shall include one occurrence of the following record for each pilot that a
19 mobile station is to place in its Neighbor Set. The base station shall use the same order
20 for the following record as is used for previous pilots which are listed in this message.
21 Specifically, the i^{th} occurrence of the following record shall correspond the i^{th} pilot in this
22 message.

23 ADD_PILOT_REC_INCL - Additional pilot information included indicator.

24 The base station shall set this field to '1' if additional pilot
25 information listed in NGHBR_PILOT_REC_TYPE and
26 RECORD_LEN fields are included. The base station shall set
27 this field to '0' if the corresponding pilot is the common pilot
28 and there is no additional pilot information included.

29 NGHBR_PILOT-

30 _REC_TYPE - Neighbor Pilot record type

31 If ADD_PILOT_REC_INCL is set to '1', the base station shall
32 set this field to the NGHBR_PILOT_REC_TYPE value shown in
33 Table 3.7.2.3.2.22-5 corresponding to the type of Pilot Record
34 specified by this record.

35 If ADD_PILOT_REC_INCL is set to '0', the base station shall
36 omit this field.

37 RECORD_LEN - Pilot record length.

If ADD_PILOT_REC_INCL is set to '1', the base station shall set this field to the number of octets in the type-specific fields of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If ADD_PILOT_REC_INCL is set to '1', the base station shall include type-specific fields based on the NGHBR_PILOT_REC_TYPE of this pilot record.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

If NGHBR_PILOT_REC_TYPE is equal to '000', the base station shall include the following fields:

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

TD_POWER_LEVEL - TD Transmit Power Level.

The base station shall set this field to the TD transmit power level relative to that of the Forward Pilot Channel as specified in Table 3.7.2.3.2.21-7.

TD_MODE - Transmit Diversity mode.

The base station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

If NGHBR_PILOT_REC_TYPE is equal to '001', the base station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index.

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh code.

The base station shall set this field to the WALSH_LENGTH value shown in Table 3.7.2.3.2.22-6 corresponding to the length of the Walsh code for the pilot that is used in as the Auxiliary Pilot.

AUX_PILOT_WALSH - Walsh code for the Auxiliary Pilot.

The base station shall set this field to the Walsh code corresponding to the Auxiliary Pilot.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If NGHBR_PILOT_REC_TYPE is equal to '010', the base station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index for the Auxiliary Transmit Diversity Pilot.

- 1 The base station shall set this field to the index of the Quasi-
2 orthogonal function (see Table 3.1.3.1.12-2 of [2]).
- 3 WALSH_LENGTH - Length of the Walsh code.
- 4 The base station shall set this field to the WALSH_LENGTH
5 value shown in 3.7.2.3.2.22-6 corresponding to the length of
6 the Walsh code for the pilots that are used as Auxiliary pilot
7 in the transmit diversity mode.
- 8 AUX_TD_WALSH - Walsh code for the Auxiliary Transmit Diversity Pilot.
- 9 The base station shall set this field to the Walsh code
10 corresponding to the Auxiliary Transmit Diversity Pilot.
- 11 AUX_TD-
12 _POWER_LEVEL - Auxiliary Transmit Diversity Pilot power level.
- 13 The base station shall set this field to the Auxiliary Transmit
14 Diversity Pilot transmit power level relative to that of the
15 Auxiliary Pilot as specified in Table 3.7.2.3.2.22-7.
- 16 TD_MODE - Transmit Diversity mode.
- 17 The base station shall set this field to the Transmit Diversity
18 mode, as specified in Table 3.7.2.3.2.26-3.
- 19 RESERVED - Reserved bits.
- 20 The base station shall set all the bits of this field to '0' to
21 make the entire record octet-aligned.

22 If NGHBR_PILOT_REC_TYPE is equal to '011', the base station shall include the following
23 fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
RESERVED	7

- 24
- 25 SR3_PRIMARY_PILOT - Primary SR3 pilot.
- 26 The base station shall set this field to the value shown in
27 Table 3.7.2.3.2.26-5 corresponding to the position of the
28 primary SR3 pilot.
- 29 SR3_PILOT_POWER1 - Relative power level between the primary SR3 pilot and the
30 pilot on the lower frequency of the two remaining SR3
31 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

RESERVED – Reserved bits.

The base station shall set this field to '0000000'.

If NGHBR_PILOT_REC_TYPE is equal to '100', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

SR3_PRIMARY_PILOT – Primary SR3 pilot.

1		The base station shall set this field to the value shown in
2		Table 3.7.2.3.2.26-5 corresponding to the position of the
3		primary SR3 pilot.
4	SR3_PILOT_POWER1	- Relative power level between the primary SR3 pilot and the
5		pilot on the lower frequency of the two remaining SR3
6		frequencies.
7		The base station shall set this field to the value shown in
8		Table 3.7.2.3.2.26-6 corresponding to the power level of the
9		primary pilot with respect to the pilot on the lower frequency
10		of the two remaining SR3 frequencies.
11	SR3_PILOT_POWER2	- Relative power level between the primary SR3 pilot and the
12		pilot on the higher frequency of the two remaining SR3
13		frequencies.
14		The base station shall set this field to the value shown in
15		Table 3.7.2.3.2.26-6 corresponding to the power level of the
16		primary pilot with respect to the pilot on the higher frequency
17		of the two remaining SR3 frequencies.
18	QOF	- Quasi-orthogonal function index.
19		The base station shall set this field to the index of the Quasi-
20		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
21		frequency of the primary pilot.
22	WALSH_LENGTH	- Length of the Walsh Code.
23		The base station shall set this field to the WALSH_LENGTH
24		value shown in Table 3.7.2.3.2.22-6 corresponding to the
25		length of the Walsh code for the pilot that is used as the
26		Auxiliary pilot on the frequency of the primary pilot.
27	AUX_PILOT_WALSH	- Walsh Code for the Auxiliary Pilot.
28		The base station shall set this field to the Walsh code
29		corresponding to the Auxiliary pilot on the frequency of the
30		primary pilot.
31	ADD_INFO_INCL1	- Additional information included for the pilot on the lower
32		frequency of the two remaining SR3 frequencies.
33		If the additional information for the pilot on the lower
34		frequencies of the two remaining SR3 frequencies is the
35		same as pilot on the primary frequency, the base station shall
36		set this field to '0'; otherwise, the base station shall set this
37		field to '1'.
38	QOF1	- Quasi-orthogonal function index for the pilot on the lower
39		frequency of the two remaining SR3 frequencies.

1		If ADD_INFO_INCL1 is set to '0', the base station shall omit
2		this field; otherwise, the base station shall set this field as
3		follows:
4		The base station shall set this field to the index of the Quasi-
5		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the lower
6		frequency of the two remaining SR3 frequencies.
7	WALSH_LENGTH1	- Length of the Walsh Code for the pilot on the lower frequency
8		of the two remaining SR3 frequencies.
9		If ADD_INFO_INCL1 is set to '0', the base station shall omit
10		this field; otherwise, the base station shall set this field as
11		follows:
12		The base station shall set this field to the WALSH_LENGTH
13		value shown in Table 3.7.2.3.2.22-6 corresponding to the
14		length of the Walsh code for the pilot that is used as the
15		Auxiliary pilot on the lower frequency of the two remaining
16		SR3 frequencies.
17	AUX_PILOT_WALSH1	- Walsh Code for the Auxiliary Pilot on the lower frequency of
18		the two remaining SR3 frequencies.
19		If ADD_INFO_INCL1 is set to '0', the base station shall omit
20		this field; otherwise, the base station shall set this field as
21		follows:
22		The base station shall set this field to the Walsh code
23		corresponding to the Auxiliary pilot on the lower frequency of
24		the two remaining SR3 frequencies.
25	ADD_INFO_INCL2	- Additional information included for the pilot on the higher
26		frequency of the two remaining SR3 frequencies.
27		If the additional information for the pilot on the higher
28		frequencies of the two remaining SR3 frequencies is the
29		same as pilot on the primary frequency, the base station shall
30		set this field to '0'; otherwise, the base station shall set this
31		field to '1'.
32	QOF2	- Quasi-orthogonal function index for the pilot on the higher
33		frequency of the two remaining SR3 frequencies.
34		If ADD_INFO_INCL2 is set to '0', the base station shall omit
35		this field; otherwise, the base station shall set this field as
36		follows:
37		The base station shall set this field to the index of the Quasi-
38		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
39		higher frequency of the two remaining SR3 frequencies.

1	WALSH_LENGTH2	-	Length of the Walsh Code for the pilot on the higher
2			frequency of the two remaining SR3 frequencies.
3			If ADD_INFO_INCL2 is set to '0', the base station shall omit
4			this field; otherwise, the base station shall set this field as
5			follows:
6			The base station shall set this field to the WALSH_LENGTH
7			value shown in Table 3.7.2.3.2.22-6 corresponding to the
8			length of the Walsh code for the pilot that is used as the
9			Auxiliary pilot on the higher frequency of the two remaining
10			SR3 frequencies.
11	AUX_PILOT_WALSH2	-	Walsh Code for the Auxiliary Pilot on the higher frequency of
12			the two remaining SR3 frequencies.
13			If ADD_INFO_INCL2 is set to '0', the base station shall omit
14			this field; otherwise, the base station shall set this field as
15			follows:
16			The base station shall set this field to the Walsh code
17			corresponding to the Auxiliary pilot on the higher frequency of
18			the two remaining SR3 frequencies.
19	RESERVED	-	Reserved bits.
20			The base station shall set all the bits of this field to '0' to
21			make the entire record octet-aligned.
22	SRCH_OFFSET_NGHR	-	Neighbor pilot channel search window offset.
23			If SRCH_OFFSET_INCL equals to '1', then the base station
24			shall set this field to the value shown in Table 2.6.6.2.1-2
25			corresponding to the search window offset to be used by the
26			mobile station for this neighbor; otherwise, the base station
27			shall omit this field.
28			

3.7.3.3.2.27 Candidate Frequency Search Request Message

MSG_TAG: CFSRQM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
RESERVED_1	4
CFSRM_SEQ	2
SEARCH_TYPE	2
SEARCH_PERIOD	4
SEARCH_MODE	4
MODE_SPECIFIC_LEN	8
Mode-specific fields	8 × MODE_SPECIFIC_LEN
ALIGN_TIMING	1
SEARCH_OFFSET	0 or 6

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

RESERVED_1 - Reserved bits.

The base station shall set this field to '0000'.

CFSRM_SEQ - *Candidate Frequency Search Request Message* sequence number.

The base station shall set this field to the *Candidate Frequency Search Request Message* sequence number, as specified in 2.6.6.2.2.3.

SEARCH_TYPE - Search command.

The base station shall set this field to the appropriate SEARCH_TYPE code from Table 3.7.3.3.2.27-1 to indicate the purpose of the message.

Table 3.7.3.3.2.27-1. SEARCH_TYPE Codes

SEARCH_TYP E(binary)	Meaning
00	Directs the mobile station to stop any periodic search in progress (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4)
01	Directs the mobile station to perform a single search (see 2.6.6.2.8.3.1 and 2.6.6.2.10.1).
11	Directs the mobile station to perform a periodic search (see 2.6.6.2.8.3.2 and 2.6.6.2.10.2).
10	Reserved.

SEARCH_PERIOD - Time between successive searches on the Candidate Frequency.

The base station shall set this field to the SEARCH_PERIOD value shown in Table 2.6.6.2.8.3.2-1 corresponding to the search period to be used by the mobile station, i.e., the time between successive searches on the Candidate Frequency.

SEARCH_MODE - Search mode.

The base station shall set this field to the SEARCH_MODE value specified in Table 3.7.3.3.2.27-2 corresponding to the type of search specified by this message.

Table 3.7.3.3.2.27-2. SEARCH_MODE Types

SEARCH_MODE (binary)	Description
0000	Searches for CDMA pilots on a Candidate Frequency.
0001	Searches for analog channels.
0010-1111	Reserved

- MODE_SPECIFIC_LEN - Length of mode-specific fields.
- The base station shall set this field to the number of octets in the mode-specific fields of this message.
- Mode-specific fields - Search mode-specific fields.
- The base station shall include mode-specific fields based on the SEARCH_MODE field.
- If SEARCH_MODE is equal to '0000', the base station shall include the following fields:

Field	Length (bits)
BAND_CLASS	5
CDMA_FREQ	11
SF_TOTAL_EC_THRESH	5
SF_TOTAL_EC_IO_THRESH	5
DIFF_RX_PWR_THRESH	5
MIN_TOTAL_PILOT_EC_IO	5
CF_T_ADD	6
TF_WAIT_TIME	4
CF_PILOT_INC	4
CF_SRCH_WIN_N	4
CF_SRCH_WIN_R	4
RESERVED_2	5
PILOT_UPDATE	1

If PILOT_UPDATE is set to '1' the base station shall include the following record:

NUM_PILOTS	6
CF_NGHR_SRCH_MODE	2

If PILOT_UPDATE is set to '1', the base station shall include NUM_PILOTS occurrences of the following record:

NGHR_PN	9
SEARCH_SET	1
SEARCH_PRIORITY	0 or 2
SRCH_WIN_NGHR	0 or 4

If PILOT_UPDATE is set to '1', the base station shall include the following field:

CF_SRCH_OFFSET_INCL	1
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(continues on next page)

1

Field	Length (bits)
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If PILOT_UPDATE is set to '1', the base station shall include NUM_PILOTS occurrences of the following record:

ADD_PILOT_REC_INCL	1
NGHBR_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	0 or $8 \times \text{RECORD_LEN}$
SRCH_OFFSET_NGHBR	0 or 3

RESERVED_3	0 - 7 (as needed)
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2

3 BAND_CLASS - Band class.

4 The base station shall set this field to the CDMA band class of
5 the Candidate Frequency.

6 CDMA_FREQ - Frequency assignment.

7 The base station shall set this field to the CDMA frequency
8 assignment for the Candidate Frequency.

9 SF_TOTAL_EC -

10 _THRESH - Serving Frequency total pilot E_c threshold.

11 If the mobile station is not to use the measurement of total E_c
12 of the pilots in the Serving Frequency Active Set in the
13 Candidate Frequency periodic search procedure, the base
14 station shall set this field to '11111'; otherwise, the base
15 station shall set this field to

$$16 \quad \lceil (10 \times \log_{10}(\text{total_ec_thresh}) + 120) / 2 \rceil$$

17 where *total_ec_thresh* is defined by the following rule: The
18 mobile station is not to visit the CDMA Candidate Frequency
19 to search for pilots if the total E_c of the pilots in the Serving
20 Frequency Active Set is greater than *total_ec_thresh*.

21 SF_TOTAL_EC -

22 _IO_THRESH - Serving Frequency total pilot E_c/I_0 threshold.

If the mobile station is not to use the measurement of total E_c/I_o of the pilots in the Serving Frequency Active Set in the Candidate Frequency periodic search procedure, the base station shall set this field to '11111'; otherwise, the base station shall set this field to

$$\lfloor -20 \times \log_{10} (total_ec_io_thresh) \rfloor$$

where *total_ec_io_thresh* is defined by the following rule: The mobile station is not to visit the CDMA Candidate Frequency to search for pilots if the total E_c/I_o of the pilots in the Serving Frequency Active Set is greater than *total_ec_io_thresh*.

DIFF_RX_PWR-

_THRESH - Minimum difference in received power.

If the mobile station is to search for pilots on the CDMA Candidate Frequency irrespective of the received power on the Candidate Frequency, the base station shall set this field to '00000'; otherwise, the base station shall set this field to

$$\lceil (minimum_power_diff + 30) / 2 \rceil$$

where *minimum_power_diff* is determined by the following rule: The mobile station is not to search for pilots on the CDMA Candidate Frequency if (*cand_freq_pwr* - *serving_freq_pwr*) is less than *minimum_power_diff* (in dB), where *cand_freq_pwr* is the received power on the CDMA Candidate Frequency, in dBm / 1.23 MHz, and *serving_freq_pwr* is the received power on the Serving Frequency, in dBm / 1.23 MHz.

MIN_TOTAL_PILOT-

_EC_IO - Minimum total pilot E_c/I_o .

If the mobile station is to attempt to demodulate the Forward Traffic Channels irrespective of the strength of pilots in the Active Set, the base station shall set this field to '00000'; otherwise, the base station shall set this field to

$$\lfloor -20 \times \log_{10} total_pilot_threshold \rfloor$$

where *total_pilot_threshold* is defined by the following rule: The mobile station is not to attempt to demodulate the Forward Traffic Channels if the sum of E_c/I_o of all pilots in the mobile station's Active Set is less than *total_pilot_threshold*.

CF_T_ADD - Pilot detection threshold for the CDMA Candidate Frequency.

This value is used by the mobile station to trigger the sending of the *Candidate Frequency Search Report Message* during a periodic search of the CDMA Candidate Frequency (see 2.6.6.2.8.3.2).

The base station shall set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.

TF_WAIT_TIME - CDMA Candidate Frequency total wait time.

The base station shall set this field to $\lfloor \text{max_wait_time} / 0.08 \rfloor$, where *max_wait_time* is the maximum time, in seconds, that the mobile station is to spend waiting for a period of $(N_{11m} \times 20)$ ms with sufficient signal quality (e.g. good frames) on the CDMA Target Frequency.

CF_PILOT_INC - Pilot PN sequence offset index increment to be used on the CDMA Candidate Frequency after handoff.

The base station shall set this field to the pilot PN sequence increment, in units of 64 PN chips, that the mobile station is to use for searching the Remaining Set, after a handoff to the CDMA Candidate Frequency is successfully completed. The base station should set this field to the largest increment such that the pilot PN sequence offsets of all its neighbor base stations are integer multiples of that increment.

CF_SRCH_WIN_N - Default search window size for the Candidate Frequency Search Set.

The base station shall set this field to the value specified in Table 2.6.6.2.1-1 corresponding to the default search window size to be used by the mobile station for its Candidate Frequency Neighbor Set. The mobile station uses the default search window size for all pilots in its Candidate Frequency Neighbor Set when the search window has not been specified for each pilot individually.

CF_SRCH_WIN_R - Search window size for the Remaining Set on the CDMA Candidate Frequency.

The base station shall set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the number of PN chips that the mobile station is to search for pilots in the Remaining Set on the CDMA Candidate Frequency after a handoff is successfully completed.

RESERVED_2 - Reserved bits.

The base station shall set this field to '00000'.

- 1 PILOT_UPDATE - Pilot search parameter update indicator.
- 2 If the mobile station is to change its pilot search parameters,
- 3 the base station shall set this field to '1'; otherwise, the base
- 4 station shall set this field to '0'.
- 5 NUM_PILOTS - Number of pilots included in the message.
- 6 The base station shall set this field to the number of the
- 7 CDMA Candidate Frequency pilots included in this message.
- 8 The base station shall set this field to a value from 0 to N_{8m} ,
- 9 inclusive.
- 10 CF_NGHBR_SRCH-
- 11 _MODE - Search mode for Candidate Frequency Search Set.
- 12 The base station shall set this field to the value shown in
- 13 Table 3.7.3.3.2.27-3 corresponding to the search mode.
- 14

Table 3.7.3.3.2.27-3. CF_NGHBR_SRCH_MODE Field

Value (binary)	Description
00	No search priorities or search windows specified
01	Search priorities specified
10	Search windows specified
11	Search windows and search priorities specified

16

17 The base station shall include NUM_PILOTS occurrences of the following four-field record,

18 one for each included CDMA Candidate Frequency pilot.

- 19 NGHBR_PN - Neighbor pilot PN sequence offset index.
- 20 The base station shall set this field to the pilot's PN sequence
- 21 offset, in units of 64 PN chips.
- 22 SEARCH_SET - Flag to indicate if the corresponding pilot is to be searched.
- 23 The base station shall set this field to '1' if the mobile station
- 24 should add the corresponding pilot to its Candidate Frequency
- 25 Search Set; otherwise, the base station shall set this field to
- 26 '0'.
- 27 SEARCH_PRIORITY - Pilot Channel search priority.

1			If CF_NGHBR_SRCH_MODE is set to '01' or '11', then the base
2			station shall set this field to the search priority for this
3			neighbor. The base station shall set the search priority as
4			specified in Table 3.7.3.3.2.26-2. If CF_NGHBR_SRCH_MODE
5			is set to any other value, the base station shall omit this
6			field.
7	SRCH_WIN_NGHBR	-	Neighbor pilot channel search window size.
8			If CF_NGHBR_SRCH_MODE is set to '10' or '11', then the base
9			station shall set this field to the value specified in
10			Table 2.6.6.2.1-1 corresponding to the search window size to
11			be used by mobile stations for this neighbor. If the
12			CF_NGHBR_SRCH_MODE is set to any other value, the base
13			station shall omit this field.
14	CF_SRCH_OFFSET_INCL	-	Neighbor pilot channel search window offset included.
15			If PILOT_UPDATE is set to '0', the base station shall omit this
16			field; otherwise, the base station shall include this field and
17			set it as follows:
18			If CF_NGHBR_SRCH_MODE is set to '10' or '11' and if
19			SRCH_OFFSET_NGHBR is included in the message, the base
20			station shall set this bit to '1'; otherwise, the base station
21			shall set this bit to '0'.
22	If PILOT_UPDATE is set to '1', the base station shall include NUM_PILOTS occurrences of		
23	the following four-field record, one for each included CDMA Candidate Frequency Pilot.		
24	ADD_PILOT_REC_INCL	-	Additional pilot information included indicator.
25			The base station shall set this field to '1' if additional pilot
26			information listed in NGHBR_PILOT_REC_TYPE and
27			RECORD_LEN fields are included. The base station shall set
28			this field to '0' if the corresponding pilot is the common pilot
29			and there is no additional pilot information included.
30	NGHBR_PILOT-		
31	_REC_TYPE	-	Neighbor Pilot record type
32			If ADD_PILOT_REC_INCL is set to '1', the base station shall
33			set this field to the NGHBR_PILOT_REC_TYPE value shown in
34			Table 3.7.2.3.2.22-5 corresponding to the type of Pilot Record
35			specified by this record.
36			If ADD_PILOT_REC_INCL is set to '0', the base station shall
37			omit this field.
38	RECORD_LEN	-	Pilot record length.

1 If ADD_PILOT_REC_INCL is set to '1', the base station shall
 2 set this field to the number of octets in the type-specific fields
 3 of this pilot record.

4 If ADD_PILOT_REC_INCL is set to '0', the base station shall
 5 omit this field.

6 Type-specific fields - Pilot record type-specific fields.

7 If ADD_PILOT_REC_INCL is set to '1', the base station shall
 8 include type-specific fields based on the
 9 NGHBR_PILOT_REC_TYPE of this pilot record.

10 If ADD_PILOT_REC_INCL is set to '0', the base station shall
 11 omit this field.

12 If NGHBR_PILOT_REC_TYPE is equal to '000', the base station shall include the following
 13 fields:

14

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

15

16 TD_POWER_LEVEL - TD Transmit Power Level.

17 The base station shall set this field to the TD transmit power
 18 level relative to that of the Forward Pilot Channel as specified
 19 in Table 3.7.2.3.2.21-7.

20 TD_MODE - Transmit Diversity mode.

21 The base station shall set this field to the Transmit Diversity
 22 mode, as specified in Table 3.7.2.3.2.26-3.

23 RESERVED - Reserved bits.

24 The base station shall set these bits to '0000'.

25 If NGHBR_PILOT_REC_TYPE is equal to '001', the base station shall include the following
 26 fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index.

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh code.

The base station shall set this field to the WALSH_LENGTH value shown in Table 3.7.2.3.2.22-6 corresponding to the length of the Walsh code for the pilot that is used in as the Auxiliary pilot.

AUX_PILOT_WALSH - Walsh code for the Auxiliary Pilot.

The base station shall set this field to the Walsh code corresponding to the Auxiliary Pilot.

RESERVED - Reserved bits.

The base station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If NGHBR_PILOT_REC_TYPE is equal to '010', the base station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index for the Auxiliary Transmit Diversity Pilot.

- 1 The base station shall set this field to the index of the Quasi-
2 orthogonal function (see Table 3.1.3.1.12-2 of [2]).
- 3 WALSH_LENGTH - Length of the Walsh code.
- 4 The base station shall set this field to the WALSH_LENGTH
5 value shown in 3.7.2.3.2.22-6 corresponding to the length of
6 the Walsh code for the pilots that are used as Auxiliary pilot
7 in the transmit diversity mode.
- 8 AUX_TD_WALSH - Walsh code for the Auxiliary Transmit Diversity Pilot.
- 9 The base station shall set this field to the Walsh code
10 corresponding to the Auxiliary Transmit Diversity Pilot.
- 11 AUX_TD-
12 _POWER_LEVEL - Auxiliary Transmit Diversity Pilot power level.
- 13 The base station shall set this field to the Auxiliary Transmit
14 Diversity Pilot transmit power level relative to that of the
15 Auxiliary Pilot as specified in Table 3.7.2.3.2.22-7.
- 16 TD_MODE - Transmit Diversity mode.
- 17 The base station shall set this field to the Transmit Diversity
18 mode, as specified in Table 3.7.2.3.2.26-3.
- 19 RESERVED - Reserved bits.
- 20 The base station shall set all the bits of this field to '0' to
21 make the entire record octet-aligned.

22 If NGHBR_PILOT_REC_TYPE is equal to '011', the base station shall include the following
23 fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3

- 24
- 25 SR3_PRIMARY_PILOT - Primary SR3 pilot.
- 26 The base station shall set this field to the value shown in
27 Table 3.7.2.3.2.26-5 corresponding to the position of the
28 primary SR3 pilot.
- 29 SR3_PILOT_POWER1 - Relative power level between the primary SR3 pilot and the
30 pilot on the lower frequency of the two remaining SR3
31 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station shall set this field to the value shown in Table 3.7.2.3.2.26-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

RESERVED – Reserved bits.

The base station shall set this field to '0000000'.

If NGHBR_PILOT_REC_TYPE is equal to '100', the base station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

SR3_PRIMARY_PILOT – Primary SR3 pilot.

1		The base station shall set this field to the value shown in
2		Table 3.7.2.3.2.26-5 corresponding to the position of the
3		primary SR3 pilot.
4	SR3_PILOT_POWER1	- Relative power level between the primary SR3 pilot and the
5		pilot on the lower frequency of the two remaining SR3
6		frequencies.
7		The base station shall set this field to the value shown in
8		Table 3.7.2.3.2.26-6 corresponding to the power level of the
9		primary pilot with respect to the pilot on the lower frequency
10		of the two remaining SR3 frequencies.
11	SR3_PILOT_POWER2	- Relative power level between the primary SR3 pilot and the
12		pilot on the higher frequency of the two remaining SR3
13		frequencies.
14		The base station shall set this field to the value shown in
15		Table 3.7.2.3.2.26-6 corresponding to the power level of the
16		primary pilot with respect to the pilot on the higher frequency
17		of the two remaining SR3 frequencies.
18	QOF	- Quasi-orthogonal function index.
19		The base station shall set this field to the index of the Quasi-
20		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
21		frequency of the primary pilot.
22	WALSH_LENGTH	- Length of the Walsh Code.
23		The base station shall set this field to the WALSH_LENGTH
24		value shown in Table 3.7.2.3.2.22-6 corresponding to the
25		length of the Walsh code for the pilot that is used as the
26		Auxiliary pilot on the frequency of the primary pilot.
27	AUX_PILOT_WALSH	- Walsh Code for the Auxiliary Pilot.
28		The base station shall set this field to the Walsh code
29		corresponding to the Auxiliary pilot on the frequency of the
30		primary pilot.
31	ADD_INFO_INCL1	- Additional information included for the pilot on the lower
32		frequency of the two remaining SR3 frequencies.
33		If the additional information for the pilot on the lower
34		frequencies of the two remaining SR3 frequencies is the
35		same as pilot on the primary frequency, the base station shall
36		set this field to '0'; otherwise, the base station shall set this
37		field to '1'.
38	QOF1	- Quasi-orthogonal function index for the pilot on the lower
39		frequency of the two remaining SR3 frequencies.

1		If ADD_INFO_INCL1 is set to '0', the base station shall omit
2		this field; otherwise, the base station shall set this field as
3		follows:
4		The base station shall set this field to the index of the Quasi-
5		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the lower
6		frequency of the two remaining SR3 frequencies.
7	WALSH_LENGTH1	- Length of the Walsh Code for the pilot on the lower frequency
8		of the two remaining SR3 frequencies.
9		If ADD_INFO_INCL1 is set to '0', the base station shall omit
10		this field; otherwise, the base station shall set this field as
11		follows:
12		The base station shall set this field to the WALSH_LENGTH
13		value shown in Table 3.7.2.3.2.22-6 corresponding to the
14		length of the Walsh code for the pilot that is used as the
15		Auxiliary pilot on the lower frequency of the two remaining
16		SR3 frequencies.
17	AUX_PILOT_WALSH1	- Walsh Code for the Auxiliary Pilot on the lower frequency of
18		the two remaining SR3 frequencies.
19		If ADD_INFO_INCL1 is set to '0', the base station shall omit
20		this field; otherwise, the base station shall set this field as
21		follows:
22		The base station shall set this field to the Walsh code
23		corresponding to the Auxiliary pilot on the lower frequency of
24		the two remaining SR3 frequencies.
25	ADD_INFO_INCL2	- Additional information included for the pilot on the higher
26		frequency of the two remaining SR3 frequencies.
27		If the additional information for the pilot on the higher
28		frequencies of the two remaining SR3 frequencies is the
29		same as pilot on the primary frequency, the base station shall
30		set this field to '0'; otherwise, the base station shall set this
31		field to '1'.
32	QOF2	- Quasi-orthogonal function index for the pilot on the higher
33		frequency of the two remaining SR3 frequencies.
34		If ADD_INFO_INCL2 is set to '0', the base station shall omit
35		this field; otherwise, the base station shall set this field as
36		follows:
37		The base station shall set this field to the index of the Quasi-
38		orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the
39		higher frequency of the two remaining SR3 frequencies.

1	WALSH_LENGTH2	-	Length of the Walsh Code for the pilot on the higher
2			frequency of the two remaining SR3 frequencies.
3			If ADD_INFO_INCL2 is set to '0', the base station shall omit
4			this field; otherwise, the base station shall set this field as
5			follows:
6			The base station shall set this field to the WALSH_LENGTH
7			value shown in Table 3.7.2.3.2.22-6 corresponding to the
8			length of the Walsh code for the pilot that is used as the
9			Auxiliary pilot on the higher frequency of the two remaining
10			SR3 frequencies.
11	AUX_PILOT_WALSH2	-	Walsh Code for the Auxiliary Pilot on the higher frequency of
12			the two remaining SR3 frequencies.
13			If ADD_INFO_INCL2 is set to '0', the base station shall omit
14			this field; otherwise, the base station shall set this field as
15			follows:
16			The base station shall set this field to the Walsh code
17			corresponding to the Auxiliary pilot on the higher frequency of
18			the two remaining SR3 frequencies.
19	RESERVED	-	Reserved bits.
20			The base station shall set all the bits of this field to '0' to
21			make the entire record octet-aligned.
22	SRCH_OFFSET_NGHR	-	Neighbor pilot channel search window offset.
23			If CF_SRCH_OFFSET_INCL is included and equals to '1', then
24			the base station shall set this field to the value specified in
25			Table 2.6.6.2.1-2 corresponding to the search window offset to
26			be used by the mobile station for this neighbor; otherwise, the
27			base station shall omit this field.
28	RESERVED_3	-	Reserved bits.
29			The base station shall add reserved bits as needed in order to
30			make the length of the Mode-specific fields equal to an
31			integer number of octets. The base station shall set these
32			bits to '0'.
33	If SEARCH_MODE is equal to '0001', the base station shall include the following fields:		
34			

Field	Length (bits)
BAND_CLASS	5
SF_TOTAL_EC_THRESH	5
SF_TOTAL_EC_IO_THRESH	5
RESERVED_4	6
NUM_ANALOG_FREQS	3

NUM_ANALOG_FREQS occurrences of the following record:

ANALOG_FREQ	11
-------------	----

RESERVED_5	0-7
------------	-----

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class associated with the analog frequencies included in this message.

SF_TOTAL_EC -

_THRESH - Serving Frequency total pilot E_c threshold.

If the mobile station is not to use the measurement of total E_c of the pilots in the Serving Frequency Active Set in the Analog Frequencies periodic search procedure, the base station shall set this field to '11111'; otherwise, the base station shall set this field to

$$\lceil (10 \times \log_{10} (total_ec_thresh) + 120) / 2 \rceil$$

where *total_ec_thresh* is defined by the following rule: The mobile station is not to visit any analog frequency if the total E_c of the pilots in the Serving Frequency Active Set is greater than *total_ec_thresh*.

SF_TOTAL_EC -

_IO_THRESH - Serving Frequency total pilot E_c/I_o threshold.

If the mobile station is not to use the measurement of total E_c/I_o of the pilots in the Serving Frequency Active Set in the Analog Frequencies periodic search procedure, the base station shall set this field to '11111'; otherwise, the base station shall set this field to

$$\lfloor -20 \times \log_{10} (total_ec_io_thresh) \rfloor$$

1		where <i>total_ec_io_thresh</i> is defined by the following rule: The
2		mobile station is not to visit any analog frequency if the total
3		E_c/I_o of the pilots in the Serving Frequency Active Set is
4		greater than <i>total_ec_io_thresh</i> .
5	RESERVED_4	- Reserved bits.
6		The base station shall set this field to '000000'.
7	NUM_ANALOG_FREQS	- Number of analog frequencies.
8		The base station shall set this field to the number of
9		neighbors on the candidate frequency. The base station shall
10		set this field to a value from 1 to 7, inclusive.
11		
12	The message will include NUM_ANALOG_FREQS occurrences of the following one-field	
13	record, one for each neighbor on the candidate frequency.	
14	ANALOG_FREQ	- Analog frequency channel number.
15		The base station shall set this field to the analog frequency
16		channel number to search.
17	RESERVED_5	- Reserved bits.
18		The base station shall add reserved bits as needed in order to
19		make the length of the Mode-specific fields equal to an
20		integer number of octets. The base station shall set these
21		bits to '0'.
22	ALIGN_TIMING	- Align timing indicator.
23		If the base station requests that the mobile station offset the
24		start of the first search from the action time of this message
25		(or of a subsequent <i>Candidate Frequency Search Control</i>
26		<i>Message</i> that starts a search) by a delay specified by the
27		SEARCH_OFFSET field, the base station shall set this field to
28		'1'; otherwise, the base station shall set this field to '0'.
29	SEARCH_OFFSET	- Search offset.
30		If the ALIGN_TIMING field is set to '0', the base station shall
31		omit this field; otherwise, the base station shall include this
32		field and set it to
33		$\min (63, \lceil search_offset_time / 0.00125 \rceil)$
34		where <i>search_offset_time</i> is the time offset, in seconds, of the
35		start of the first search from the action time of this message
36		(or of a subsequent <i>Candidate Frequency Search Control</i>
37		<i>Message</i> that starts a search).
38		

3.7.3.3.2.28 Candidate Frequency Search Control Message

MSG_TAG: CFSCNM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
CFSCM_SEQ	2
SEARCH_TYPE	2

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall set this field to '000000'.

CFSCM_SEQ - *Candidate Frequency Search Control Message* sequence number.

The base station shall set this field to the *Candidate Frequency Search Control Message* sequence number, as specified in 3.6.6.2.2.5.

SEARCH_TYPE - Search command.

The base station shall set this field to the appropriate SEARCH_TYPE code from Table 3.7.3.3.2.27-1 to indicate the purpose of the message.

3.7.3.3.2.29 Power Up Function Message

MSG_TAG: PUFM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	6
ACTION_TIME_FRAME	2
PUF_SETUP_SIZE	6
PUF_PULSE_SIZE	7
PUF_INTERVAL	10
PUF_INIT_PWR	6
PUF_PWR_STEP	5
TOTAL_PUF_PROBES	4
MAX_PWR_PUF	4
PUF_FREQ_INCL	1
PUF_BAND_CLASS	0 or 5
PUF_CDMA_FREQ	0 or 11

USE_TIME - Use action time indicator.

The base station shall set this field to '1'.

ACTION_TIME - Action time.

The base station shall set this field to the System Time, in units of 80 ms (modulo 64), used in calculating the start of the first PUF probe.

ACTION_TIME_FRAME - Action time frame.

The base station shall set this field to the number of frames after ACTION_TIME that the mobile station is to begin the first PUF probe.

PUF_SETUP_SIZE - Number of PUF setup power control groups.

1		The base station shall set this field to one less than the
2		number of power control groups that the mobile station is to
3		transmit at nominal power prior to transmitting a PUF pulse.
4		The base station shall set the values of PUF_SETUP_SIZE and
5		PUF_PULSE_SIZE so that $[PUF_SETUP_SIZE + 1 +$
6		$PUF_PULSE_SIZE + 1] \bmod 16$ is not equal to 0.
7	PUF_PULSE_SIZE	- Number of PUF pulse power control groups.
8		The base station shall set this field to one less than the
9		number of power control groups that the mobile station is to
10		transmit at elevated power level during the PUF pulse. The
11		base station shall set the values of PUF_SETUP_SIZE and
12		PUF_PULSE_SIZE so that $[PUF_SETUP_SIZE + 1 +$
13		$PUF_PULSE_SIZE + 1] \bmod 16$ is not equal to 0.
14	PUF_INTERVAL	- PUF interval.
15		The base station shall set this field to the number of frames
16		between the start of each PUF probe.
17	PUF_INIT_PWR	- Power increase of initial PUF pulse.
18		The base station shall set this field to the amount (in dB) that
19		the mobile station is to increase its mean output power for
20		the first PUF pulse.
21	PUF_PWR_STEP	- PUF power step.
22		The base station shall set this field to the value (in dB) by
23		which the mobile station is to increment the power of a PUF
24		pulse above nominal power from one PUF pulse to the next.
25	TOTAL_PUF_PROBES	- Total number of PUF probes.
26		The base station shall set this field to one less than the
27		maximum number of PUF probes the mobile station is to
28		transmit in a PUF attempt.
29	MAX_PWR_PUF	- Maximum number of PUF probes transmitted at full power.
30		The base station shall set this field to one less than the
31		number of PUF pulses that the mobile station is to transmit
32		at maximum power level.
33	PUF_FREQ_INCL	- Frequency included indicator.
34		If the mobile station is to change PUF_BAND_CLASS or
35		PUF_CDMA_FREQ, the base station shall set this field to '1';
36		otherwise, the base station shall set this field to '0'.
37	PUF_BAND_CLASS	- Band class.

1 If PUF_FREQ_INCL is set to '1', the base station shall include
2 this field and set it to the CDMA band class corresponding to
3 the CDMA frequency assignment for the CDMA Channel as
4 specified in [30]; otherwise, the base station shall omit this
5 field.

6 PUF_CDMA_FREQ - Frequency assignment.

7 If PUF_FREQ_INCL is set to '1', the base station shall include
8 this field and set it to the CDMA Channel number, in the
9 specified CDMA band class, corresponding to the CDMA
10 frequency for the CDMA Channel as specified in [2];
11 otherwise, the base station shall omit this field.
12

3.7.3.3.2.30 Power Up Function Completion Message

MSG_TAG: PUFCM

Field	Length (bits)
RESERVED	6
LOC_IND	1
RESERVED_1	0 or 3
MS_LAT	0 or 22
MS_LONG	0 or 23
MS_LOC_TSTAMP	0 or 24

RESERVED - Reserved bits.

The base station shall set these bits to '000000'.

LOC_IND - Location indicator

If the base station is to include MS_LAT, MS_LONG, and MS_LOC_TSTAMP in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RESERVED_1 - Reserved bits.

If LOC_IND is equal to '1', the base station shall set these bits to '000'; otherwise, the base station shall not include this field.

MS_LAT - Mobile station latitude.

If LOC_IND is equal to '1', the base station shall set this field to the mobile station's latitude in units of 0.25 second, expressed as a two's complement signed number with positive numbers signifying North latitudes. The base station shall set this field to a value in the range -1296000 to 1296000 inclusive (corresponding to a range of -90° to +90°).

Otherwise, the base station shall not include this field.

MS_LONG - Mobile station longitude.

If LOC_IND is equal to '1', the base station shall set this field to the mobile station's longitude in units of 0.25 second, expressed as a two's complement signed number with positive numbers signifying East longitude. The base station shall set this field to a value in the range -2592000 to 2592000 inclusive (corresponding to a range of -180° to +180°).

Otherwise, the base station shall not include this field.

MS_LOC_TSTAMP - Time stamp.

If LOC_IND is equal to '1', the base station shall set this field to the time at which the mobile station's location parameters were received; otherwise, the base station shall not include this field.

This field is formatted as shown below.

Field	Length (bits)
HOURS	8
MINUTES	8
SECONDS	8
Note: All subfields contain two 4-bit BCD numbers giving the decimal value of the subfield. For example, if the minute is 53, the MINUTES subfield contains '01010011'.	

HOURS - Current hour (UTC).

The base station shall set this field to the current hour (UTC), in the range 0-23.

MINUTES - Current minutes (UTC).

The base station shall set this field to the current minutes (UTC), in the range 0-59.

SECONDS - Current seconds (UTC).

The base station shall set this field to the current seconds (UTC), in the range 0-59.

3.7.3.3.2.31 General Handoff Direction Message

MSG_TAG: GHDM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
HDM_SEQ	2
SEARCH_INCLUDED	1
SRCH_WIN_A	0 or 4
SRCH_WIN_N	0 or 4
SRCH_WIN_R	0 or 4
T_ADD	0 or 6
T_DROP	0 or 6
T_COMP	0 or 4
T_TDROP	0 or 4
SOFT_SLOPE	0 or 6
ADD_INTERCEPT	0 or 6
DROP_INTERCEPT	0 or 6
EXTRA_PARMS	1
P_REV	0 or 8
PACKET_ZONE_ID	0 or 8
FRAME_OFFSET	0 or 4
PRIVATE_LCM	0 or 1
RESET_L2	0 or 1
RESET_FPC	0 or 1
SERV_NEG_TYPE	0 or 1

(continues on next page)

Field	Length (bits)
ENCRYPT_MODE	0 or 2
NOM_PWR_EXT	0 or 1
NOM_PWR	0 or 4
NUM_PREAMBLE	0 or 3
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11
RETURN_IF_HANDOFF_FAIL	0 or 1
COMPLETE_SEARCH	0 or 1
PERIODIC_SEARCH	0 or 1
SCR_INCLUDED	0 or 1
SERV_CON_SEQ	0 or 3
RECORD_TYPE	0 or 8
RECORD_LEN	0 or 8
Type -specific fields	0 or 8 x RECORD_LEN
SUP_CHAN_PARMS_INCLUDED	1
FOR_INCLUDED	0 or 1
FOR_SUP_CONFIG	0 or 2
NUM_FOR_SUP	0 or 3
USE_FOR_DURATION	0 or 1
FOR_DURATION	0 or 8
REV_INCLUDED	0 or 1
REV_DTX_DURATION	0 or 4
CLEAR_RETRY_DELAY	0 or 1
USE_REV_DURATION	0 or 1
REV_DURATION	0 or 8
NUM_REV_CODES	0 or 3
USE_T_ADD_ABORT	0 or 1
REV_PARMS_INCLUDED	0 or 1
T_MULCHAN	0 or 3
BEGIN_PREAMBLE	0 or 3
RESUME_PREAMBLE	0 or 3

(continues on next page)

1

Field	Length (bits)
USE_PWR_CNTL_STEP	1
PWR_CNTL_STEP	0 or 3
NUM_PILOTS	3

NUM_PILOTS occurrences of the following record:

PILOT_PN	9
PWR_COMB_IND	1
FOR_FUND_CODE_CHAN	8
FOR_SUP_INCLUDED	0 or 1
FOR_SUP_CHAN_REC Record	0 or 9 or (1 + 8 × NUM_FOR_SUP)

FPC_SUBCHAN_GAIN	5
USE_PC_TIME	1
PC_ACTION_TIME	0 or 6
RLGAIN_TRAFFIC_PILOT	0 or 6
DEFAULT_RLAG	0 or 1
NNSCR_INCLUDED	0 or 1
RECORD_TYPE	0 or 8
RECORD_LEN	0 or 8
Type-specific fields	0 or 8 x RECORD_LEN
REV_FCH_GATING_MODE	1
REV_PWR_CNTL_DELAY_INCL	0 or 1
REV_PWR_CNTL_DELAY	0 or 2

(continues on next page)

2

3

1

Field	Length (bits)
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
CC_INFO_INCL	0 or 1
NUM_CALLS_ASSIGN	0 or 8

NUM_CALLS_ASSIGN occurrences of the following variable length record

CON_REF	8
RESPONSE_IND	1
TAG	0 or 4
BYPASS_ALERT_ANSWER	0 or 1

2

3

USE_TIME - Use action time indicator.

4

This field indicates whether an explicit action time is specified in this message.

5

6

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

7

8

9

ACTION_TIME - Action time.

10

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the handoff is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

11

12

13

14

HDM_SEQ - *General Handoff Direction Message* sequence number.

15

This field is used by the mobile station in the *Power Measurement Report Message* to identify the order in which the reported pilot strengths are sent.

16

17

18

The base station shall set this field to the handoff message sequence number, as specified in 3.6.6.2.2.10.

19

20

SEARCH_INCLUDED - Pilot search parameters included.

1			If the mobile station is to change its pilot search parameters,
2			the base station shall set this field to '1'; otherwise, the base
3			station shall set this field to '0'.
4	SRCH_WIN_A	-	Search window size for the Active Set and Candidate Set.
5			If SEARCH_INCLUDED is set to '1', the base station shall
6			include the field SRCH_WIN_A and set this field to the window
7			size parameter shown in Table 2.6.6.2.1-1 corresponding to
8			the number of PN chips that the mobile station is to search
9			for pilots in the Active Set and the Candidate Set; otherwise,
10			the base station shall omit this field.
11	SRCH_WIN_N	-	Search window size for the Neighbor Set.
12			If SEARCH_INCLUDED is set to '1', the base station shall
13			include the field SRCH_WIN_N and set this field to the window
14			size parameter shown in Table 2.6.6.2.1-1 corresponding to
15			the search window size to be used by mobile stations for the
16			Neighbor Set after completion of the handoff; otherwise, the
17			base station shall omit this field.
18	SRCH_WIN_R	-	Search window size for the Remaining Set.
19			If SEARCH_INCLUDED is set to '1', the base station shall
20			include the field SRCH_WIN_R and set this field to the window
21			size parameter shown in Table 2.6.6.2.1-1 corresponding to
22			the search window size to be used by mobile stations for the
23			Remaining Set after completion of the handoff; otherwise, the
24			base station shall omit this field.
25	T_ADD	-	Pilot detection threshold.
26			This value is used by the mobile station to trigger the
27			transfer of a pilot from the Neighbor Set or Remaining Set to
28			the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
29			the <i>Pilot Strength Measurement Message</i> or <i>Extended Pilot</i>
30			<i>Strength Measurement Message</i> initiating the handoff process
31			(see 2.6.6.2.5.2).
32			If SEARCH_INCLUDED is set to '1', the base station shall
33			include the field T_ADD and set this field to the pilot
34			detection threshold, expressed as an unsigned binary number
35			equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_0 \rfloor$; otherwise, the base station
36			shall omit this field.
37	T_DROP	-	Pilot drop threshold.
38			This value is used by mobile stations to start a handoff drop
39			timer for pilots in the Active Set and the Candidate Set (see
40			2.6.6.2.3).

- 1 If SEARCH_INCLUDED is set to '1', the base station shall
 2 include the field T_DROP and set this field to the pilot drop
 3 threshold, expressed as an unsigned binary number equal to
 4 $\lfloor -2 \times 10 \times \log_{10} E_c/I_0 \rfloor$; otherwise, the base station shall omit
 5 this field.
- 6 T_COMP - Active Set versus Candidate Set comparison threshold.
- 7 The mobile station transmits a *Pilot Strength Measurement*
 8 *Message* or *Extended Pilot Strength Measurement Message* when
 9 the strength of a pilot in the Candidate Set exceeds that of a
 10 pilot in the Active Set by this margin (see 2.6.6.2.5.2).
- 11 If SEARCH_INCLUDED is set to '1', the base station shall
 12 include the field T_COMP and set this field to the threshold
 13 Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB;
 14 otherwise, the base station shall omit this field.
- 15 T_TDROP - Drop timer value.
- 16 Timer value after which an action is taken by the mobile
 17 station for a pilot that is a member of the Active Set or
 18 Candidate Set, and whose strength has not become greater
 19 than T_DROP. If the pilot is a member of the Active Set, a
 20 *Pilot Strength Measurement Message* or *Extended Pilot Strength*
 21 *Measurement Message* is issued. If the pilot is a member of
 22 the Candidate Set, it will be moved to the Neighbor Set.
- 23 If SEARCH_INCLUDED is set to '1', the base station shall
 24 include the field T_TDROP and set this field to the T_TDROP
 25 value shown in Table 2.6.6.2.3-1 corresponding to the drop
 26 timer value to be used by the mobile station; otherwise, the
 27 base station shall omit this field.
- 28 SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the
 29 active set, or dropping a pilot from the active set (see 2.6.6.2.3
 30 and 2.6.6.2.5.2).
- 31 If SEARCH_INCLUDED is set to '1', the base station shall
 32 include the field SOFT_SLOPE in the additional fields and set
 33 this field as an unsigned binary number; otherwise, the base
 34 station shall omit this field.
- 35 ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to
 36 the active set (see 2.6.6.2.5.2).
- 37 If SEARCH_INCLUDED is set to '1', the base station shall
 38 include the field ADD_INTERCEPT in the additional fields and
 39 set this field as a two's complement signed binary number;
 40 otherwise, the base station shall omit this field.

1	DROP_INTERCEPT	-	The intercept in the inequality criterion for dropping a pilot
2			from the active set (see 2.6.6.2.3).
3			If SEARCH_INCLUDED is set to '1', the base station shall
4			include the field DROP_INTERCEPT in the additional fields
5			and set this field as a two's complement signed binary number;
6			otherwise, the base station shall omit this field.
7	EXTRA_PARMS	-	Extra parameters included.
8			If the mobile station is to change FRAME_OFFSET,
9			PRIVATE_LCM, ENCRYPT_MODE, NOM_PWR, BAND_CLASS, or
10			CDMA_FREQ, or the mobile station is to perform a reset of the
11			acknowledgment procedures, or the mobile station is to reset
12			Forward Traffic Channel power control counters, the base
13			station shall set this field to '1'; otherwise, the base station
14			shall set this field to '0'.
15	P_REV	-	Protocol revision level.
16			If EXTRA_PARMS is set to '1', the base station shall set this
17			field to the base station protocol revision level that the mobile
18			station is to use after completion of the handoff; otherwise,
19			the base station shall omit this field.
20	PACKET_ZONE_ID	-	Packet data services zone identifier.
21			If EXTRA_PARMS is set to '1', the base station shall include
22			the field PACKET_ZONE_ID and set this field as described
23			below; otherwise, the base station shall omit this field.
24			If the base station supports a packet data service zone, the
25			base station shall set this field to the non-zero packet data
26			services zone identifier that the mobile station is to use after
27			completion of the handoff.
28			If the base station does not support a packet data service
29			zone, the base station shall set this field to '00000000'.
30	FRAME_OFFSET	-	Frame offset.
31			The Forward and Reverse Traffic Channel frames are delayed
32			$\text{FRAME_OFFSET} \times 1.25$ ms relative to system timing (see of
33			[2]).
34			If EXTRA_PARMS is set to '1', the base station shall include
35			the field FRAME_OFFSET and set this field to the Forward and
36			Reverse Traffic Channel frame offset; otherwise, the base
37			station shall omit this field.
38	PRIVATE_LCM	-	Private long code mask indicator.

This field is used to change the long code mask after a hard handoff.

If EXTRA_PARMS is set to '1', the base station shall include the field PRIVATE_LCM and set this field as described below; otherwise, the base station shall omit this field.

If the private long code mask is to be used after the handoff, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RESET_L2 - Reset acknowledgment procedures command.

This field is used to reset acknowledgment processing in the mobile station.

If EXTRA_PARMS is set to '1', the base station shall include the field RESET_L2 and set this field as described below; otherwise, the base station shall omit this field.

If the field is included and the mobile station is to reset its acknowledgment procedures, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RESET_FPC - Reset Forward Traffic Channel power control.

This field is used to reset the Forward Traffic Channel power control counters.

If EXTRA_PARMS is set to '1', the base station shall include the field RESET_FPC and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to '0' if the Forward Traffic Channel power control counters are to be maintained after completion of the handoff. If the counters are to be initialized as specified in 2.6.4.1.1.1, then the base station shall set this field to '1'.

SERV_NEG_TYPE - Service negotiation type.

If EXTRA_PARMS is set to '1', the base station shall include the field SERV_NEG_TYPE and set this field as described below; otherwise, the base station shall omit this field.

If the mobile station is to use service negotiation, the base station shall set this field to '1'. If the mobile station is to use service option negotiation, the base station shall set this field to '0'.

1	ENCRYPT_MODE	-	Message encryption mode.
2			If EXTRA_PARMS is set to '1', the base station shall include
3			the field ENCRYPT_MODE and set this field to the
4			ENCRYPT_MODE value shown in Table 3.7.2.3.2.8-2
5			corresponding to the encryption mode that is to be used for
6			messages sent on the Forward and Reverse Traffic Channels,
7			as specified in 2.3.12.2; otherwise, the base station shall omit
8			this field.
9	NOM_PWR_EXT	-	Extended nominal transmit power.
10			If EXTRA_PARMS is set to '1', the base station shall include
11			this field and set this field as described below; otherwise, the
12			base station shall omit this field.
13			If this field is included, a Band Class 0 base station shall set
14			this field to '0'.
15			If this field is included, a Band Class 1 base station shall set
16			this field to '1' if the correction factor to be used by the mobile
17			station in the open loop power estimate is between -24 dB and
18			-9 dB inclusive; otherwise (the correction factor is in the
19			range -8 dB to 7 dB inclusive), the base station shall set this
20			field to '0'.
21	NOM_PWR	-	Nominal transmit power offset.
22			If EXTRA_PARMS is set to '1', the base station shall include
23			the field NOM_PWR and set this field to the correction factor
24			to be used by the mobile station in the open loop power
25			estimate, expressed as a two's complement value in units of 1
26			dB (see [2]); otherwise, the base station shall omit this field.
27	NUM_PREAMBLE	-	Traffic Channel preamble length.
28			If EXTRA_PARMS is set to '0', the base station shall omit the
29			NUM_PREAMBLE field; otherwise, the base station shall
30			include this field and set it to the length of Traffic Channel
31			preamble that the mobile station is to send when performing
32			a handoff; as follows:
33			If, after the handoff, radio configuration 1 or radio
34			configuration 2 is to be used, the base station shall set
35			NUM_PREAMBLE to the Traffic Channel preamble length in
36			20 ms units; otherwise, the base station shall set
37			NUM_PREAMBLE to the value shown in Table 3.7.3.3.2.17-1
38			corresponding to the Traffic Channel preamble length in 1.25
39			ms units.
40	BAND_CLASS	-	Band class.

1			If EXTRA_PARMS is set to '1', the base station shall include
2			the field BAND_CLASS and set this field to the CDMA band
3			class corresponding to the CDMA frequency assignment for
4			the CDMA Channel as specified in [30]; otherwise, the base
5			station shall omit this field.
6	CDMA_FREQ	-	Frequency assignment.
7			If EXTRA_PARMS is set to '1', the base station shall include
8			the field CDMA_FREQ and set this field to the CDMA Channel
9			number, in the specified CDMA band class, corresponding to
10			the CDMA frequency assignment for the CDMA Channel as
11			specified in [2]; otherwise, the base station shall omit this
12			field.
13	RETURN_IF_HANDOFF-	-	Return on failure flag.
14	_FAIL		If EXTRA_PARMS is set to '1', the base station shall include
15			the field RETURN_IF_HANDOFF_FAIL and set this field as
16			described below; otherwise, the base station shall omit this
17			field.
18			If the base station includes this field, it shall set this field to
19			'1' if the mobile station is to resume the use of the Active Set
20			on the Serving Frequency following an unsuccessful hard
21			handoff attempt, as specified in 2.6.6.2.8.2; otherwise, the
22			base station shall set this field to '0'.
23	COMPLETE_SEARCH	-	Flag to complete search.
24			If RETURN_IF_HANDOFF_FAIL is included and is set to '1', the
25			base station shall include the field COMPLETE_SEARCH and
26			set this field as described below; otherwise, the base station
27			shall omit this field.
28			If the base station includes this field, it shall set this field to
29			'1' if the mobile station is to complete the search of the
30			Candidate Frequency Search Set before resuming the use of
31			the Active Set on the Serving Frequency when an inter-
32			frequency handoff attempt is unsuccessful, as specified in
33			2.6.6.2.8.2; otherwise, the base station shall set this field to
34			'0'.
35	PERIODIC_SEARCH	-	Flag to search the Candidate Frequency periodically.
36			If EXTRA_PARMS is set to '1', the base station shall include
37			the field PERIODIC_SEARCH and set this field as described
38			below; otherwise, the base station shall omit this field.

- 1 If the base station includes this field, it shall set this field to
 2 '1' if the mobile station is to periodically search the Candidate
 3 Frequency, as specified in 2.6.6.2.8.3; otherwise, the base
 4 station shall set this field to '0'.
- 5 SCR_INCLUDED - Service Configuration Record included indicator.
 6
 7 If EXTRA_PARMS is set to '1', the base station shall include
 8 the field SCR_INCLUDED and shall set this field as described
 9 below; otherwise, the base station shall omit this field.
 10
 11 The base station shall set this field to '1' if it includes Service
 12 Configuration Record in the message; otherwise, the base
 13 station shall set this field to '0'.
- 12 SERV_CON_SEQ - Connect sequence number.
 13
 14 If SCR_INCLUDED is included and is set to '1', the base
 15 station shall include the field SERV_CON_SEQ and shall set
 16 this field to the connect sequence number pertaining to this
 17 service configuration as specified in 3.6.4.1.2.1.2.
- 17 If SCR_INCLUDED is included and is set to '1', the base station shall include one
 18 occurrence of the following three-field record to specify the service configuration.
- 19 RECORD_TYPE - Information record type.
 20
 21 If SCR_INCLUDED is included and is set to '1', the base
 22 station shall include the field RECORD_TYPE and shall set
 23 this field to the record type value shown in Table 3.7.5-1
 24 corresponding to the Service Configuration information
 25 record.
- 25 RECORD_LEN - Information record length.
 26
 27 If SCR_INCLUDED is included and is set to '1', the base
 28 station shall include the field RECORD_LEN and shall set this
 29 field to the number of octets included in the type-specific
 30 fields of the Service Configuration information record.
- 30 Type-specific fields - Type -specific fields.
 31
 32 If SCR_INCLUDED is included and is set to '1', the base
 33 station shall include the type specific fields and shall set
 34 these fields as specified in 3.7.5.7 for the Service
 35 Configuration information record.
- 35 SUP_CHAN_PARAMS- - Supplemental channel parameters included indicator.
 36 _INCLUDED
 37 The base station shall set this field to '1' if the base station
 38 includes the FOR_INCLUDED, REV_INCLUDED, and
 39 REV_PARMS_INCLUDED fields in the message; otherwise, the
 40 base station shall set this field to '0'.

FOR_INCLUDED - Forward assignment information included indicator.

If SUP_CHAN_PARMS_INCLUDED is set to '1', the base station shall include the field FOR_INCLUDED and set this field as described below; otherwise, the base station shall omit this field.

If the base station includes this field, it shall set this field to '1' if Forward Supplemental Code Channel assignment information is included in the message; otherwise, the base station shall set this field to '0'.

FOR_SUP_CONFIG - Forward Supplemental Code Channel configuration indicator.

If FOR_INCLUDED is included and is set to '1', the base station shall include the field FOR_SUP_CONFIG and set this field according to the following rules:

The base station shall set this field to '00' if Forward Supplemental Code Channels are not specified in the message, and the mobile station is to stop processing all Forward Supplemental Code Channels.

The base station shall set this field to '01' if Forward Supplemental Code Channels are not specified in the message, and the mobile station is to start processing the Forward Supplemental Code Channels previously stored in its Code Channel List, CODE_CHAN_LIST_S.

The base station shall set this field to '10' if the Forward Supplemental Code Channels are specified in the message, and the mobile station is to stop processing all Forward Supplemental Code Channels in CODE_CHAN_LIST_S, and to update the CODE_CHAN_LIST_S, according to the information contained in the message.

The base station shall set this field to '11' if the Forward Supplemental Code Channels are specified in the message, and the mobile station is to update its Code Channel List, CODE_CHAN_LIST_S, according to the information contained in the message and to start processing the Forward Supplemental Code Channels.

NUM_FOR_SUP - Number of Forward Supplemental Code Channels.

1			If FOR_SUP_CONFIG is included and is set to '10' or '11', the
2			base station shall include the field NUM_FOR_SUP and set it
3			to the number of Forward Supplemental Code Channels
4			assigned to the mobile station; otherwise, the base station
5			shall omit this field. NUM_FOR_SUP shall not exceed the
6			maximum number of Forward Supplemental Code Channels
7			for the negotiated multiplex option.
8	USE_FOR_DURATION	-	Use forward duration indicator.
9			If FOR_SUP_CONFIG is included and is set to '01' or '11' the
10			base station shall include the field USE_FOR_DURATION and
11			set this field as described below; otherwise the base station
12			shall omit this field.
13			The base station shall set this field to '1' if the
14			FOR_DURATION field is included in the message and the
15			mobile station is to process the Forward Supplemental Code
16			Channels for a time duration indicated by FOR_DURATION.
17			The base station shall set this field to '0' if the mobile station
18			is to process the Forward Supplemental Code Channels for an
19			indefinite duration (i.e., the mobile station is to continue
20			processing Forward Supplemental Code Channels until it
21			receives a subsequent <i>Supplemental Channel Assignment</i>
22			<i>Message</i> or a <i>General Handoff Direction Message</i> that specifies
23			a different Forward Supplemental Code Channel assignment.
24	FOR_DURATION	-	Duration of Forward Supplemental Code Channel assignment.
25			If USE_FOR_DURATION is included and is set to '1' the base
26			station shall include the field FOR_DURATION and set this
27			field to the allocated duration, in units of 80 ms, for which the
28			mobile station is to process the Forward Supplemental Code
29			Channels; otherwise, the base station shall omit this field.
30	REV_INCLUDED	-	Reverse assignment information included indicator.
31			If SUP_CHAN_PARMS_INCLUDED is set to '1', the base station
32			shall include the field REV_INCLUDED and set this field as
33			described below; otherwise, the base station shall omit this
34			field.
35			If the base station includes this field, it shall set this field to
36			'1' if Reverse Supplemental Code Channel assignment
37			information is included in the message; otherwise, the base
38			station shall set this field to '0'.
39	REV_DTX_DURATION	-	Reverse Discontinuous Transmission Duration.

If REV_INCLUDED is included and is set to '1', the base station shall include the field REV_DTX_DURATION; otherwise the base station shall omit this field.

If the base station includes this field, it shall set this field to the maximum duration of time in units of 20 ms that the mobile station is allowed to stop transmission on a Reverse Supplemental Code Channel within the reverse assignment duration. The base station shall set this field to '0000' if the mobile station is to stop using a Reverse Supplemental Code Channel once it has stopped transmitting on that Reverse Supplemental Channel. The base station shall set this field to '1111' if the mobile station is allowed to resume transmission on a Reverse Supplemental Code Channel at any time within the reverse assignment duration.

CLEAR_RETRY_DELAY - Clear retry delay indicator.

If REV_INCLUDED is included and is set to '1', the base station shall include the field CLEAR_RETRY_DELAY and set this field as described below; otherwise the base station shall omit this field.

The base station shall set this field to '1' to indicate that the mobile station is to clear any existing retry delay which it has stored (see 2.6.6.2.5.1); otherwise, the base station shall set this field to '0'.

USE_REV_DURATION - Use reverse duration indicator.

If REV_INCLUDED is included and is set to '1', the base station shall include the field USE_REV_DURATION and set this field as described below; otherwise the base station shall omit this field.

The base station shall set this field to '1' if the REV_DURATION field is included in the message and the mobile station is allowed to transmit on the Reverse Supplemental Code Channels for a time duration indicated by REV_DURATION.

The base station shall set this field to '0' if the mobile station is allowed to transmit on the Reverse Supplemental Code Channels for an indefinite duration (i.e., the mobile station may continue to transmit on the Reverse Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Reverse Supplemental Code Channel assignment.

1	REV_DURATION	-	Duration of Reverse Supplemental Code Channel Assignment.
2			
3			If USE_REV_DURATION is included and is set to '1', the base
4			station shall include the field REV_DURATION and set this
5			field to the allocated duration, in units of 80 ms, for which the
6			mobile station may transmit on Reverse Supplemental Code
7			Channels; otherwise the base station shall omit this field.
8	NUM_REV_CODES	-	Number of Reverse Supplemental Code Channels.
9			If REV_INCLUDED is included and is set to '1', the base
10			station shall include the field NUM_REV_CODES and set this
11			field to the number of Reverse Supplemental Code Channels
12			which are assigned to the mobile station; otherwise the base
13			station shall omit this field.
14	USE_T_ADD_ABORT	-	Reverse use T_ADD abort indicator.
15			If REV_INCLUDED is included and is set to '1', the base
16			station shall include the field USE_T_ADD_ABORT and set
17			this field as described below; otherwise the base station shall
18			omit this field.
19			The base station shall set this field to '1' to indicate that the
20			mobile station is to use the T_ADD Reverse Supplemental
21			Code Channel abort feature for this reverse assignment;
22			otherwise, the base station shall set this field to '0'.
23	REV_PARM-		
24	_INCLUDED	-	Reverse assignment parameters included indicator.
25			If SUP_CHAN_PARMs_INCLUDED is set to '1', the base station
26			shall include the field REV_PARMs_INCLUDED and set this
27			field as described below; otherwise, the base station shall
28			omit this field.
29			If the base station includes this field, it shall set this field to
30			'1' if the following three fields are included in the message;
31			otherwise, the base station shall set this field to '0'.
32	T_MULCHAN	-	<i>Supplemental Channel Request Message</i> pilot strength reporting
33			offset.
34			If REV_PARMs_INCLUDED is included and is set to '1', the
35			base station shall include the field T_MULCHAN and set this
36			field as described below; otherwise the base station shall omit
37			this field.

1		The base station shall set this field to the threshold offset
2		that the mobile station is to use when reporting neighbor
3		pilot strength measurements in a <i>Supplemental Channel</i>
4		<i>Request Message</i> . The mobile station is to interpret this field
5		as an offset to T_ADD ranging from 0.5 dB (corresponding to
6		T_MULCHAN = '000') to 4.0 dB (corresponding to T_MULCHAN
7		= '111'), in 0.5 dB increments.
8	BEGIN_PREAMBLE	- Number of preamble frames on Reverse Supplemental Code
9		Channels at the beginning of transmission on Reverse
10		Supplemental Code Channel.
11		If REV_PARMS_INCLUDED is included and is set to '1', the
12		base station shall include the field BEGIN_PREAMBLE and set
13		this field to the number of Reverse Supplemental Code
14		Channel preamble frames that the mobile station is to send
15		when beginning transmission on Reverse Supplemental Code
16		Channels; otherwise the base station shall omit this field.
17	RESUME_PREAMBLE	- Number of preamble frames on Reverse Supplemental Code
18		Channels at the resumption of transmission.
19		If REV_PARMS_INCLUDED is included and is set to '1', the
20		base station shall include the field RESUME_PREAMBLE and
21		set this field to the number of Reverse Supplemental Code
22		Channel preamble frames that the mobile station is to send
23		when resuming transmission on a Reverse Supplemental
24		Code Channel following an autonomous suspension of
25		transmission on an allocated Supplemental Code Channel;
26		otherwise the base station shall omit this field.
27	USE_PWR_CNTL_STEP	- Power control step size indicator.
28		The base station shall set this field to '1' if the field
29		PWR_CNTL_STEP is included in the message.
30	PWR_CNTL_STEP	- Power control step size.
31		If USE_PWR_CNTL_STEP is set to '1', then the base station
32		shall include the field PWR_CNTL_STEP and set this field to
33		the step size that the mobile station is to use for closed loop
34		power control, according to Table 3.7.3.3.2.25-1; otherwise,
35		the base station shall omit this field.
36	NUM_PILOTS	- Number of pilots included in the message.
37		The base station shall set this field to the number of pilots
38		included in the message. The base station shall set this field
39		to an integer that is equal to or greater than 1.
40		

The base station shall include one occurrence of the following four-part record for each of the NUM_PILOTS pilots included in the message:

- PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this pilot in units of 64 PN chips.
- PWR_COMB_IND - Power control symbol combining indicator.

If the Forward Traffic Channel associated with this pilot will carry the same closed-loop power control subchannel bits as that of the previous pilot in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. The base station shall set this field to '0' in the first record in the pilot list.
- FOR_FUND_CODE-
_CHAN - Forward Fundamental Channel.

The base station shall set this field to the code channel index to be used for the Forward Fundamental Channel associated with this pilot.
- FOR_SUP_INCLUDED - Forward Supplemental Code Channel included.

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the Forward Fundamental Channel associated with this pilot. If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used, the base station shall set this field in the range 1 to 63 inclusive. If Radio Configuration 4, 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.
- FOR_SUP_CHAN_REC - Forward Supplemental Code Channel record

If FOR_SUP_INCLUDED is set to '1', the base station shall include the record FOR_SUP_CHAN_REC and set its fields as described below; otherwise, the base station shall omit this record.

FOR_SUP_CHAN_REC contains information about Forward Supplemental Code Channels associated with this pilot, and consists of the field EXPL_CODE_CHAN, and either the BASE_CODE_CHAN field or NUM_FOR_SUP occurrences of the FOR_SUP_CODE_CHAN field, as shown below.

EXPL_CODE_CHAN	1
BASE_CODE_CHAN	0 or 8

If EXPL_CODE_CHAN is equal to '1', NUM_FOR_SUP occurrences of the following field:

FOR_SUP_CODE_CHAN	8
-------------------	---

EXPL_CODE_CHAN - Explicit code channel indicator.

The base station shall set this field to '1' to indicate explicit assignment of each Forward Supplemental Code Channel by means of the field FOR_SUP_CODE_CHAN. The base station shall set this field to '0' if the mobile station is to use NUM_FOR_SUP adjacent code channels beginning with index BASE_CODE_CHAN (i.e., BASE_CODE_CHAN through BASE_CODE_CHAN + NUM_FOR_SUP - 1).

In both cases (i.e., the explicit code channel list format and range format), the order of the code channel indices is the same for all pilots specified in this message (i.e., for each pilot, the i^{th} entry in the list indicates the code channel index to be used for the i^{th} Forward Supplemental Code Channel associated with that pilot).

BASE_CODE_CHAN - Base code channel index.

If the EXPL_CODE_CHAN field is included and is set to '0' the base station shall include the field BASE_CODE_CHAN and set this field as described below; otherwise the base station shall omit this field.

The base station shall set this field to the base code channel index (see [2]) in the range of 1 to (63 - NUM_FOR_SUP + 1), inclusive, that the mobile station is to use as the first Forward Supplemental Code Channel associated with this pilot. The mobile station is to use code channel index (BASE_CODE_CHAN + i - 1), where i ranges from 1 to NUM_FOR_SUP, for the i^{th} Forward Supplemental Code Channel associated with this pilot.

FOR_SUP_CODE_CHAN - Forward Supplemental Code Channel.

If EXPL_CODE_CHAN is included and is set to '1', the base station shall include NUM_FOR_SUP occurrences of the field FOR_SUP_CODE_CHAN and set this field as described below; otherwise the base station shall omit this field.

1		The base station shall set the i^{th} occurrence of this field to
2		the code channel index (see [2]), in the range 1 to 63
3		inclusive, that the mobile station is to use for the i^{th} Forward
4		Code Channel associated with this pilot.
5	FPC_SUBCHAN_GAIN	- Forward power control subchannel relative gain.
6		The base station shall set FPC_SUBCHAN_GAIN equal to the
7		power level of the forward link power control subchannel
8		relative to that of 20 ms frames at a 9600 bps or 14400 bps
9		rate on the Forward Fundamental Channel or the Forward
10		Dedicated Control Channel that the Forward Power Control
11		Subchannel is punctured on. The base station shall set the
12		value in units of 0.25 dB.
13	USE_PC_TIME	- Use power control action time indicator.
14		This field indicates whether an explicit time
15		[PC_ACTION_TIME] at which a new value for Power Control
16		Subchannel to traffic ratio (FPC_SUBCHAN_GAIN) takes effect
17		is specified in the message.
18		If an explicit action time is specified in this message, the
19		base station shall set this field to '1'; otherwise, the base
20		station shall set this field to '0'.
21	PC_ACTION_TIME	- Power Control Subchannel gain action time.
22		If the USE_PC_TIME field is set to '1', the base station shall
23		set this field to the System Time, in units of 80 ms (modulo
24		64), at which FPC_SUBCHAN_GAIN specified in this message
25		is to take effect. If the USE_PC_TIME field is set to '0' the
26		base station shall omit this field.
27	RLGAIN_TRAFFIC-	
28	_PILOT	- Gain adjustment of the Reverse Traffic Channel relative to
29		the Reverse Pilot Channel power for Radio Configurations
30		greater than 2.
31		If EXTRA_PARMS is set to '1', the base station shall include
32		this field and set it to the correction factor to be used by
33		mobile stations in setting the power of a code channel,
34		expressed as a two's complement value in units of 0.125 dB
35		(see 2.1.2.3.3 of [2]); otherwise, the base station shall omit
36		this field.
37	DEFAULT_RLAG	- Default reverse link attribute gain used indicator.
38		If EXTRA_PARMS is set to '0', the base station shall omit this
39		field; otherwise, the base station set this field as follows.

1 If the mobile station is to use the default values for the
 2 reverse link attribute gain, as specified in Table 2.1.2.3.3-1 of
 3 [2] after completion of handoff, the base station shall set this
 4 field to '1'; otherwise, the base station shall set this field to
 5 '0'.

6 NNSCR_INCLUDED - Non-negotiable Service Configuration Record included
 7 indicator.

8 The base station shall omit this field, if EXTRA_PARMS is set
 9 to '0'; otherwise, the base station shall include this field and
 10 set this field as described below:

11 The base station shall set this field to '1', if the Non-
 12 negotiable Service Configuration record is included in this
 13 message; otherwise, the base station shall set this field to '0'.

14 If NNSCR_INCLUDED is included and is set to '1', the base station shall include one
 15 occurrence of the following three-field record to specify the non-negotiable service
 16 configuration parameters.

17 RECORD_TYPE - Information record type.

18 If NNSCR_INCLUDED is included and is set to '1', the base
 19 station shall include the field RECORD_TYPE and shall set
 20 this field to the record type value shown in Table 3.7.5-1
 21 corresponding to the Non-Negotiable Service Configuration
 22 information record.

23 RECORD_LEN - Information record length.

24 If NNSCR_INCLUDED is included and is set to '1', the base
 25 station shall include the field RECORD_LEN and shall set this
 26 field to the number of octets included in the type-specific
 27 fields of the Non-Negotiable Service Configuration
 28 information record.

29 Type-specific fields - Type-specific fields.

30 If NNSCR_INCLUDED is included and is set to '1', the base
 31 station shall include the type specific fields and shall set
 32 these fields as specified in 3.7.5.20 for the Non-Negotiable
 33 Service Configuration information record.

34 .

35 REV_FCH-

36 _GATING_MODE - Reverse eighth gating mode indicator.

37 The base station shall set this field to '1' if the mobile station
 38 is allowed to perform the reverse eighth gating mode after
 39 handoff; otherwise, the base station shall set this field to '0'.

1	REV_PWR-	
2	_CNTL_DELAY_INCL	- Reverse power control delay included indicator.
3		If REV_FCH_GATING_MODE is set to '0', the base station shall
4		omit this field; otherwise, the base station shall include this
5		field and set it as follows:
6		The base station shall set this field to '1' if
7		REV_PWR_CNTL_DELAY is included in this message;
8		otherwise, the base station shall set this field to '0'.
9	REV_PWR-	
10	_CNTL_DELAY	- The reverse power control delay.
11		If REV_PWR_CNTL_DELAY_INCL is set to '0', the base station
12		shall omit this field; otherwise, the base station shall include
13		this field and set it as follows:
14		The base station shall set this field to the closed-loop reverse
15		power control delay minus one (the closed-loop reverse power
16		control delay is the time between the end of a gated-on
17		reverse PCG and the beginning of the reverse PCG where the
18		corresponding feedback is sent on the Forward Power Control
19		Subchannel, see 2.1.2.3.2 of [2]) used by the mobile station
20		after handoff, in units of 1.25 ms. To disable the gating on the
21		reverse Fundamental Channel, the base station shall set this
22		field to '000'.
23	KEY_SIZE	- Encryption key size indication.
24		If EXTRA_PARMS is set to '1', the base station shall include
25		this field and set this field as described below; otherwise, the
26		base station shall omit this field.
27		The base station shall set this field to the encryption key size, as
28		shown in Table 3.7.4.5-2.
29	USE_NEW_KEY	- Use new encryption key indication
30		If ENCRYPT_MODE is set to '10' or '11', the base station shall
31		include this field. If this field is included, the base station shall
32		set this field to '0' to indicate that the stored encryption key to be
33		used by the mobile station. Otherwise, the base station shall set
34		this field to '1' to indicate that the new encryption key to be used
35		by the mobile station.
36	KEY_SEQ	- Encryption key sequence number.

1			If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to
2			'0', the base station shall include this field and shall set it to the
3			encryption key sequence number to be used by the mobile
4			station. If ENCRYPT_MODE is set to a value other than '10' or '11'
5			or USE_NEW_KEY is set to '1', the base station shall omit this
6			field.
7	CC_INFO_INCL	-	Call Control information included indicator.
8			If the SCR_INCLUDED field is not included or is included but
9			is set to '0', the base station shall omit this field; otherwise,
10			the base station shall include this field and set it as follows:
11			The base station shall set this field to '1' if Call Control
12			related parameters (to assign new call(s)) are included in this
13			message; otherwise, the base station shall set this field to '0'.
14	NUM_CALLS_ASSIGN	-	Number of call assignments.
15			If the CC_INFO_INCL field is not included or is included but is
16			set to '0', the base station shall omit this field; otherwise, the
17			base station shall include this field and set it as follows:
18			The base station shall set this field to the number of new call
19			assignments included in this message.
20	The base station shall include NUM_CALLS_ASSIGN occurrences of the following variable		
21	length record.		
22	CON_REF	-	Connection reference.
23			The base station shall set this field to the connection
24			reference of the service option connection corresponding to
25			this call.
26	RESPONSE_IND	-	Response indicator.
27			The base station shall set this field to '1' if this call
28			assignment is a response to an <i>Enhanced Origination Message</i>
29			from the mobile station; otherwise, the base station shall set
30			this field to '0'.
31	TAG	-	Transaction identifier.
32			If the RESPONSE_IND field is set to '0', the base station shall
33			omit this field; otherwise, the base station shall include this
34			field and set it as follows:

1 The base station shall set this field to the value of the TAG
2 field received in the *Enhanced Origination Message* to which
3 this call assignment is the response.

4 BYPASS_ALERT-

5 _ANSWER - Bypass alert indicator.

6 If the RESPONSE_IND field is set to '1', the base station shall
7 omit this field; otherwise, the base station shall include this
8 field and set it as follows:

9 If the mobile station is to bypass the *Waiting for Order Substate*
10 and the *Waiting for Mobile Station Answer Substate* for this call, the
11 base station shall set this field to '1'; otherwise, the base station
12 shall set this field to '0'.
13

3.7.3.3.2.32 Resource Allocation Message

MSG_TAG: RAM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
FPC_PRI_CHAN	1

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which this message is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

FPC_PRI_CHAN - Power Control Subchannel indicator.

The base station shall set this field to '0' if the mobile station is to perform the primary inner loop estimation on the received Forward Fundamental Channel and the base station is to multiplex the Power Control Subchannel on the Forward Fundamental Channel. The base station shall set this field to '1' if the mobile station is to perform the primary inner loop estimation on the received Forward Dedicated Control Channel and the base station is to multiplex the Power Control Subchannel on the Forward Dedicated Control Channel.

If only Fundamental Channel is assigned, the base station shall set this field to '0'. If only the Dedicated Control Channel is assigned, the base station shall set this field to '1'.

3.7.3.3.2.33 Resource Allocation Mini Message

MSG_TAG: RAMM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
FPC_PRI_CHAN	1

USE_TIME - Use action time indicator.

This field indicates whether an ACTION_TIME is specified in this message.

If an ACTION_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

FPC_PRI_CHAN - Power Control Subchannel indicator.

The base station shall set this field to '0' if the mobile station is to perform the primary inner loop estimation on the received Forward Fundamental Channel and the base station is to multiplex the Power Control Subchannel on the Forward Fundamental Channel. The base station shall set this field to '1' if the mobile station is to perform the primary inner loop estimation on the received Forward Dedicated Control Channel and the base station is to multiplex the Power Control Subchannel on the Forward Dedicated Control Channel.

If only Fundamental Channel is assigned, the base station shall set this field to '0'. If only the Dedicated Control Channel is assigned, the base station shall set this field to '1'.

3.7.3.3.2.34 Extended Release Message

MSG_TAG: ERM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
CH_IND	3
GATING_RATE_INCL	1
PILOT_GATING_RATE	0 or 2

USE_TIME - Use action time indicator.

This field indicates whether an explicit action time is specified in this message.

If an explicit action time is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

CH_IND - Channel Indicator.

The base station shall set this field as shown in Table 3.7.3.3.2.34-1, to release physical resources.

Table 3.7.3.3.2.34-1. Channel Indicator

CH_IND (binary)	Physical Resource(s) Released
000	Reserved
001	Fundamental Channel
010	Dedicated Control Channel
011	Reserved
100	Continuous Reverse Pilot Channel
101	Fundamental Channel and Continuous Reverse Pilot Channel
110	Dedicated Control Channel and Continuous Reverse Pilot Channel
111	Fundamental Channel, Dedicated Control Channel, and Continuous Reverse Pilot Channel

GATING_RATE_INCL - Reverse pilot gating rate included flag.

The base station shall set this field to '1' if the PILOT_GATING_RATE field is included, otherwise it shall set this field to '0'.

PILOT_GATING_RATE - Actual Reverse Pilot gating Rate.

If the GATING_RATE_INCL field is set to '1' then the base station shall set this field to the PILOT_GATING_RATE field shown in Table 3.7.3.3.2.34-2 corresponding to the actual gating rate on the Reverse Pilot Channel; otherwise, the base station shall omit this field.

Table 3.7.3.3.2.34-2. Actual Reverse Pilot Gating rate

PILOT_GATING_RATE field (binary)	Meaning
00	Gating rate 1
01	Gating rate $\frac{1}{2}$
10	Gating rate $\frac{1}{4}$
11	Reserved

3.7.3.3.2.35 Extended Release Mini Message

MSG_TAG: ERMM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
CH_IND	3
GATING_RATE_INCL	1
PILOT_GATING_RATE	0 or 2

USE_TIME - Use action time indicator.

This field indicates whether an ACTION_TIME is specified in this message.

If an ACTION_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

CH_IND - Channel Indicator.

The base station shall set this field as shown in Table 3.7.3.3.2.34-1, to release physical resources.

GATING_RATE_INCL - Reverse pilot gating rate included flag.

The base station shall set this field to '1' if the PILOT_GATING_RATE field is included, otherwise it shall set this field to '0'.

PILOT_GATING_RATE - Actual Reverse Pilot gating Rate.

If the GATING_RATE_INCL field is set to '1' then the base station shall set this field to the PILOT_GATING_RATE field shown in Table 3.7.3.3.2.34-2 corresponding to the actual gating rate on the Reverse Pilot Channel; otherwise, the base station shall omit this field.

1 3.7.3.3.2.36 Universal Handoff Direction Message

2 MSG_TAG: UHDM

3

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
HDM_SEQ	2
PARMS_INCL	1
P_REV	0 or 8
SERV_NEG_TYPE	0 or 1
SEARCH_INCLUDED	1
SRCH_WIN_A	0 or 4
SRCH_WIN_N	0 or 4
SRCH_WIN_R	0 or 4
T_ADD	0 or 6
T_DROP	0 or 6
T_COMP	0 or 4
T_TDROP	0 or 4
SOFT_SLOPE	0 or 6
ADD_INTERCEPT	0 or 6
DROP_INTERCEPT	0 or 6
EXTRA_PARMS	1
PACKET_ZONE_ID	0 or 8
FRAME_OFFSET	0 or 4
PRIVATE_LCM	0 or 1
RESET_L2	0 or 1
RESET_FPC	0 or 1

(continues on next page)

4

5

1

Field	Length (bits)
ENCRYPT_MODE	0 or 2
NOM_PWR_EXT	0 or 1
NOM_PWR	0 or 4
RLGAIN_TRAFFIC_PILOT	0 or 6
DEFAULT_RLAG	0 or 1
NUM_PREAMBLE	0 or 3
BAND_CLASS	0 or 5
CDMA_FREQ	0 or 11
RETURN_IF_HANDOFF_FAIL	0 or 1
COMPLETE_SEARCH	0 or 1
PERIODIC_SEARCH	0 or 1
SCR_INCLUDED	0 or 1
SERV_CON_SEQ	0 or 3
RECORD_TYPE	0 or 8
RECORD_LEN	0 or 8
Type -specific fields	0 or 8 x RECORD_LEN
NNSCR_INCLUDED	0 or 1
RECORD_TYPE	0 or 8
RECORD_LEN	0 or 8
Type -specific fields	0 or 8 x RECORD_LEN

(continues on next page)

2

3

1

Field	Length (bits)
USE_PWR_CNTL_STEP	1
PWR_CNTL_STEP	0 or 3
CLEAR_RETRY_DELAY	1
SCH_INCL	1
NUM_FOR_ASSIGN	0 or 2

The base station shall include NUM_FOR_ASSIGN occurrences of the following fields

FOR_SCH_ID	1
FOR_SCH_DURATION	4
FOR_SCH_START_TIME_INCL	1
FOR_SCH_START_TIME	0 or 5
SCCL_INDEX	4

NUM_REV_ASSIGN	0 or 2
----------------	--------

The base station shall include NUM_REV_ASSIGN occurrences of the following fields

REV_SCH_ID	1
REV_SCH_DURATION	4
REV_SCH_START_TIME_INCL	1
REV_SCH_START_TIME	0 or 5
REV_SCH_NUM_BITS_IDX	4

FPC_SUBCHAN_GAIN	5
USE_PC_TIME	1
PC_ACTION_TIME	0 or 6

(continues on next page)

2

3

Field	Length (bits)
CH_IND	3
ACTIVE_SET_REC_LEN	8
ACTIVE_SET_REC_FIELDS	8 x ACTIVE_SET_REC_LEN
REV_FCH_GATING_MODE	1
REV_PWR_CNTL_DELAY_INCL	0 or 1
REV_PWR_CNTL_DELAY	0 or 2
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
3XFL_1XRL_INCL	1
1XRL_FREQ_OFFSET	0 or 2
CC_INFO_INCL	0 or 1
NUM_CALLS_ASSIGN	0 or 8

NUM_CALLS_ASSIGN occurrences of the following variable length record:

CON_REF	8
RESPONSE_IND	1
TAG	0 or 4
BYPASS_ALERT_ANSWER	0 or 1

1

2 If CH_IND = '101', the ACTIVE_SET_REC_FIELDS shall be:

3

NUM_FOR_SCH	0 or 5
-------------	--------

NUM_FOR_SCH occurrences of the following three fields:

FOR_SCH_ID	1
SCCL_INDEX	4
FOR_SCH_NUM_BITS_IDX	4

NUM_REV_SCH	0 or 5
-------------	--------

NUM_REV_SCH occurrences of the following three fields:

REV_SCH_ID	1
REV_WALSH_ID	1
REV_SCH_NUM_BITS_IDX	4

NUM_PILOTS	3
SRCH_OFFSET_INCL	1

NUM_PILOTS occurrences of the following record:

PILOT_PN	9
SRCH_OFFSET	0 or 3
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	$8 \times \text{RECORD_LEN}$
PWR_COMB_IND	1
CODE_CHAN_FCH	11
QOF_MASK_ID_FCH	2
NUM_SCH	0 or 5

NUM_SCH occurrences of the following record

FOR_SCH_ID	1
SCCL_INDEX	4
PILOT_INCL	1

(continues on next page)

1

2

3

CODE_CHAN_SCH	0 or 11
QOF_MASK_ID_SCH	0 or 2

3X_FCH_INFO_INCL	1
------------------	---

NUM_PILOTS plus one occurrence of the following record if
3X_FCH_INFO_INCL is set to '1':

3X_FCH_LOW_INCL	1
QOF_MASK_ID_FCH_LOW	0 or 2
CODE_CHAN_FCH_LOW	0 or 11
3X_FCH_HIGH_INCL	1
QOF_MASK_ID_FCH_HIGH	0 or 2
CODE_CHAN_FCH_HIGH	0 or 11
3X_SCH_INFO_INCL	0 or 1

NUM_SCH occurrences of the following record if
3X_SCH_INFO_INCL is included and set to '1':

FOR_SCH_ID	1
3X_SCH_LOW_INCL	1
QOF_MASK_ID_SCH_LOW	0 or 2
CODE_CHAN_SCH_LOW	0 or 11
3X_SCH_HIGH_INCL	1
QOF_MASK_ID_SCH_HIGH	0 or 2
CODE_CHAN_SCH_HIGH	0 or 11

1

RESERVED	0 - 7 (as needed)
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2

3 If CH_IND = '010' or '110', the ACTIVE_SET_REC_FIELDS shall be:

4

NUM_FOR_SCH	0 or 5
-------------	--------

NUM_FOR_SCH occurrences of the following three fields:

FOR_SCH_ID	1
SCCL_INDEX	4
FOR_SCH_NUM_BITS_IDX	4

NUM_REV_SCH	0 or 5
-------------	--------

NUM_REV_SCH occurrences of the following three fields:

REV_SCH_ID	1
REV_WALSH_ID	1
REV_SCH_NUM_BITS_IDX	4

NUM_PILOTS	3
SRCH_OFFSET_INCL	1

NUM_PILOTS occurrences of the following record:

PILOT_PN	9
SRCH_OFFSET	0 or 3
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	$8 \times \text{RECORD_LEN}$
PWR_COMB_IND	1
CODE_CHAN_DCCH	11
QOF_MASK_ID_DCCH	2
NUM_SCH	0 or 5

NUM_SCH occurrences of the following five fields:

FOR_SCH_ID	1
SCCL_INDEX	4
PILOT_INCL	1
CODE_CHAN_SCH	0 or 11
QOF_MASK_ID_SCH	0 or 2

(continues on next page)

1

3X_DCCH_INFO_INCL	1
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NUM_PILOTS plus one occurrence of the following record if 3X_DCCH_INFO_INCL is set to '1':

3X_DCCH_LOW_INCL	1
QOF_MASK_ID_DCCH_LOW	0 or 2
CODE_CHAN_DCCH_LOW	0 or 11
3X_DCCH_HIGH_INCL	1
QOF_MASK_ID_DCCH_HIGH	0 or 2
CODE_CHAN_DCCH_HIGH	0 or 11
3X_SCH_INFO_INCL	0 or 1

NUM_SCH occurrences of the following record if 3X_SCH_INFO_INCL is included and set to '1':

FOR_SCH_ID	1
3X_SCH_LOW_INCL	1
QOF_MASK_ID_SCH_LOW	0 or 2
CODE_CHAN_SCH_LOW	0 or 11
3X_SCH_HIGH_INCL	1
QOF_MASK_ID_SCH_HIGH	0 or 2
CODE_CHAN_SCH_HIGH	0 or 11

2

RESERVED	0 - 7 (as needed)
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3

4 If CH_IND = '111', the ACTIVE_SET_REC_FIELDS shall be:

5

NUM_FOR_SCH	0 or 5
-------------	--------

NUM_FOR_SCH occurrences of the following three fields:

FOR_SCH_ID	1
SCCL_INDEX	4
FOR_SCH_NUM_BITS_IDX	4

NUM_REV_SCH	0 or 5
-------------	--------

NUM_REV_SCH occurrences of the following three fields:

REV_SCH_ID	1
REV_WALSH_ID	1
REV_SCH_NUM_BITS_IDX	4

NUM_PILOTS	3
SRCH_OFFSET_INCL	1

NUM_PILOTS occurrences of the following record:

PILOT_PN	9
SRCH_OFFSET	0 or 3
ADD_PILOT_REC_INCL	1
PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type-specific fields	$8 \times \text{RECORD_LEN}$
PWR_COMB_IND	1
CODE_CHAN_FCH	11
QOF_MASK_ID_FCH	2
CODE_CHAN_DCCH	11
QOF_MASK_ID_DCCH	2
NUM_SCH	0 or 5

NUM_SCH occurrences of the following record

FOR_SCH_ID	1
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(continues on next page)

SCCL_INDEX	4
PILOT_INCL	1
CODE_CHAN_SCH	0 or 11
QOF_MASK_ID_SCH	0 or 2
3X_FCH_INFO_INCL	1
3X_DCCH_INFO_INCL	1

NUM_PILOTS plus one occurrence of the following record if 3X_FCH_INFO_INCL or 3X_DCCH_INFO_INCL is set to '1':

3X_FCH_LOW_INCL	0 or 1
QOF_MASK_ID_FCH_LOW	0 or 2
CODE_CHAN_FCH_LOW	0 or 11
3X_FCH_HIGH_INCL	0 or 1
QOF_MASK_ID_FCH_HIGH	0 or 2
CODE_CHAN_FCH_HIGH	0 or 11
3X_DCCH_LOW_INCL	0 or 1
QOF_MASK_ID_DCCH_LOW	0 or 2
CODE_CHAN_DCCH_LOW	0 or 11
3X_DCCH_HIGH_INCL	0 or 1
QOF_MASK_ID_DCCH_HIGH	0 or 2
CODE_CHAN_DCCH_HIGH	0 or 11
3X_SCH_INFO_INCL	0 or 1

NUM_SCH occurrences of the following record if 3X_SCH_INFO_INCL is included and set to '1':

FOR_SCH_ID	1
3X_SCH_LOW_INCL	1
QOF_MASK_ID_SCH_LOW	0 or 2
CODE_CHAN_SCH_LOW	0 or 11
3X_SCH_HIGH_INCL	1
QOF_MASK_ID_SCH_HIGH	0 or 2
CODE_CHAN_SCH_HIGH	0 or 11

RESERVED	0 - 7 (as needed)
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1	USE_TIME	-	Use action time indicator.
2			This field indicates whether an explicit action time is
3			specified in this message.
4			If an explicit action time is specified in this message, the
5			base station shall set this field to '1'; otherwise, the base
6			station shall set this field to '0'.
7	ACTION_TIME	-	Action time.
8			If the USE_TIME field is set to '1', the base station shall set
9			this field to the System Time, in units of 80 ms (modulo 64),
10			at which the handoff is to take effect. If the USE_TIME field is
11			set to '0' the base station shall omit this field.
12	HDM_SEQ	-	<i>Universal Handoff Direction Message</i> sequence number.
13			This field is used by the mobile station in the <i>Power</i>
14			<i>Measurement Report Message</i> to identify the order in which the
15			reported pilot strengths are sent.
16			The base station shall set this field to the handoff message
17			sequence number, as specified in 2.6.6.2.2.10.
18	PARMS_INCL	-	Parameters included indicator.
19			The base station shall set this field to '1', if P_REV and
20			SERV_NEG_TYPE are included; otherwise, the base station
21			shall set this field '0'.
22	P_REV	-	Protocol revision level.
23			If PARMS_INCL is set to '1', the base station shall set this
24			field to the base station protocol revision level that the mobile
25			station is to use after completion of the handoff; otherwise,
26			the base station shall omit this field.
27	SERV_NEG_TYPE	-	Service negotiation type.
28			If PARMS_INCL is set to '1', the base station shall include the
29			field SERV_NEG_TYPE and set this field as described below;
30			otherwise, the base station shall omit this field.
31			If the mobile station is to use service negotiation, the base
32			station shall set this field to '1'. If the mobile station is to use
33			service option negotiation, the base station shall set this field
34			to '0'.
35	SEARCH_INCLUDED	-	Pilot search parameters included.
36			If the mobile station is to change its pilot search parameters,
37			the base station shall set this field to '1'; otherwise, the base
38			station shall set this field to '0'.

- 1 SRCH_WIN_A - Search window size for the Active Set and Candidate Set.
- 2 If SEARCH_INCLUDED is set to '1', the base station shall
- 3 include the field SRCH_WIN_A and set this field to the window
- 4 size parameter shown in Table 2.6.6.2.1-1 corresponding to
- 5 the number of PN chips that the mobile station is to search
- 6 for pilots in the Active Set and the Candidate Set; otherwise,
- 7 the base station shall omit this field.
- 8 SRCH_WIN_N - Search window size for the Neighbor Set.
- 9 If SEARCH_INCLUDED is set to '1', the base station shall
- 10 include the field SRCH_WIN_N and set this field to the window
- 11 size parameter shown in Table 2.6.6.2.1-1 corresponding to
- 12 the search window size to be used by mobile stations for the
- 13 Neighbor Set after completion of the handoff; otherwise, the
- 14 base station shall omit this field.
- 15 SRCH_WIN_R - Search window size for the Remaining Set.
- 16 If SEARCH_INCLUDED is set to '1', the base station shall
- 17 include the field SRCH_WIN_R and set this field to the window
- 18 size parameter shown in Table 2.6.6.2.1-1 corresponding to
- 19 the search window size to be used by mobile stations for the
- 20 Remaining Set after completion of the handoff; otherwise, the
- 21 base station shall omit this field.
- 22 T_ADD - Pilot detection threshold.
- 23 This value is used by the mobile station to trigger the
- 24 transfer of a pilot from the Neighbor Set or Remaining Set to
- 25 the Candidate Set (see 2.6.6.2.6) and to trigger the sending of
- 26 the *Pilot Strength Measurement Message* or *Extended Pilot*
- 27 *Strength Measurement Message* initiating the handoff process
- 28 (see 2.6.6.2.5.2).
- 29 If SEARCH_INCLUDED is set to '1', the base station shall
- 30 include the field T_ADD and set this field to the pilot
- 31 detection threshold, expressed as an unsigned binary number
- 32 equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_0 \rfloor$; otherwise, the base station
- 33 shall omit this field.
- 34 T_DROP - Pilot drop threshold.
- 35 This value is used by mobile stations to start a handoff drop
- 36 timer for pilots in the Active Set and the Candidate Set (see
- 37 2.6.6.2.3).

1			If SEARCH_INCLUDED is set to '1', the base station shall
2			include the field T_DROP and set this field to the pilot drop
3			threshold, expressed as an unsigned binary number equal to
4			$\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit
5			this field.
6	T_COMP	-	Active Set versus Candidate Set comparison threshold.
7			The mobile station transmits a <i>Pilot Strength Measurement</i>
8			<i>Message</i> or <i>Extended Pilot Strength Measurement Message</i> when
9			the strength of a pilot in the Candidate Set exceeds that of a
10			pilot in the Active Set by this margin (see 2.6.6.2.5.2).
11			If SEARCH_INCLUDED is set to '1', the base station shall
12			include the field T_COMP and set this field to the threshold
13			Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB;
14			otherwise, the base station shall omit this field.
15	T_TDROP	-	Drop timer value.
16			Timer value after which an action is taken by the mobile
17			station for a pilot that is a member of the Active Set or
18			Candidate Set, and whose strength has not become greater
19			than T_DROP. If the pilot is a member of the Active Set, a
20			<i>Pilot Strength Measurement Message</i> or <i>Extended Pilot Strength</i>
21			<i>Measurement Message</i> is issued. If the pilot is a member of
22			the Candidate Set, it will be moved to the Neighbor Set.
23			If SEARCH_INCLUDED is set to '1', the base station shall
24			include the field T_TDROP and set this field to the T_TDROP
25			value shown in Table 2.6.6.2.3-1 corresponding to the drop
26			timer value to be used by the mobile station; otherwise, the
27			base station shall omit this field.
28	SOFT_SLOPE	-	The slope in the inequality criterion for adding a pilot to the
29			Active Set, or dropping a pilot from the Active Set (see
30			2.6.6.2.3 and 2.6.6.2.5.2).
31			If SEARCH_INCLUDED is set to '1', the base station shall
32			include the field SOFT_SLOPE in the additional fields and set
33			this field as an unsigned binary number; otherwise, the base
34			station shall omit this field.
35	ADD_INTERCEPT	-	The intercept in the inequality criterion for adding a pilot to
36			the Active Set (see 2.6.6.2.5.2).
37			If SEARCH_INCLUDED is set to '1', the base station shall
38			include the field ADD_INTERCEPT in the additional fields and
39			set this field as a two's complement signed binary number;
40			otherwise, the base station shall omit this field.

- 1 DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot
 2 from the Active Set (see 2.6.6.2.3).
- 3 If SEARCH_INCLUDED is set to '1', the base station shall
 4 include the field DROP_INTERCEPT in the additional fields
 5 and set this field as a two's complement signed binary
 6 number; otherwise, the base station shall omit this field.
- 7 EXTRA_PARMS - Extra parameters included.
- 8 If the base station includes the fields PACKET_ZONE_ID,
 9 FRAME_OFFSET, PRIVATE_LCM, RESET_L2, RESET_FPC,
 10 SERV_NEG_TYPE, ENCRPPT_MODE, NOM_PWR_EXT,
 11 NOM_PWR, RLGAIN_TRAFFIC_PILOT, UI_ENCRYPT_MODE,
 12 KEY_SIZE, DEFAULT_RLAG, NUM_PREAMBLE, BAND_CLASS,
 13 PERIODIC_SEARCH, or CDMA_FREQ in this message, the base
 14 station shall set this field to '1'; otherwise, the base station
 15 shall set this field to '0'.
- 16 PACKET_ZONE_ID - Packet data services zone identifier.
- 17 If EXTRA_PARMS is set to '1', the base station shall include
 18 the field PACKET_ZONE_ID and set this field as described
 19 below; otherwise, the base station shall omit this field.
- 20 If the base station supports a packet data service zone, the
 21 base station shall set this field to the non-zero packet data
 22 services zone identifier that the mobile station is to use after
 23 completion of the handoff.
- 24 If the base station does not support a packet data service
 25 zone, the base station shall set this field to '00000000'.
- 26 FRAME_OFFSET - Frame offset.
- 27 The Forward and Reverse Traffic Channel frames are delayed
 28 $\text{FRAME_OFFSET} \times 1.25$ ms relative to system timing (see [2]).
- 29 If EXTRA_PARMS is set to '1', the base station shall include
 30 the field FRAME_OFFSET and set this field to the Forward and
 31 Reverse Traffic Channel frame offset; otherwise, the base
 32 station shall omit this field.
- 33 PRIVATE_LCM - Private long code mask indicator.
- 34 This field is used to change the long code mask after a hard
 35 handoff.
- 36 If EXTRA_PARMS is set to '1', the base station shall include
 37 the field PRIVATE_LCM and set this field as described below;
 38 otherwise, the base station shall omit this field.

1			If the private long code mask is to be used after the handoff,
2			the base station shall set this field to '1'; otherwise, the base
3			station shall set this field to '0'.
4	RESET_L2	-	Reset acknowledgment procedures command.
5			This field is used to reset acknowledgment processing in the
6			mobile station.
7			If EXTRA_PARMS is set to '1', the base station shall include
8			the field RESET_L2 and set this field as described below;
9			otherwise, the base station shall omit this field.
10			If the field is included and the mobile station is to reset its
11			acknowledgment procedures, the base station shall set this
12			field to '1'; otherwise, the base station shall set this field to
13			'0'.
14	RESET_FPC	-	Reset Forward Traffic Channel power control.
15			This field is used to reset the Forward Traffic Channel power
16			control counters.
17			If EXTRA_PARMS is set to '1', the base station shall include
18			the field RESET_FPC and set this field as described below;
19			otherwise, the base station shall omit this field.
20			The base station shall set this field to '0' if the Forward Traffic
21			Channel power control counters are to be maintained after
22			completion of the handoff. If the counters are to be initialized
23			as specified in 2.6.4.1.1.1, then the base station shall set this
24			field to '1'.
25	ENCRYPT_MODE	-	Message encryption mode.
26			If EXTRA_PARMS is set to '1', the base station shall include
27			the field ENCRYPT_MODE and set this field to the
28			ENCRYPT_MODE value shown in Table 3.7.2.3.2.8-2
29			corresponding to the encryption mode that is to be used for
30			messages sent on the Forward and Reverse Traffic Channels,
31			as specified in 2.3.12.2; otherwise, the base station shall omit
32			this field.
33	NOM_PWR_EXT	-	Extended nominal transmit power.
34			If EXTRA_PARMS is set to '1', the base station shall include
35			this field and set this field as described below; otherwise, the
36			base station shall omit this field.
37			If this field is included, a Band Class 0 base station shall set
38			this field to '0'.

1			If this field is included, a Band Class 1 base station shall set
2			this field to '1' if the correction factor to be used by the mobile
3			station in the open loop power estimate is between -24 dB and
4			-9 dB inclusive; otherwise (the correction factor is in the
5			range -8 dB to 7 dB inclusive), the base station shall set this
6			field to '0'.
7	NOM_PWR	-	Nominal transmit power offset.
8			If EXTRA_PARMS is set to '1', the base station shall include
9			the field NOM_PWR and set this field to the correction factor
10			to be used by the mobile station in the open loop power
11			estimate, expressed as a two's complement value in units of 1
12			dB (see [2]); otherwise, the base station shall omit this field.
13	RLGAIN_TRAFFIC_PILOT	-	Gain adjustment of the Reverse Traffic Channel relative to
14			the Reverse Pilot Channel power for Radio configurations
15			greater than 2.
16			If EXTRA_PARMS is set to '1', the base station shall include
17			this field and set it to the correction factor to be used by
18			mobile stations in setting the power of a reverse traffic
19			channel, expressed as a two's complement value in units of
20			0.125 dB (see 2.1.2.3.3 of [2]; otherwise, the base station shall
21			omit this field.
22	DEFAULT_RLAG	-	Default reverse link attribute gain used indicator.
23			If EXTRA_PARMS is set to '0', the base station shall omit this
24			field; otherwise, the base station set this field as follows:
25			If the mobile station is to use the default values for the
26			reverse link attribute gain, as specified in Table 2.1.2.3.3-1 of
27			[2] after completion of handoff, the base station shall set this
28			field to '1'; otherwise, the base station shall set this field to
29			'0'.
30	NUM_PREAMBLE	-	Number of Traffic Channel preamble.
31			If EXTRA_PARMS is set to '0', the base station shall omit the
32			NUM_PREAMBLE field; otherwise, the base station shall
33			include this field and set it to the length of Traffic Channel
34			preamble that the mobile station is to send when performing
35			a handoff; as follows:

1		If, after the handoff, radio configuration 1 or radio
2		configuration 2 is to be used, the base station shall set
3		NUM_PREAMBLE to the Traffic Channel preamble length in
4		20 ms units; otherwise, the base station shall set
5		NUM_PREAMBLE to the value shown in Table 3.7.3.3.2.17-1
6		corresponding to the Traffic Channel preamble length in 1.25
7		ms units.
8	BAND_CLASS	- Band class.
9		If EXTRA_PARMS is set to '1', the base station shall include
10		the field BAND_CLASS and set this field to the CDMA band
11		class corresponding to the CDMA frequency assignment for
12		the CDMA Channel as specified in [30]; otherwise, the base
13		station shall omit this field.
14	CDMA_FREQ	- Frequency assignment.
15		If EXTRA_PARMS is set to '0', the base station shall omit this
16		field; otherwise, the base station shall set this field as follows:
17		If a Radio Configuration associated with Spreading Rate 1 is
18		used, the base station shall set this field to the CDMA
19		Channel number, in the specified CDMA band class,
20		corresponding to the CDMA frequency assignment for the
21		CDMA Channel as specified in [2]. If a Radio Configuration
22		associated with Spreading Rate 3 is used, the base station
23		shall include the field CDMA_FREQ and set this field to the
24		CDMA Channel number, in the specified CDMA band class,
25		corresponding to the CDMA center SR3 frequency assignment
26		for the CDMA Channel..
27	RETURN_IF-	
28	_HANDOFF_FAIL	- Return on failure flag.
29		If EXTRA_PARMS is set to '1', the base station shall include
30		the field RETURN_IF_HANDOFF_FAIL and set this field as
31		described below; otherwise, the base station shall omit this
32		field.
33		If the base station includes this field, it shall set this field to
34		'1' if the mobile station is to resume the use of the Active Set
35		on the Serving Frequency following an unsuccessful hard
36		handoff attempt, as specified in 2.6.6.2.8.2; otherwise, the
37		base station shall set this field to '0'.
38	COMPLETE_SEARCH	- Flag to complete search.

If RETURN_IF_HANDOFF_FAIL is included and is set to '1', the base station shall include the field COMPLETE_SEARCH and set this field as described below; otherwise, the base station shall omit this field.

If the base station includes this field, it shall set this field to '1' if the mobile station is to complete the search of the Candidate Frequency Search Set before resuming the use of the Active Set on the Serving Frequency when an inter-frequency handoff attempt is unsuccessful, as specified in 2.6.6.2.8.2; otherwise, the base station shall set this field to '0'.

PERIODIC_SEARCH - Flag to search the Candidate Frequency periodically.

If EXTRA_PARMS is set to '1', the base station shall include the field PERIODIC_SEARCH and set this field as described below; otherwise, the base station shall omit this field.

If the base station includes this field, it shall set this field to '1' if the mobile station is to periodically search the Candidate Frequency, as specified in 2.6.6.2.8.3; otherwise, the base station shall set this field to '0'.

SCR_INCLUDED - Service Configuration Record included indicator.

If EXTRA_PARMS is set to '1', the base station shall include the field SCR_INCLUDED and shall set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to '1' if it includes the Service Configuration Record in the message; otherwise, the base station shall set this field to '0'.

SERV_CON_SEQ - Connect sequence number.

If SCR_INCLUDED is included and is set to '1', the base station shall include the field SERV_CON_SEQ and shall set this field to the connect sequence number pertaining to this service configuration as specified in 3.6.4.1.2.1.2.

If SCR_INCLUDED is included and is set to '1', the base station shall include one occurrence of the following three-field record to specify the service configuration.

RECORD_TYPE - Information record type.

If SCR_INCLUDED is included and is set to '1', the base station shall include the field RECORD_TYPE and shall set this field to the record type value shown in Table 3.7.5-1 corresponding to the Service Configuration information record.

RECORD_LEN - Information record length.

- 1 If SCR_INCLUDED is included and is set to '1', the base
 2 station shall include the field RECORD_LEN and shall set this
 3 field to the number of octets included in the type-specific
 4 fields of the Service Configuration information record.
- 5 Type-specific fields - Type-specific fields.
- 6 If SCR_INCLUDED is included and is set to '1', the base
 7 station shall include the type specific fields and shall set
 8 these fields as specified in 3.7.5.7 for the Service
 9 Configuration information record.
- 10 NNSCR_INCLUDED - Non-negotiable Service Configuration Record Included
 11 indicator
- 12 The base station shall omit this field, if EXTRA_PARMS is set
 13 to '0'; otherwise, the base station shall include this field and
 14 set this field as described below:
- 15 The base station shall set this field to '1', if the Non-
 16 negotiable Service Configuration record is included in this
 17 message; otherwise, the base station shall set this field to '0'.
- 18 If NNSCR_INCLUDED is included and is set to '1', the base station shall include one
 19 occurrence of the following three-field record to specify the non-negotiable service
 20 configuration.
- 21 RECORD_TYPE - Information record type.
- 22 If NNSCR_INCLUDED is included and is set to '1', the base
 23 station shall include the field RECORD_TYPE and shall set
 24 this field to the record type value shown in Table 3.7.5-1
 25 corresponding to the Non-Negotiable Service Configuration
 26 information record.
- 27 RECORD_LEN - Information record length.
- 28 If NNSCR_INCLUDED is included and is set to '1', the base
 29 station shall include the field RECORD_LEN and shall set this
 30 field to the number of octets included in the type-specific
 31 fields of the Non-Negotiable Service Configuration
 32 information record.
- 33 Type-specific fields - Type-specific fields.
- 34 If NNSCR_INCLUDED is included and is set to '1', the base
 35 station shall include the type specific fields and shall set
 36 these fields as specified in 3.7.5.20 for the Non-Negotiable
 37 Service Configuration information record.
- 38 USE_PWR_CNTL_STEP - Power control step size indicator.

1		The base station shall set this field to '1' if the field
2		PWR_CNTL_STEP is included in the message.
3	PWR_CNTL_STEP	- Power control step size.
4		If USE_PWR_CNTL_STEP is set to '1', then the base station
5		shall include the field PWR_CNTL_STEP and set this field to
6		the step size that the mobile station is to use for closed loop
7		power control, according to Table 3.7.3.3.2.25-1; otherwise,
8		the base station shall omit this field.
9	CLEAR_RETRY_DELAY	- Clear retry delay indicator.
10		The base station shall set this field to '1' if the mobile station
11		is to clear any existing retry delay which it has stored (see
12		2.6.6.2.5.1); otherwise, the base station shall set this field to
13		'0'.
14	SCH_INCL	- SCH related parameters included indicator.
15		The base station shall set this field to '1' if this message
16		include the NUM_FOR_ASSIGN, NUM_REV_ASSIGN,
17		NUM_FOR_SCH, NUM_REV_SCH, and NUM_SCH fields.
18		Otherwise, the base station shall set this field to '0'.
19	NUM_FOR-	
20	_ASSIGN	- Number of Forward Supplemental Channel assigned.
21		If SCH_INCL is set to '0', the base station shall omit this field;
22		otherwise, the base station shall set this field to the number
23		of Forward Supplemental Channel assigned.
24	The base station shall include NUM_FOR_ASSIGN occurrences of the following five fields	
25	(FOR_SCH_ID, FOR_SCH_DURATION, FOR_SCH_START_TIME_INCL,	
26	FOR_SCH_START_TIME, and SCCL_INDEX).	
27		
28	FOR_SCH_ID	- Forward Supplemental Channel identifier.
29		The base station shall set this field to the Identifier of the
30		Forward Supplemental Channel.
31	FOR_SCH_DURATION	- Duration of Forward Supplemental Channel assignment.
32		The base station shall set this field to the duration (see Table
33		3.7.3.3.2.37-3), starting at the start time of the message
34		specified by FOR_START_TIME, during which the mobile
35		station is to process the Forward Supplemental Channel.

1		The base station shall set this field to '0000' to indicate that
2		the mobile station should stop processing the Forward
3		Supplemental Channel starting at the explicit start time of
4		the message specified by FOR_SCH_START_TIME or at the
5		implicit start time if FOR_SCH_START_TIME_INCL is set to
6		'0'.
7		The base station shall set this field to '1111' to indicate that
8		the mobile station should process the Forward Supplemental
9		Channel, starting at the start time of the message specified
10		by FOR_SCH_START_TIME, until a subsequent Forward
11		Supplemental Channel assignment with the same
12		FOR_SCH_ID field is received (see 2.6.6.2.5.1.1).
13	FOR_SCH_	
14	START_TIME_INCL	- Start time included indicator.
15		If FOR_SCH_DURATION is not equal to '0000', the base station
16		shall set this field to '1'. If FOR_SCH_DURATION is equal to
17		'0000', the base station shall set this field as follows:
18		The base station shall set this field to '1' if
19		FOR_SCH_START_TIME is included in this message;
20		otherwise, the base station shall set this field to '0'.
21	FOR_SCH_START_TIME	- Start time for Forward Supplemental Channel Assignment.
22		If FOR_SCH_START_TIME INCL is set to '0', the base station
23		shall omit this field; otherwise, the base station shall set this
24		field to the System Time, in units of time specified by
25		START_TIME_UNIT, (modulo 32) at which the mobile station is
26		to start processing the Forward Supplemental Channel
27		specified in this message. The explicit start time for
28		processing Forward Supplemental Channels is the time for
29		which
30		$(\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{FOR_SCH_START_TIME}) \bmod 32$
31		= 0,
32		where t is the System Time in units of 20 ms.
33	SCCL_INDEX	- Supplemental Channel Code list index.
34		The base station shall set this field to the index of the record
35		in the Forward Supplemental Channel Code list corresponding
36		to the FOR_SCH_ID.
37	NUM_REV-	
38	_ASSIGN	- Number of Reverse Supplemental Channel assigned.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of Reverse Supplemental Channel assigned.

The base station shall include NUM_REV_ASSIGN occurrences of the following five fields (REV_SCH_ID, REV_SCH_DURATION, REV_SCH_START_TIME_INCL, REV_SCH_START_TIME, and REV_SCH_NUM_BITS_IDX).

REV_SCH_ID - Reverse Supplemental Channel Identifier.

The base station shall set this field to the identifier of the Reverse Supplemental Channel.

REV_SCH-

_DURATION - Duration of Reverse Supplemental Channel assignment.

The base station shall set this field to '0000' to indicate that the mobile station is to stop transmitting on the Reverse Supplemental Channel specified by REV_SCH_ID at the explicit action time specified by REV_SCH_START_TIME or at the implicit start time if REV_SCH_START_TIME_INCL is set to '0'. The base station shall set this field to '1111' to indicate that the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID, starting at the explicit action time specified by REV_SCH_START_TIME. The base station shall set this field to the duration according to Table 3.7.3.3.2.37-3, starting at the explicit action time specified by REV_SCH_START_TIME, during which the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID.

REV_SCH-

_START_TIME_INCL - Start time included indicator.

If REV_SCH_DURATION is not equal to '0000', the base station shall set this field to '1'. If REV_SCH_DURATION is equal to '0000', the base station shall set this field as follows:

The base station shall set this field to '1' if REV_SCH_START_TIME is included in this message; otherwise, the base station shall set this field to '0'.

- 1 REV_SCH_START_TIME - Start time for Reverse Supplemental Channel Assignment.
- 2 If REV_SCH_START_TIME_INCL is set to '0', the base station
- 3 shall omit this field; otherwise, the base station shall set this
- 4 field to the System Time, in units of time specified by
- 5 START_TIME_UNIT, (modulo 32) at which the mobile station
- 6 may start transmitting on the Reverse Supplemental Channel
- 7 specified in this message. The explicit start time for
- 8 transmitting on the Reverse Supplemental Channel is the
- 9 time for which
- 10
$$(\lfloor t / (\text{START_TIME_UNIT}_s + 1) \rfloor - \text{REV_SCH_START_TIME}) \bmod$$
- 11
$$32 = 0,$$
- 12 where t is the System Time in units of 20 ms.
- 13 REV_SCH-
- 14 _NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame
- 15 index granted by the base station.
- 16 If USE_FLEX_NUM_BITS is equal to '0' or if
- 17 USE_FLEX_NUM_BITS is equal to '1' and
- 18 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then
- 19 the base station shall set this field according to Table
- 20 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel
- 21 number of information bits per frame, that the mobile station
- 22 may transmit on the reverse Supplemental Channel
- 23 identified by REV_SCH_ID.
- 24 If USE_FLEX_NUM_BITS is equal to '1' and
- 25 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000',
- 26 then the base station shall set the REV_SCH_NUM_BITS_IDX
- 27 field to indicate the Reverse Supplemental Channel number
- 28 of information bits per frame that the mobile station may
- 29 transmit on the Reverse Supplemental Channel identified by
- 30 REV_SCH_ID to be
- 31
$$\text{NUM_BITS}[\text{RSCH_NBIT_TABLE_ID}[\text{REV_SCH_ID}]]$$
- 32
$$[\text{REV_SCH_NUM_BITS_IDX}].$$
- 33 The REV_SCH_NUM_BITS_IDX field also specifies the number
- 34 of CRC bits per frame for the Reverse Supplemental Channel
- 35 identified by REV_SCH_ID. The number of CRC bits per frame
- 36 is specified by
- 37
$$\text{CRC_LEN_IDX}[\text{RSCH_NBIT_TABLE_ID}[\text{REV_SCH_ID}]] [\text{REV_SCH_}$$
- 38
$$\text{H_NUM_BITS_IDX}]$$
 and Table 3.7.5.20-4.
- 39 FPC_SUBCHAN_GAIN - Forward power control subchannel relative gain.

1			The base station shall set FPC_SUBCHAN_GAIN equal to the
2			power level of the forward link power control subchannel
3			relative to that of 20 ms frames at a 9600 bps or 14400 bps
4			rate on the Forward Fundamental Channel or the Forward
5			Dedicated Control Channel that the Forward Power Control
6			Subchannel is punctured on. The base station shall set the
7			value in units of 0.25 dB.
8	USE_PC_TIME	-	Use power control action time indicator.
9			This field indicates whether an explicit time
10			[PC_ACTION_TIME] at which a new value for power control
11			sub-channel to traffic ratio (FPC_SUBCHAN_GAIN) takes
12			effect is specified in the message.
13			If an explicit action time is specified in this message, the
14			base station shall set this field to '1'; otherwise, the base
15			station shall set this field to '0'.
16	PC_ACTION_TIME	-	Power Control Subchannel gain action time.
17			If the USE_PC_TIME field is set to '1', the base station shall
18			set this field to the System Time, in units of 80 ms (modulo
19			64), at which FPC_SUBCHAN_GAIN specified in this message
20			is to take effect. If the USE_PC_TIME field is set to '0' the
21			base station shall omit this field.
22	CH_IND	-	Channel Indicator.
23			The base station shall set this field as shown in Table
24			3.7.3.3.2.36-1.

Table 3.7.3.3.2.36-1. Channel Indicator

CH_IND (Binary)	Physical Resource(s) Allocated
000	Reserved.
001	Reserved
010	Dedicated Control Channel
011	Reserved
100	Reserved
101	Fundamental Channel and Continuous Reverse Pilot Channel
110	Dedicated Control Channel and Continuous Reverse Pilot Channel
111	Fundamental Channel, Dedicated Control Channel and Continuous Reverse Pilot Channel

ACTIVE_SET_REC_LEN - Active Set record length.

The base station shall set this field to the number of octets in the ACTIVE_SET_REC_FIELDS included in this message.

ACTIVE_SET -

_REC_FIELDS - Active Set record fields.

The Active Set record fields are determined by the value of CH_IND, as described below.

REV_FCH-

_GATING_MODE - Reverse eighth gating mode indicator.

The base station shall set this field to '1' if the mobile station is allowed to perform the reverse eighth gating mode after handoff; otherwise, the base station shall set this field to '0'.

REV_PWR-

_CNTL_DELAY_INCL - Reverse power control delay included indicator.

If REV_FCH_GATING_MODE is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows.

The base station shall set this field to '1' if REV_PWR_CNTL_DELAY is included in this message; otherwise, the base station shall set this field to '0'.

1	REV_PWR-	
2	_CNTL_DELAY	- The reverse power control delay.
3		If REV_PWR_CNTL_DELAY_INCL is set to '0', the base station
4		shall omit this field; otherwise, the base station shall include
5		this field and set it as follows:
6		The base station shall set this field to the closed-loop reverse
7		power control delay minus one (the closed-loop reverse power
8		control delay is the time between the end of a gated-on
9		reverse PCG and the beginning of the reverse PCG where the
10		corresponding feedback is sent on the Forward Power Control
11		Subchannel, see 2.1.2.3.2 of [2]) used by the mobile station
12		after handoff, in units of 1.25 ms.
13	KEY_SIZE	- Encryption key size indication.
14		If EXTRA_PARMS is set to '1', the base station shall include
15		this field and set this field as described below; otherwise, the
16		base station shall omit this field.
17		The base station shall set this field to the encryption key size, as
18		shown in Table 3.7.4.5-2.
19	USE_NEW_KEY	- Use new encryption key indication
20		If ENCRYPT_MODE is set to '10' or '11', the base station shall
21		include this field. If this field is included, the base station shall
22		set this field to '0' to indicate that the stored encryption key to be
23		used by the mobile station. Otherwise, the base station shall set
24		this field to '1' to indicate that the new encryption key to be used
25		by the mobile station.
26	KEY_SEQ	- Encryption key sequence number.
27		If ENCRYPT_MODE is set to '10' or '11' and USE_NEW_KEY is set to
28		'0', the base station shall include this field and shall set it to the
29		encryption key sequence number to be used by the mobile
30		station. If ENCRYPT_MODE is set to a value other than '10' or '11'
31		or USE_NEW_KEY is set to '1', the base station shall omit this
32		field.
33	3XFL_1XRL_INCL	- 3X Forward Link and 1X Reverse Link indicator.
34		The base station shall set this field to '1' if the base station is
35		assigning 3X traffic channel on the Forward Link and 1X
36		traffic channel on the Reverse Link; otherwise, the base
37		station shall set this field to '0'.

1	1XRL_FREQ_OFFSET	-	1X Reverse Link frequency offset.
2			If 3XFL_1XRL_INCL is set to '0', the base station shall omit
3			this field; otherwise, the base station shall set this field as
4			follows:
5			The base station shall set this field to the value shown in
6			Table 3.7.2.3.2.21-5 corresponding to the frequency offset of
7			the 1X reverse link.
8	CC_INFO_INCL	-	Call Control information included indicator.
9			If the SCR_INCLUDED field is not included or is included but
10			is set to '0', the base station shall omit this field; otherwise,
11			the base station shall include this field and set it as follows:
12			The base station shall set this field to '1' if Call Control
13			related parameters (to assign new call(s)) are included in this
14			message; otherwise, the base station shall set this field to '0'.
15	NUM_CALLS_ASSIGN	-	Number of call assignments.
16			If the CC_INFO_INCL field is not included or is included but is
17			set to '0', the base station shall omit this field; otherwise, the
18			base station shall include this field and set it as follows:
19			The base station shall set this field to the number of new call
20			assignments included in this message.
21	The base station shall include NUM_CALLS_ASSIGN occurrences of the following variable		
22	length record.		
23	CON_REF	-	Connection reference.
24			The base station shall set this field to the connection
25			reference of the service option connection corresponding to
26			this call.
27	RESPONSE_IND	-	Response indicator.
28			The base station shall set this field to '1' if this call
29			assignment is a response to an <i>Enhanced Origination Message</i>
30			from the mobile station; otherwise, the base station shall set
31			this field to '0'.
32	TAG	-	Transaction identifier.
33			If the RESPONSE_IND field is set to '0', the base station shall
34			omit this field; otherwise, the base station shall include this

field and set it as follows:

The base station shall set this field to the value of the TAG field received in the *Enhanced Origination Message* to which this call assignment is the response.

BYPASS_ALERT-

_ANSWER - Bypass alert indicator.

If the RESPONSE_IND field is set to '1', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

If the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile Station Answer Substate* for this call, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

If the CH_IND field is set to '101', the base station shall include the following fields:

NUM_FOR_SCH - Number of Forward Supplemental Channel records.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the number of the Forward Supplemental Channel records need to be updated.

If NUM_FOR_SCH is included and not equal to '00000', the base station shall include NUM_FOR_SCH occurrence of the following three fields:

FOR_SCH_ID - Forward Supplemental Channel identifier.

The base station shall set this field to the identifier of the Forward Supplemental Channel.

SCCL_INDEX - Supplemental Channel Code list index.

The base station shall set this field to the index of the record in the Supplemental Channel Code list.

FOR_SCH-

_NUM_BITS_IDX - Forward Supplemental Channel number of information bits index.

1 If USE_FLEX_NUM_BITS is equal to '0' or if
 2 USE_FLEX_NUM_BITS is equal to '1' and
 3 FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to '0000',
 4 then the base station shall set this field according to Table
 5 3.7.3.3.2.37-4 to indicate the number of information bits per
 6 frame and the length of the CRC field for the Forward
 7 Supplemental Channel identified by FOR_SCH_ID
 8 corresponding to SCCL_INDEX.

9 If USE_FLEX_NUM_BITS_s is equal to '1' and
 10 FSCH_NBIT_TABLE_ID[FOR_SCH_ID] is not equal to '0000',
 11 then the base station shall set the FOR_SCH_NUM_BITS_IDX
 12 field to indicate that the number of information bits per frame
 13 for the Forward Supplemental channel identified by
 14 FOR_SCH_ID to be
 15 NUM_BITS[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_N
 16 UM_BITS_IDX].

17 The FOR_SCH_NUM_BITS_IDX field also specifies the number
 18 of CRC bits per frame for the Forward Supplemental Channel
 19 identified by FOR_SCH_ID. The number of CRC bits per frame
 20 is specified by CRC_LEN_IDX
 21 [FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_NUM_BITS_I
 22 DX] and Table 3.7.5.20-4.

23 NUM_REV_SCH - Number of Reverse Supplemental Channel records.

24 If SCH_INCL is set to '0', the base station shall omit this field;
 25 otherwise, the base station shall set this field as follows:

26 The base station shall set this field to the number of the
 27 Reverse Supplemental Channels need to be updated.

28 If NUM_REV_SCH is included and not equal to '00000', the base station shall include
 29 NUM_REV_SCH occurrence of the following three fields:

30 REV_SCH_ID - Reverse Supplemental Channel identifier.

31 The base station shall set this field to the identifier of the
 32 Reverse Supplemental Channel.

33 REV_WALSH_ID - Reverse Supplemental Channel Walsh cover Identifier.

The base station shall set this field according to Table 3.7.3.3.2.37-1 to indicate the Walsh cover ID that the mobile station is to use when transmitting at the rate specified by REV_SCH_NUM_BITS_IDX on the Reverse Supplemental Channel specified by REV_SCH_ID. If only one reverse supplemental channel is assigned, the base station should set this field to the default value for the REV_WALSH_ID as specified in 2.6.4.2.

REV_SCH-

_NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame index.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then the base station shall set this field according to Table 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field.

If USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000', then the base station shall set the REV_SCH_NUM_BITS_IDX field to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field to be NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX].

NUM_PILOTS - Number of pilots included in the message.

The base station shall set this field to the number of pilots included in the message. The base station shall set this field to an integer that is equal to or greater than 1.

SRCH_OFFSET_INCL - Target pilot channel search window offset included.

If the SRCH_OFFSET field is included in the following records, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

The base station shall include one occurrence of the following record for each of the NUM_PILOTS pilots included in the message:

PILOT_PN - Pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this pilot in units of 64 PN chips.

1	SRCH_OFFSET	-	Target pilot channel search window offset.
2			If SRCH_OFFSET_INCL equals to '1', then the base station
3			shall set this field to the value shown in Table 2.6.6.2.1-2
4			corresponding to the search window offset to be used by the
5			mobile station for this target pilot. Otherwise, the base
6			station shall omit this field.
7	ADD_PILOT_REC_INCL	-	Additional pilot information included indicator.
8			The base station shall set this field to '1' if additional pilot
9			information listed in PILOT_REC_TYPE and RECORD_LEN
10			fields are included. The base station shall set this field to '0'
11			if the corresponding pilot is the common pilot and there is no
12			additional pilot information included.
13	PILOT_REC_TYPE	-	Pilot record type.
14			If ADD_PILOT_REC_INCL is set to '1', the base station shall
15			set this field to the PILOT_REC_TYPE value shown in Table
16			3.7.2.3.2.21-6 corresponding to the type of Pilot Record
17			specified by this record.
18			If ADD_PILOT_REC_INCL is set to '0', the base station shall
19			omit this field.
20	RECORD_LEN	-	Pilot record length.
21			If ADD_PILOT_REC_INCL is set to '1', the base station shall
22			set this field to the number of octets in the type-specific fields
23			of this pilot record.
24			If ADD_PILOT_REC_INCL is set to '0', the base station shall
25			omit this field.
26	Type-specific fields	-	Pilot record type-specific fields.
27			If ADD_PILOT_REC_INCL is set to '1', the base station shall
28			include type-specific fields based on the PILOT_REC_TYPE of
29			this pilot record as described in 3.7.6.1.
30			If ADD_PILOT_REC_INCL is set to '0', the base station shall
31			omit this field.
32			
33	PWR_COMB_IND	-	Power control symbol combining indicator.
34			If the Forward Traffic Channel associated with this pilot will
35			carry the same closed-loop power control subchannel bits as
36			that of the previous pilot in this message, the base station
37			shall set this field to '1'; otherwise, the base station shall set
38			this field to '0'. The base station shall set this field to '0' in
39			the first record in the pilot list.

1 CODE_CHAN_FCH - Code channel on the Fundamental Channel.

2 If a Radio Configuration associated with Spreading Rate 1 is
3 used, the base station shall set this field to the code channel
4 index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile
5 station is to use on the Fundamental Channel of the Forward
6 Traffic Channel. If a Radio Configuration associated with
7 Spreading Rate 3 is used, the base station shall set this field
8 to the code channel index that the mobile station is to use for
9 the Fundamental Channel on the center SR3 frequency.

10 If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used,
11 the base station shall set this field in the range 1 to 63
12 inclusive. If Radio Configuration 4, 6 or 8 is used, the base
13 station shall set this field in the range 1 to 127 inclusive. If
14 Radio Configuration 7 or 9 is used, the base station shall set
15 this field in the range 1 to 255 inclusive.

16 QOF_MASK_ID_FCH - Quasi-orthogonal function index on the Fundamental
17 Channel.

18 If a Radio Configuration associated with Spreading Rate 1 is
19 used, the base station shall set this field to the index of the
20 Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]). If a
21 Radio Configuration associated with Spreading Rate 3 is used,
22 the base station shall set this field to the index of the Quasi-
23 orthogonal function on the center SR3 frequency.

24 NUM_SCH - Number of Supplemental Channel records.

25 If SCH_INCL is set to '0', the base station shall omit this field;
26 otherwise, the base station shall set this field as follows:

27 The base station shall set this field to the number of the
28 Supplemental Channel records need to be updated.

29 If NUM_SCH is included and not equal to '00000', the base station shall include NUM_SCH
30 occurrence of the following five fields:

31 FOR_SCH_ID - Forward Supplemental Channel identifier.

32 The base station shall set this field the identifier of the
33 Forward Supplemental Channel pertaining to this record.

34 SCCL_INDEX - Supplemental Channel Code list index.

35 The base station shall set this field to the index of the record
36 in the Supplemental Channel Code list.

1	PILOT_INCL	-	The corresponding pilot included in Supplemental Channel
2			Active Set indicator.
3			The base station shall set this field to '1' if the corresponding
4			pilot is included in the Active Set of Supplemental Channel;
5			otherwise, the base station shall set this field to '0'.
6	CODE_CHAN_SCH	-	Code channel on the Supplemental Channel.
7			If PILOT_INCL is included and set to '1', the base station shall
8			set this field as follows; otherwise, the base station shall omit
9			this field.
10			The base station shall set this field to the code channel index
11			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
12			to use on the Supplemental Channel of the Forward Traffic
13			Channel indexed by SCCL_INDEX.
14	QOF_MASK_ID_SCH	-	Quasi-orthogonal function index on the Supplemental
15			Channel.
16			If PILOT_INCL is included and set to '1', the base station shall
17			set this field as follows; otherwise, the base station shall omit
18			this field.
19			The base station shall set this field to the index of the Quasi-
20			orthogonal function (see Table 3.1.3.1.12-2 of [2]).
21	3X_FCH_INFO_INCL	-	3X FCH information included indicator.
22			If the 3X Fundamental Channel information is included, the
23			base station shall set this field to '1'; otherwise, the base
24			station shall set this field to '0'.
25	The base station shall include NUM_PILOTS plus one occurrence of the following record if		
26	3X_FCH_INFO_INCL is set to '1'. The base station shall use the same order for the		
27	following fields as is used for the PILOT_PN fields listed in this message.		
28	3X_FCH_LOW_INCL	-	FCH code channel on the lowest SR3 frequency included
29			indicator.
30			If the FCH on the lowest SR3 frequencies has a different code
31			channel than the FCH on the center SR3 frequency, the base
32			station shall set this field to '1'; otherwise, the base station
33			shall set this field to '0'.
34	QOF_MASK_ID-		
35	_FCH_LOW	-	QOF index for the FCH on the lowest SR3 frequency.
36			If 3X_FCH_LOW_INCL is set to '0', the base station shall omit
37			this field; otherwise, the base station shall set this field as
38			follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the FCH on the lowest SR3 frequency.

CODE_CHAN-

_FCH_LOW - Code channel for the FCH on the lowest SR3 frequency.

If 3X_FCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the FCH on the lowest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

3X_FCH_HIGH_INCL - FCH code channel on the highest SR3 frequency included indicator.

If the FCH on the highest SR3 frequencies has a different code channel than the FCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_FCH_HIGH - QOF index for the FCH on the highest SR3 frequency.

If 3X_FCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the FCH on the highest SR3 frequency.

CODE_CHAN-

_FCH_HIGH - Code channel for the FCH on the highest SR3 frequency.

If 3X_FCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

1			The base station shall set this field to the code channel index
2			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
3			to use on the FCH on the highest SR3 frequency. If Radio
4			Configuration 6 or 8 is used, the base station shall set this
5			field in the range 1 to 127 inclusive. If Radio Configuration 7
6			or 9 is used, the base station shall set this field in the range
7			1 to 255 inclusive.
8	3X_SCH_INFO_INCL	-	3X SCH information included indicator.
9			If SCH_INCL is set to '0', the base station shall omit this field;
10			otherwise, the base station shall set this field as follows:
11			If the 3X Supplemental Channel information is included, the
12			base station shall set this field to '1'; otherwise, the base
13			station shall set this field to '0'.
14	The base station shall include NUM_SCH plus one occurrence of the following seven fields		
15	record if 3X_SCH_INFO_INCL is included and set to '1'.		
16	FOR_SCH_ID	-	Forward Supplemental Channel identifier.
17			The base station shall set this field the identifier of the
18			Forward Supplemental Channel pertaining to this record.
19	3X_SCH_LOW_INCL	-	SCH code channel on the lowest SR3 frequency included
20			indicator.
21			If the SCH on the lowest SR3 frequencies has a different code
22			channel than the SCH on the center SR3 frequency, the base
23			station shall set this field to '1'; otherwise, the base station
24			shall set this field to '0'.
25	QOF_MASK_ID-		
26	_SCH_LOW	-	QOF index for the SCH on the lowest SR3 frequency.
27			If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
28			this field; otherwise, the base station shall set this field as
29			follows:
30			The base station shall set this field to the index of the Quasi-
31			orthogonal function (see Table 3.1.3.1.12-2 of [2])
32			corresponding to the QOF index for the SCH on the lowest SR3
33			frequency.
34	CODE_CHAN-		
35	_SCH_LOW	-	Code channel for the SCH on the lowest SR3 frequency.
36			If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
37			this field; otherwise, the base station shall set this field as
38			follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the SCH on the lowest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

3X_SCH_HIGH_INCL - SCH code channel on the highest SR3 frequency included indicator.

If the SCH on the highest SR3 frequencies has a different code channel than the SCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_SCH_HIGH - QOF index for the SCH on the highest SR3 frequency.

If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the SCH on the highest SR3 frequency.

CODE_CHAN-

_SCH_HIGH - Code channel for the SCH on the highest SR3 frequency.

If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the SCH on the highest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

If the CH_IND field is set to '010' or '110', the base station shall include the following fields:

NUM_FOR_SCH - Number of Forward Supplemental Channel records.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

1 The base station shall set this field to the number of the
2 Forward Supplemental Channel records need to be updated.

3 If NUM_FOR_SCH is included and not equal to '00000', the base station shall include
4 NUM_FOR_SCH occurrence of the following three fields:

5 FOR_SCH_ID - Forward Supplemental Channel identifier.
6 The base station shall set this field to identifier of the
7 Forward Supplemental Channel.

8 SCCL_INDEX - Supplemental Channel Code list index.
9 The base station shall set this field to the index of the record
10 in the Supplemental Channel Code list.

11 FOR_SCH-
12 _NUM_BITS_IDX - Forward Supplemental Channel number of information bits
13 index.
14 If USE_FLEX_NUM_BITS is equal to '0' or if
15 USE_FLEX_NUM_BITS is equal to '1' and
16 FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to '0000',
17 then the base station shall set this field according to Table
18 3.7.3.3.2.37-4 to indicate the number of information bits per
19 frame and the length of the CRC field for the Forward
20 Supplemental Channel identified by FOR_SCH_ID
21 corresponding to SCCL_INDEX.

22 If USE_FLEX_NUM_BITS_s is equal to '1' and
23 FSCH_NBIT_TABLE_ID[FOR_SCH_ID] is not equal to '0000',
24 then the base station shall set the FOR_SCH_NUM_BITS_IDX
25 field to indicate that the number of information bits per frame
26 for the Forward Supplemental channel identified by
27 FOR_SCH_ID to be
28 NUM_BITS[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_N
29 UM_BITS_IDX].
30 The FOR_SCH_NUM_BITS_IDX field also specifies the number
31 of CRC bits per frame for the Forward Supplemental Channel
32 identified by FOR_SCH_ID. The number of CRC bits per frame
33 is specified by
34 CRC_LEN_IDX[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SC
35 H_NUM_BITS_IDX] and Table 3.7.5.20-4.

36 NUM_REV_SCH - Number of Reverse Supplemental Channel records.
37 If SCH_INCL is set to '0', the base station shall omit this field;
38 otherwise, the base station shall set this field as follows:
39 The base station shall set this field to the number of the
40 Reverse Supplemental Channels need to be updated.

If NUM_REV_SCH is included and not equal to '00000', the base station shall include NUM_REV_SCH occurrence of the following three fields:

REV_SCH_ID - Reverse Supplemental Channel identifier.

The base station shall set this field to the identifier of the Reverse Supplemental Channel.

REV_WALSH_ID - Reverse Supplemental Channel Walsh cover Identifier.

The base station shall set this field according to Table 3.7.3.3.2.37-1 to indicate the Walsh cover ID that the mobile station is to use when transmitting at the rate specified by REV_SCH_NUM_BITS_IDX on the Reverse Supplemental Channel specified by REV_SCH_ID. If only one reverse supplemental channel is assigned, the base station should set this field to the default value for the REV_WALSH_ID as specified in 2.6.4.2.

REV_SCH_NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame index.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then the base station shall set this field according to Table 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field.

If USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000', then the base station shall set the REV_SCH_NUM_BITS_IDX field to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field to be NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX].

NUM_PILOTS - Number of pilots included in the message.

The base station shall set this field to the number of pilots included in the message. The base station shall set this field to an integer that is equal to or greater than 1.

- 1 SRCH_OFFSET_INCL - Target pilot channel search window offset included.
- 2 If the SRCH_OFFSET field is included in the following records,
- 3 the base station shall set this field to '1'; otherwise, the base
- 4 station shall set this field to '0'.
- 5 The base station shall include one occurrence of the following record for each of the
- 6 NUM_PILOTS pilots included in the message:
- 7 PILOT_PN - Pilot PN sequence offset index.
- 8 The base station shall set this field to the pilot PN sequence
- 9 offset for this pilot in units of 64 PN chips.
- 10 SRCH_OFFSET - Target pilot channel search window offset.
- 11 If SRCH_OFFSET_INCL equals to '1', then the base station
- 12 shall set this field to the value shown in Table 2.6.6.2.1-2
- 13 corresponding to the search window offset to be used by the
- 14 mobile station for this target pilot. Otherwise, the base
- 15 station shall omit this field.
- 16 ADD_PILOT_REC_INCL - Additional pilot information included indicator.
- 17 The base station shall set this field to '1' if additional pilot
- 18 information listed in PILOT_REC_TYPE and RECORD_LEN
- 19 fields are included. The base station shall set this field to '0'
- 20 if the corresponding pilot is the common pilot and there is no
- 21 additional pilot information included.
- 22 PILOT_REC_TYPE - Pilot record type.
- 23 If ADD_PILOT_REC_INCL is set to '1', the base station shall
- 24 set this field to the PILOT_REC_TYPE value shown in Table
- 25 3.7.2.3.2.21-6 corresponding to the type of Pilot Record
- 26 specified by this record.
- 27 If ADD_PILOT_REC_INCL is set to '0', the base station shall
- 28 omit this field.
- 29 RECORD_LEN - Pilot record length.
- 30 If ADD_PILOT_REC_INCL is set to '1', the base station shall
- 31 set this field to the number of octets in the type-specific fields
- 32 of this pilot record.
- 33 If ADD_PILOT_REC_INCL is set to '0', the base station shall
- 34 omit this field.
- 35 Type-specific fields - Pilot record type-specific fields.
- 36 If ADD_PILOT_REC_INCL is set to '1', the base station shall
- 37 include type-specific fields based on the PILOT_REC_TYPE of
- 38 this pilot record as described in 3.7.6.1.

If ADD_PILOT_REC_INCL is set to '0', the base station shall omit this field.

PWR_COMB_IND - Power control symbol combining indicator.

If the Forward Traffic Channel associated with this pilot will carry the same closed-loop power control subchannel bits as that of the previous pilot in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'. The base station shall set this field to '0' in the first record in the pilot list.

CODE_CHAN_DCCH - Code channel on the Dedicated Control Channel.

If a Radio Configuration associated with Spreading Rate 1 is used, the base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the Dedicated Control Channel of the Forward Traffic Channel. If a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use for the Dedicated Control Channel on the center SR3 frequency.

If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used, the base station shall set this field in the range 1 to 63 inclusive. If Radio Configuration 4, 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

QOF_MASK_ID_DCCH - Quasi-orthogonal function index on the Dedicated Control Channel.

If a Radio Configuration associated with Spreading Rate 1 is used, the base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]). If a Radio Configuration associated with Spreading Rate 3 is used, the base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

NUM_SCH - Number of Supplemental Channel records.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the number of the Supplemental Channel records need to be updated.

If NUM_SCH is included and not equal to '00000', the base station shall include NUM_SCH

1 occurrence of the following five fields:

- 2 FOR_SCH_ID - Forward Supplemental Channel identifier
- 3 The base station shall set this field to the identifier of the
- 4 Forward Supplemental Channel pertaining to this record.
- 5 SCCL_INDEX - Supplemental Channel Code list index.
- 6 The base station shall set this field to the index of the record
- 7 in the Supplemental Channel Code list.
- 8 PILOT_INCL - The corresponding pilot included in Supplemental Channel
- 9 Active Set indicator.
- 10 The base station shall set this field to '1' if the corresponding
- 11 pilot is included in the Active Set of Supplemental Channel;
- 12 otherwise, the base station shall set this field to '0'.
- 13 CODE_CHAN_SCH - Code channel on the Supplemental Channel.
- 14 The base station shall set this field to the code channel index
- 15 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
- 16 to use on the Supplemental Channel of the Forward Traffic
- 17 Channel indexed by SCCL_INDEX.
- 18 QOF_MASK_ID_SCH - Quasi-orthogonal function index on the Supplemental
- 19 Channel.
- 20 If SCH_INCL is set to '0', the base station shall omit this field;
- 21 otherwise, the base station shall set this field as follows:
- 22 The base station shall set this field to the index of the Quasi-
- 23 orthogonal function (see Table 3.1.3.1.12-2 of [2]).
- 24 3X_DCCH_INFO_INCL - 3X DCCH information included indicator.
- 25 If the 3X Dedicated Control Channel information is included,
- 26 the base station shall set this field to '1'; otherwise, the base
- 27 station shall set this field to '0'.
- 28 The base station shall include NUM_PILOTS plus one occurrence of the following record if
- 29 3X_DCCH_INFO_INCL is set to '1'. The base station shall use the same order for the
- 30 following fields as is used for the PILOT_PN fields listed in this message.
- 31 3X_DCCH_LOW_INCL - DCCH code channel on the lowest SR3 frequency included
- 32 indicator.
- 33 If the DCCH on the lowest SR3 frequencies has a different
- 34 code channel than the DCCH on the center SR3 frequency,
- 35 the base station shall set this field to '1'; otherwise, the base
- 36 station shall set this field to '0'.
- 37 QOF_MASK_ID-

1	<code>_DCCH_LOW</code>	-	QOF index for the DCCH on the lowest SR3 frequency.
2			If <code>3X_DCCH_LOW_INCL</code> is set to '0', the base station shall
3			omit this field; otherwise, the base station shall set this field
4			as follows:
5			The base station shall set this field to the index of the Quasi-
6			orthogonal function (see Table 3.1.3.1.12-2 of [2])
7			corresponding to the QOF index for the DCCH on the lowest
8			SR3 frequency.
9	<code>CODE_CHAN-</code>		
10	<code>_DCCH_LOW</code>	-	Code channel for the DCCH on the lowest SR3 frequency.
11			If <code>3X_DCCH_LOW_INCL</code> is set to '0', the base station shall
12			omit this field; otherwise, the base station shall set this field
13			as follows:
14			The base station shall set this field to the code channel index
15			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
16			to use on the DCCH on the lowest SR3 frequency. If Radio
17			Configuration 6 or 8 is used, the base station shall set this
18			field in the range 1 to 127 inclusive. If Radio Configuration 7
19			or 9 is used, the base station shall set this field in the range
20			1 to 255 inclusive.
21	<code>3X_DCCH_HIGH_INCL</code>	-	DCCH code channel on the highest SR3 frequency included
22			indicator.
23			If the DCCH on the highest SR3 frequencies has a different
24			code channel than the DCCH on the center SR3 frequency,
25			the base station shall set this field to '1'; otherwise, the base
26			station shall set this field to '0'.
27	<code>QOF_MASK_ID-</code>		
28	<code>_DCCH_HIGH</code>	-	QOF index for the DCCH on the highest SR3 frequency.
29			If <code>3X_DCCH_HIGH_INCL</code> is set to '0', the base station shall
30			omit this field; otherwise, the base station shall set this field
31			as follows:
32			The base station shall set this field to the index of the Quasi-
33			orthogonal function (see Table 3.1.3.1.12-2 of [2])
34			corresponding to the QOF index for the DCCH on the highest
35			SR3 frequency.

1	CODE_CHAN-	
2	_DCCH_HIGH	- Code channel for the DCCH on the highest SR3 frequency.
3		If 3X_DCCH_HIGH_INCL is set to '0', the base station shall
4		omit this field; otherwise, the base station shall set this field
5		as follows:
6		The base station shall set this field to the code channel index
7		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
8		to use on the DCCH on the highest SR3 frequency. If Radio
9		Configuration 6 or 8 is used, the base station shall set this
10		field in the range 1 to 127 inclusive. If Radio Configuration 7
11		or 9 is used, the base station shall set this field in the range
12		1 to 255 inclusive.
13	3X_SCH_INFO_INCL	- 3X SCH information included indicator.
14		If SCH_INCL is set to '0', the base station shall omit this field;
15		otherwise, the base station shall set this field as follows:
16		If the 3X Supplemental Channel information is included, the
17		base station shall set this field to '1'; otherwise, the base
18		station shall set this field to '0'.
19	The base station shall include NUM_SCH plus one occurrence of the following seven fields	
20	record if 3X_SCH_INFO_INCL is included and set to '1'.	
21	FOR_SCH_ID	- Forward Supplemental Channel identifier.
22		The base station shall set this field the identifier of the
23		Forward Supplemental Channel pertaining to this record.
24	3X_SCH_LOW_INCL	- SCH code channel on the lowest SR3 frequency included
25		indicator.
26		If the SCH on the lowest SR3 frequencies has a different code
27		channel than the SCH on the center SR3 frequency, the base
28		station shall set this field to '1'; otherwise, the base station
29		shall set this field to '0'.
30	QOF_MASK_ID-	
31	_SCH_LOW	- QOF index for the SCH on the lowest SR3 frequency.
32		If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
33		this field; otherwise, the base station shall set this field as
34		follows:
35		The base station shall set this field to the index of the Quasi-
36		orthogonal function (see Table 3.1.3.1.12-2 of [2])
37		corresponding to the QOF index for the SCH on the lowest SR3
38		frequency.

CODE_CHAN-

- _SCH_LOW** - Code channel for the SCH on the lowest SR3 frequency.
- If 3X_SCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:
- The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the SCH on the lowest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

- 3X_SCH_HIGH_INCL** - SCH code channel on the highest SR3 frequency included indicator.
- If the SCH on the highest SR3 frequencies has a different code channel than the SCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

- _SCH_HIGH** - QOF index for the SCH on the highest SR3 frequency.
- If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:
- The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the SCH on the highest SR3 frequency.

CODE_CHAN-

- _SCH_HIGH** - Code channel for the SCH on the highest SR3 frequency.
- If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:
- The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the SCH on the highest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

1

2 If the CH_IND field is set to '111', the base station shall include the following fields:

3 NUM_FOR_SCH - Number of Forward Supplemental Channel records.

4 If SCH_INCL is set to '0', the base station shall omit this field;
5 otherwise, the base station shall set this field as follows:6 The base station shall set this field to the number of the
7 Forward Supplemental Channel records need to be updated.8 If NUM_FOR_SCH is included and not equal to '00000', the base station shall include
9 NUM_FOR_SCH occurrence of the following three fields:

10 FOR_SCH_ID - Forward Supplemental Channel identifier.

11 The base station shall set this field to the identifier of the
12 Forward Supplemental Channel.

13 SCCL_INDEX - Supplemental Channel Code list index.

14 The base station shall set this field to the index of the record
15 in the Supplemental Channel Code list.

16 FOR_SCH-

17 _NUM_BITS_IDX - Forward Supplemental Channel number of information bits
18 index.19 If USE_FLEX_NUM_BITS is equal to '0' or if
20 USE_FLEX_NUM_BITS is equal to '1' and
21 FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to '0000',
22 then the base station shall set this field according to Table
23 3.7.3.3.2.37-4 to indicate the number of information bits per
24 frame and the length of the CRC field for the Forward
25 Supplemental Channel identified by FOR_SCH_ID
26 corresponding to SCCL_INDEX.

If USE_FLEX_NUM_BITS_s is equal to '1' and FSCH_NBIT_TABLE_ID[FOR_SCH_ID] is not equal to '0000', then the base station shall set the FOR_SCH_NUM_BITS_IDX field to indicate that the number of information bits per frame for the Forward Supplemental channel identified by FOR_SCH_ID to be NUM_BITS[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_NUM_BITS_IDX].

The FOR_SCH_NUM_BITS_IDX field also specifies the number of CRC bits per frame for the Forward Supplemental Channel identified by FOR_SCH_ID. The number of CRC bits per frame is specified by CRC_LEN_IDX[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_NUM_BITS_IDX] and Table 3.7.5.20-4.

NUM_REV_SCH - Number of Reverse Supplemental Channel records.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the number of the Reverse Supplemental Channels need to be updated.

If NUM_REV_SCH is included and not equal to '00000', the base station shall include NUM_REV_SCH occurrence of the following three fields:

REV_SCH_ID - Reverse Supplemental Channel identifier.

The base station shall set this field to the identifier of the Reverse Supplemental Channel.

REV_WALSH_ID - Reverse Supplemental Channel Walsh cover Identifier.

The base station shall set this field according to Table 3.7.3.3.2.37-1 to indicate the Walsh cover ID that the mobile station is to use when transmitting at the rate specified by REV_SCH_NUM_BITS_IDX on the Reverse Supplemental Channel specified by REV_SCH_ID. If only one reverse supplemental channel is assigned, the base station should set this field to the default value for the REV_WALSH_ID as specified in 2.6.4.2.

REV_SCH-
_NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame index.

- 1 If USE_FLEX_NUM_BITS is equal to '0' or if
 2 USE_FLEX_NUM_BITS is equal to '1' and
 3 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then
 4 the base station shall set this field according to Table
 5 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel
 6 number of information bits per frame, corresponding to
 7 REV_WALSH_ID field.
- 8 If USE_FLEX_NUM_BITS is equal to '1' and
 9 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000',
 10 then the base station shall set the REV_SCH_NUM_BITS_IDX
 11 field to indicate the Reverse Supplemental Channel number
 12 of information bits per frame, corresponding to
 13 REV_WALSH_ID field to be
 14 NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]]
 15 [REV_SCH_NUM_BITS_IDX].
- 16 NUM_PILOTS - Number of pilots included in the
 17 message.
- 18 The base station shall set this field to the number of pilots
 19 included in the message. The base station shall set this field
 20 to an integer that is equal to or greater than 1.
- 21 SRCH_OFFSET_INCL - Target pilot channel search window offset included.
- 22 If the SRCH_OFFSET field is included in the following records,
 23 the base station shall set this field to '1'; otherwise, the base
 24 station shall set this field to '0'.
- 25 The base station shall include one occurrence of the following record for each of the
 26 NUM_PILOTS pilots included in the message:
- 27 PILOT_PN - Pilot PN sequence offset index.
- 28 The base station shall set this field to the pilot PN sequence
 29 offset for this pilot in units of 64 PN chips.
- 30 SRCH_OFFSET - Target pilot channel search window offset.
- 31 If SRCH_OFFSET_INCL equals to '1', then the base station
 32 shall set this field to the value shown in Table 2.6.6.2.1-2
 33 corresponding to the search window offset to be used by the
 34 mobile station for this target pilot. Otherwise, the base
 35 station shall omit this field.
- 36 ADD_PILOT_REC_INCL - Additional pilot information included indicator.

1			The base station shall set this field to '1' if additional pilot
2			information listed in PILOT_REC_TYPE and RECORD_LEN
3			fields are included. The base station shall set this field to '0'
4			if the corresponding pilot is the common pilot and there is no
5			additional pilot information included.
6	PILOT_REC_TYPE	-	Pilot record type.
7			If ADD_PILOT_REC_INCL is set to '1', the base station shall
8			set this field to the PILOT_REC_TYPE value shown in Table
9			3.7.2.3.2.21-6 corresponding to the type of Pilot Record
10			specified by this record.
11			If ADD_PILOT_REC_INCL is set to '0', the base station shall
12			omit this field.
13	RECORD_LEN	-	Pilot record length.
14			If ADD_PILOT_REC_INCL is set to '1', the base station shall
15			set this field to the number of octets in the type-specific fields
16			of this pilot record.
17			If ADD_PILOT_REC_INCL is set to '0', the base station shall
18			omit this field.
19	Type-specific fields	-	Pilot record type-specific fields.
20			If ADD_PILOT_REC_INCL is set to '1', the base station shall
21			include type-specific fields based on the PILOT_REC_TYPE of
22			this pilot record as described in 3.7.6.1.
23			If ADD_PILOT_REC_INCL is set to '0', the base station shall
24			omit this field.
25			
26	PWR_COMB_IND	-	Power control symbol combining indicator.
27			If the Forward Traffic Channel associated with this pilot will
28			carry the same closed-loop power control subchannel bits as
29			that of the previous pilot in this message, the base station
30			shall set this field to '1'; otherwise, the base station shall
31			set this field to '0'. The base station shall set this field to '0' in
32			the first record in the pilot list.

1	CODE_CHAN_FCH	-	Code Channel on the Fundamental Channel.
2			If a Radio Configuration associated with Spreading Rate 1 is
3			used, the base station shall set this field to the code channel
4			index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile
5			station is to use on the Fundamental Channel of the Forward
6			Traffic Channel. If a Radio Configuration associated with
7			Spreading Rate 3 is used, the base station shall set this field
8			to the code channel index that the mobile station is to use for
9			the Fundamental Channel on the center SR3 frequency.
10			If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used,
11			the base station shall set this field in the range 1 to 63
12			inclusive. If Radio Configuration 4, 6 or 8 is used, the base
13			station shall set this field in the range 1 to 127 inclusive. If
14			Radio Configuration 7 or 9 is used, the base station shall set
15			this field in the range 1 to 255 inclusive.
16	QOF_MASK_ID_FCH	-	Quasi-orthogonal function index on the Fundamental
17			Channel.
18			If a Radio Configuration associated with Spreading Rate 1 is
19			used, the base station shall set this field to the index of the
20			Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]). If a
21			Radio Configuration associated with Spreading Rate 3 is used,
22			the base station shall set this field to the index of the Quasi-
23			orthogonal function on the center SR3 frequency.
24	CODE_CHAN_DCCH	-	Code channel on the DCCH.
25			If a Radio Configuration associated with Spreading Rate 1 is
26			used, the base station shall set this field to the code channel
27			index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile
28			station is to use on the Dedicated Control Channel of the
29			Forward Traffic Channel. If a Radio Configuration associated
30			with Spreading Rate 3 is used, the base station shall set this
31			field to the code channel index that the mobile station is to
32			use for the Dedicated Control Channel on the center SR3
33			frequency.
34			If Radio Configuration 1, 2, 3, or 5 (see 3.1.3.1.2 of [2]) is used,
35			the base station shall set this field in the range 1 to 63
36			inclusive. If Radio Configuration 4, 6 or 8 is used, the base
37			station shall set this field in the range 1 to 127 inclusive. If
38			Radio Configuration 7 or 9 is used, the base station shall set
39			this field in the range 1 to 255 inclusive.
40	QOF_MASK_ID_DCCH	-	Quasi-orthogonal function index on the DCCH.

1			If a Radio Configuration associated with Spreading Rate 1 is
2			used, the base station shall set this field to the index of the
3			Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]). If a
4			Radio Configuration associated with Spreading Rate 1 is used,
5			the base station shall set this field to the index of the Quasi-
6			orthogonal function on the center SR3 frequency.
7	NUM_SCH	-	Number of Supplemental Channel records.
8			The base station shall set this field to the number of the
9			Supplemental Channel records need to be updated.
10	If NUM_SCH is included and not equal to '00000', the base station shall include NUM_SCH		
11	occurrence of the following fields:		
12	FOR_SCH_ID	-	Forward Supplemental Channel identifier.
13			The base station shall set this field to the identifier of the
14			Forward Supplemental Channel pertaining to this record.
15	SCCL_INDEX	-	Supplemental Channel Code list index.
16			The base station shall set this field to the index of the record
17			in the Supplemental Channel Code List Table.
18	PILOT_INCL	-	The corresponding pilot included in Supplemental Channel
19			Active Set indicator.
20			The base station shall set this field to '1' if the corresponding
21			pilot is included in the Active Set of Supplemental Channel;
22			otherwise, the base station shall set this field to '0'.
23	CODE_CHAN_SCH	-	Code Channel on the Supplemental Channel.
24			If SCH_INCL is set to '0', the base station shall omit this field;
25			otherwise, the base station shall set this field as follows:
26			The base station shall set this field to the code channel index
27			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
28			to use on the Supplemental Channel of the Forward Traffic
29			Channel indexed by SCCL_INDEX.
30	QOF_MASK_ID_SCH	-	Quasi-orthogonal function index on the Supplemental
31			Channel.
32			If SCH_INCL is set to '0', the base station shall omit this field;
33			otherwise, the base station shall set this field as follows:
34			The base station shall set this field to the index of the Quasi-
35			orthogonal function (see Table 3.1.3.1.12-2 of [2]).
36	3X_FCH_INFO_INCL	-	3X FCH information included indicator.

If the 3X Fundamental Channel information is included, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

4 3X DCCH INFO INCL – 3X DCCH information included indicator.

If the 3X Dedicated Control Channel information is included, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

8 The base station shall include NUM_PILOTS plus one occurrence of the following record if
9 3X_FCH_INFO_INCL or 3X_FCH_INFO_INCL is set to '1'. The base station shall use the
10 same order for the following fields as is used for the PILOT_PN fields listed in this message.

11 3X_FCH_LOW_INCL - FCH code channel on the lowest SR3 frequency included
12 indicator.

If 3X_FCH_INFO_INCL is set to '0', the base station shall set omit this field; otherwise, the base station shall set this field as follows:

If the FCH on the lowest SR3 frequencies has a different code channel than the FCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

20 QOF MASK ID-

²¹ _FCH_LOW – QOF index for the FCH on the lowest SR3 frequency.

If 3X_FCH_LOW_INCL is included and set to '1', the base station shall set this field as follows; otherwise, the base station shall omit this field:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the FCH on the lowest SR3 frequency.

29 CODE CHAN-

30 _FCH_LOW - Code channel for the FCH on the lowest SR3 frequency.

If 3X_FCH_LOW_INCL is included and set to '1', the base station shall set this field as follows; otherwise, the base station shall omit this field:

1		The base station shall set this field to the code channel index
2		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
3		to use on the FCH on the lowest SR3 frequency. If Radio
4		Configuration 6 or 8 is used, the base station shall set this
5		field in the range 1 to 127 inclusive. If Radio Configuration 7
6		or 9 is used, the base station shall set this field in the range
7		1 to 255 inclusive.
8	3X_FCH_HIGH_INCL	- FCH code channel on the highest SR3 frequency included
9		indicator.
10		If 3X_FCH_INFO_INCL is set to '0', the base station shall omit
11		this field; otherwise, the base station shall set this field as
12		follows:
13		If the FCH on the highest SR3 frequencies has a different
14		code channel than the FCH on the center SR3 frequency, the
15		base station shall set this field to '1'; otherwise, the base
16		station shall set this field to '0'.
17	QOF_MASK_ID-	
18	_FCH_HIGH	- QOF index for the FCH on the highest SR3 frequency.
19		If 3X_FCH_HIGH_INCL is included and set to '1', the base
20		station shall set this field as follows; otherwise, the base
21		station shall omit this field:
22		The base station shall set this field to the index of the Quasi-
23		orthogonal function (see Table 3.1.3.1.12-2 of [2])
24		corresponding to the QOF index for the FCH on the highest
25		SR3 frequency.
26	CODE_CHAN-	
27	_FCH_HIGH	- Code channel for the FCH on the highest SR3 frequency.
28		If 3X_FCH_HIGH_INCL is included and set to '1', the base
29		station shall set this field as follows; otherwise, the base
30		station shall omit this field:
31		The base station shall set this field to the code channel index
32		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
33		to use on the FCH on the highest SR3 frequency. If Radio
34		Configuration 6 or 8 is used, the base station shall set this
35		field in the range 1 to 127 inclusive. If Radio Configuration 7
36		or 9 is used, the base station shall set this field in the range
37		1 to 255 inclusive.
38	3X_DCCH_LOW_INCL	- DCCH code channel on the lowest SR3 frequency included
39		indicator.

1		If 3X_DCCH_INFO_INCL is set to '0', the base station shall
2		omit this field; otherwise, the base station shall set this field
3		as follows:
4		If the DCCH on the lowest SR3 frequencies has a different
5		code channel than the DCCH on the center SR3 frequency,
6		the base station shall set this field to '1'; otherwise, the base
7		station shall set this field to '0'.
8	QOF_MASK_ID-	
9	_DCCH_LOW	- QOF index for the DCCH on the lowest SR3 frequency.
10		If 3X_DCCH_LOW_INCL is included and set to '1', the base
11		station shall set this field as follows; otherwise, the base
12		station shall omit this field:
13		The base station shall set this field to the index of the Quasi-
14		orthogonal function (see Table 3.1.3.1.12-2 of [2])
15		corresponding to the QOF index for the DCCH on the lowest
16		SR3 frequency.
17	CODE_CHAN-	
18	_DCCH_LOW	- Code channel for the DCCH on the lowest SR3 frequency.
19		If 3X_DCCH_LOW_INCL is included and set to '1', the base
20		station shall set this field as follows; otherwise, the base
21		station shall omit this field:
22		The base station shall set this field to the code channel index
23		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
24		to use on the DCCH on the lowest SR3 frequency. If Radio
25		Configuration 6 or 8 is used, the base station shall set this
26		field in the range 1 to 127 inclusive. If Radio Configuration 7
27		or 9 is used, the base station shall set this field in the range
28		1 to 255 inclusive.
29	3X_DCCH_HIGH_INCL	- DCCH code channel on the highest SR3 frequency included
30		indicator.
31		If 3X_DCCH_INFO_INCL is set to '0', the base station shall
32		omit this field; otherwise, the base station shall set this field
33		as follows:
34		If the DCCH on the highest SR3 frequencies has a different
35		code channel than the DCCH on the center SR3 frequency,
36		the base station shall set this field to '1'; otherwise, the base
37		station shall set this field to '0'.
38	QOF_MASK_ID-	
39	_DCCH_HIGH	- QOF index for the DCCH on the highest SR3 frequency.

If 3X_DCCH_HIGH_INCL is included and set to '1', the base station shall set this field as follows; otherwise, the base station shall omit this field:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the DCCH on the highest SR3 frequency.

CODE_CHAN-

_DCCH_HIGH - Code channel for the DCCH on the highest SR3 frequency.

If 3X_DCCH_HIGH_INCL is included and set to '1', the base station shall set this field as follows; otherwise, the base station shall omit this field:

The base station shall set this field to the code channel index (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is to use on the DCCH on the highest SR3 frequency. If Radio Configuration 6 or 8 is used, the base station shall set this field in the range 1 to 127 inclusive. If Radio Configuration 7 or 9 is used, the base station shall set this field in the range 1 to 255 inclusive.

3X_SCH_INFO_INCL - 3X SCH information included indicator.

If SCH_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

If the 3X Supplemental Channel information is included, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

The base station shall include NUM_SCH plus one occurrence of the following seven fields record if 3X_SCH_INFO_INCL is included and set to '1'.

FOR_SCH_ID - Forward Supplemental Channel identifier.

The base station shall set this field the identifier of the Forward Supplemental Channel pertaining to this record.

3X_SCH_LOW_INCL - SCH code channel on the lowest SR3 frequency included indicator.

If the SCH on the lowest SR3 frequencies has a different code channel than the SCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_SCH_LOW - QOF index for the SCH on the lowest SR3 frequency.

1		If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
2		this field; otherwise, the base station shall set this field as
3		follows:
4		The base station shall set this field to the index of the Quasi-
5		orthogonal function (see Table 3.1.3.1.12-2 of [2]
6		corresponding to the QOF index for the SCH on the lowest SR3
7		frequency.
8	CODE_CHAN-	
9	_SCH_LOW	- Code channel for the SCH on the lowest SR3 frequency.
10		If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
11		this field; otherwise, the base station shall set this field as
12		follows:
13		The base station shall set this field to the code channel index
14		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
15		to use on the SCH on the lowest SR3 frequency. If Radio
16		Configuration 6 or 8 is used, the base station shall set this
17		field in the range 1 to 127 inclusive. If Radio Configuration 7
18		or 9 is used, the base station shall set this field in the range
19		1 to 255 inclusive.
20	3X_SCH_HIGH_INCL	- SCH code channel on the highest SR3 frequency included
21		indicator.
22		If the SCH on the highest SR3 frequencies has a different
23		code channel than the SCH on the center SR3 frequency, the
24		base station shall set this field to '1'; otherwise, the base
25		station shall set this field to '0'.
26	QOF_MASK_ID-	
27	_SCH_HIGH	- QOF index for the SCH on the highest SR3 frequency.
28		If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit
29		this field; otherwise, the base station shall set this field as
30		follows:
31		The base station shall set this field to the index of the Quasi-
32		orthogonal function (see Table 3.1.3.1.12-2 of [2]
33		corresponding to the QOF index for the SCH on the highest
34		SR3 frequency.
35	CODE_CHAN-	
36	_SCH_HIGH	- Code channel for the SCH on the highest SR3 frequency.
37		If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit
38		this field; otherwise, the base station shall set this field as
39		follows:

1 The base station shall set this field to the code channel index
2 (see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
3 to use on the SCH on the highest SR3 frequency. If Radio
4 Configuration 6 or 8 is used, the base station shall set this
5 field in the range 1 to 127 inclusive. If Radio Configuration 7
6 or 9 is used, the base station shall set this field in the range
7 1 to 255 inclusive.
8

1 3.7.3.3.2.37 Extended Supplemental Channel Assignment Message

2 MSG_TAG: ESCAM

3

Field	Length (bits)
START_TIME_UNIT	3
REV_SCH_DTX_DURATION	4
USE_T_ADD_ABORT	1
USE_SCRM_SEQ_NUM	1
SCRM_SEQ_NUM	0 or 4
ADD_INFO_INCL	1
FPC_PRI_CHAN	0 or 1

REV_CFG_INCLUDED	1
------------------	---

The base station shall include the following field if
REV_CFG_INCLUDED is set to '1'

NUM_REV_CFG_RECS	5
------------------	---

The base station shall the include (NUM_REV_CFG_RECS
+1) occurrences of the following three fields if
REV_CFG_INCLUDED is set to '1'

REV_SCH_ID	1
REV_WALSH_ID	1
REV_SCH_NUM_BITS_IDX	4

NUM_REV_SCH	2
-------------	---

The base station shall include NUM_REV_SCH occurrences
of the following fields

REV_SCH_ID	1
REV_SCH_DURATION	4
REV_SCH_START_TIME_INCL	1
REV_SCH_START_TIME	0 or 5
REV_SCH_NUM_BITS_IDX	4

(continues on next page)

4

5

1

Field	Length (bits)
FOR_CFG_INCLUDED	1
FOR_SCH_FER_REP	0 or 1

The base station shall include the following field if
FOR_CFG_INCLUDED is set to '1'

NUM_FOR_CFG_RECS	5
------------------	---

The base station shall the include (NUM_FOR_CFG_RECS
+1) occurrences of the following fields if
FOR_CFG_INCLUDED is set to '1'

FOR_SCH_ID	1
SCCL_INDEX	4
FOR_SCH_NUM_BITS_IDX	4
NUM_SUP_SHO	3

NUM_SUP_SHO+1 occurrences of the following fields

PILOT_PN	9
ADD_PILOT_REC_INCL	1
ACTIVE_PILOT_REC_TYPE	0 or 3
RECORD_LEN	0 or 3
Type -specific fields	0 or 8 x RECORD_LEN
CODE_CHAN_SCH	11
QOF_MASK_ID_SCH	2

NUM_FOR_SCH	2
-------------	---

The base station shall include NUM_FOR_SCH
occurrences of the following fields

FOR_SCH_ID	1
FOR_SCH_DURATION	4
FOR_SCH_START_TIME_INCL	1
FOR_SCH_START_TIME	0 or 5
SCCL_INDEX	4

(continues on next page)

2

3

1

Field	Length (bits)
FPC_INCL	1
FPC_MODE_SCH	0 or 3
FPC_SCH_INIT_SETPT_OP	0 or 1
FPC_SEC_CHAN	0 or 1
NUM_SUP	0 or 2

Include NUM_SUP occurrences of the following fields:

SCH_ID	1
FPC_SCH_FER	5
FPC_SCH_INIT_SETPT	8
FPC_SCH_MIN_SETPT	8
FPC_SCH_MAX_SETPT	8

FPC_THRESH_SCH_INCL	0 or 1
FPC_SETPT_THRESH_SCH	0 or 8
RPC_INCL	1
RPC_NUM_SUP	0 or 1

Include RPC_NUM_SUP +1 occurrences of the following two fields record:

SCH_ID	1
RLGAIN_SCH_PILOT	6

(continues on next page)

2

3

4

Field	Length (bits)
3X_SCH_INFO_INCL	1
NUM_3X_CFG	0 or 2

NUM_3X_CFG occurrences of the following record if
3X_SCH_INFO_INCL is included and set to '1':

FOR_SCH_ID	1
NUM_3X_REC	5

(NUM_3X_REC + 1) occurrences of the following record:

SCCL_INDEX	4
------------	---

(NUM_SUP_SHO + 1) occurrences of the following record:

3X_SCH_LOW_INCL	1
QOF_MASK_ID_SCH_LOW	0 or 2
CODE_CHAN_SCH_LOW	0 or 11
3X_SCH_HIGH_INCL	1
QOF_MASK_ID_SCH_HIGH	0 or 2
CODE_CHAN_SCH_HIGH	0 or 11

1		
2	START_TIME_UNIT	- Unit for start time.
3		The base station shall set this field to indicate the units of
4		start time included in <i>Extended Supplemental Channel</i>
5		<i>Assignment Message</i> , <i>Forward Supplemental Channel Assignment</i>
6		<i>Mini Message</i> , <i>Reverse Supplemental Channel Assignment Mini</i>
7		<i>Message</i> , and <i>Universal Handoff Direction Message</i> . The base
8		station shall set this field to one less than the number of 20
9		ms frames that determines the START_TIME_UNIT.
10	REV_SCH_DTX-	
11	_DURATION	- Discontinuous Transmission on Reverse Supplemental
12		Channel.
13		The base station shall set this field to the maximum duration
14		of time in units of 20 ms that the mobile station is allowed to
15		stop transmission on a Reverse Supplemental Channel within
16		the reverse assignment duration. The base station shall set
17		this field to '0000' if the mobile station is to stop using a
18		Reverse Supplemental Channel once it has stopped
19		transmitting on that Reverse Supplemental Channel. The
20		base shall set this field to '1111' if the mobile station is
21		allowed to resume transmission on a Reverse Supplemental
22		Channel at any time within the reverse assignment duration.
23	USE_T_ADD_ABORT	- Reverse use T_ADD abort indicator.
24		The base station shall set this field to '1' to indicate that the
25		mobile station is to utilize the T_ADD Reverse Supplemental
26		Channel abort feature for this reverse assignment;
27		otherwise, the base station shall set this field to '0'.
28	USE_SCRM-	
29	_SEQ_NUM	- Use Supplemental Channel Request Message sequence
30		number indicator.
31		The base station shall set this field to '1' if the
32		SCRM_SEQ_NUM field is included in this message; otherwise,
33		the base station shall set this field to '0'.

1	SCRM_SEQ_NUM	-	Supplemental Channel Request Message sequence number.
2			If USE_SCRM_SEQ_NUM is set to '1', the base station shall set
3			this field to the sequence number corresponding to the
4			SCRM_SEQ_NUM field in a Supplemental Channel Request
5			Message to which the mobile station is to match this
6			message; otherwise, the base station shall omit this field.
7	ADD_INFO_INCL	-	Additional information included indicator.
8			If the message is to contain the FPC_PRI_CHAN field, the
9			base station shall set this field to '1'; otherwise, the base
10			station shall set this field to '0'.
11			The base station shall set this field to '0' if the message does
12			not contain any Supplemental Channel assignment.
13	FPC_PRI_CHAN	-	Power Control Subchannel Indicator.
14			If the ADD_INFO_INCL field is set to '0', the base station shall
15			omit this field; otherwise, the base station shall set this field
16			as follows:
17			The base station shall set this field to '0' if the mobile station
18			is to perform the primary inner loop estimation on the
19			received Forward Fundamental Channel and the base station
20			is to multiplex the Power Control Subchannel on the Forward
21			Fundamental Channel. The base station shall set this field to
22			'1' if the mobile station is to perform the primary inner loop
23			estimation on the received Forward Dedicated Control
24			Channel and the base station is to multiplex the Power
25			Control Subchannel on the Forward Dedicated Control
26			Channel.
27			If only Fundamental Channel is assigned, the base station
28			shall set this field to '0'. If only the Dedicated Control
29			Channel is assigned, the base station shall set this field to
30			'1'.
31	REV_CFG_INCLUDED-	-	Reverse Supplemental Channel configuration included.
32			The base station shall set this field to '1' if this message
33			contains a Reverse Supplemental Channel configuration.
34			Otherwise, the base station shall set this field to '0'.
35	NUM_REV_CFG_RECS	-	Number of the Reverse Supplemental Channel configuration
36			Records.

The base station shall set this field to one less than the number of reverse supplemental channel configuration records consisting of the following three fields that are included in this message.

The base station shall include NUM_REV_CFG_RECS occurrences of the following three fields only if the REV_CFG_INCLUDED field is set to '1'.

REV_SCH_ID - Reverse Supplemental Channel Identifier.

The base station shall set this field to the identifier of the Reverse Supplemental Channel.

REV_WALSH_ID - Reverse Supplemental Channel Walsh cover Identifier.

The base station shall set this field according to Table 3.7.3.3.2.37-1 to indicate the Walsh cover ID that the mobile station is to use when transmitting number of bits per frame specified by REV_NUM_BITS_IDX on the Reverse Supplemental Channel specified by REV_SCH_ID. If only one reverse supplemental channel is assigned, the base station should set this field to the default value for the REV_WALSH_ID as specified in 2.6.4.2.

Table 3.7.3.3.2.37-1. REV_WALSH_ID Field

REV_WALSH_ID (binary)	Walsh Cover	
	SCH_ID = '0'	SCH_ID = '1'
0	+-	++--
1	+++--	+++-----+

REV_SCH-
_NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame index.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then the base station shall set this field according to Table 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field.

If USE_FLEX_NUM_BITS is equal to '1' and RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000', then the base station shall set the REV_SCH_NUM_BITS_IDX field to indicate the Reverse Supplemental Channel number of information bits per frame, corresponding to REV_WALSH_ID field to be NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX].

Table 3.7.3.3.2.37-2. R-SCH Number of Information Bits per Frame

REV_SCH_NUM_BITS_IDX (binary)	Number of information bits per frame		Number of CRC bits per frame
	RC 1, 3, 5	RC 2, 4, 6	
0000	172	267	12
0001	360	552	16
0010	744	1,128	16
0011	1,512	2,280	16
0100	3,048	4,584	16
0101	6,120	5,178	16
0110	12,264	9,192	16
0111	Reserved	10,356	16
1000	Reserved	20,712	16
RESERVED	All other values are reserved		

NUM_REV_SCH - Number of Reverse Supplemental Channels assigned.

The base station shall set this field to the number of Reverse Supplemental Channel assigned. The base station shall set this field to '00' if the assignment of Supplemental Channel is not included.

The base station shall include NUM_REV_SCH occurrences of the following five fields (REV_SCH_ID, REV_SCH_DURATION, REV_SCH_START_TIME_INCL, REV_SCH_START_TIME, and REV_SCH_NUM_BITS_IDX).

REV_SCH_ID - Reverse Supplemental Channel Identifier.

The base station shall set this field to the identifier of the Reverse Supplemental Channel.

REV_SCH_DURATION - Duration of Reverse Supplemental Channel assignment

The base station shall set this field to '0000' to indicate that the mobile station is to stop transmitting on the Reverse Supplemental Channel specified by REV_SCH_ID at the explicit start time specified by REV_SCH_START_TIME or at the implicit start time if REV_SCH_START_TIME_INCL is set to '0'. The base station shall set this field to '1111' to indicate that the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID, starting at the explicit action time specified by REV_SCH_START_TIME. The base station shall set this field to the duration according to Table 3.7.3.3.2.37-3, starting at the start time specified by REV_SCH_START_TIME, during which the mobile station may transmit on the Reverse Supplemental Channel specified by REV_SCH_ID.

Table 3.7.3.3.2.37-3. FOR_SCH_DURATION and REV_SCH_DURATION Fields

FOR_SCH_DURATION REV_SCH_DURATION (binary)	Duration in 20 ms
0001	1
0010	2
0011	3
0100	4
0101	5
0110	6
0111	7
1000	8
1001	16
1010	32
1011	64
1100	96
1101	128
1110	256
1110-1111	Reserved

1	REV_SCH-	
2	_START_TIME_INCL	- Start time included indicator.
3		If REV_SCH_DURATION is not equal to '0000', the base station
4		shall set this field to '1'. If REV_SCH_DURATION is equal to
5		'0000', the base station shall set this field as follows:
6		The base station shall set this field to '1' if
7		REV_SCH_START_TIME is included in this message;
8		otherwise, the base station shall set this field to '0'.
9	REV_SCH-	
10	_START_TIME	- Start time for Reverse Supplemental Channel assignment.
11		If REV_SCH_START_TIME_INCL is set to '0', the base station
12		shall omit this field; otherwise, the base station shall set this
13		field to the System Time, in units of time specified by
14		START_TIME_UNIT, (modulo 32) at which the mobile station
15		may start transmitting on the Reverse Supplemental
16		Channel specified in this message. The explicit start time
17		for transmitting on the Reverse Supplemental Channel is the
18		time for which
19		$\lfloor t / (\text{START_TIME_UNIT}_s + 1) \rfloor - \text{REV_SCH_START_TIME} \bmod 32$
20		= 0,
21		where t is the System Time in units of 20 ms.
22	REV_SCH-	
23	_NUM_BITS_IDX	- Reverse Supplemental Channel number of bits per frame
24		index.
25		If USE_FLEX_NUM_BITS is equal to '0' or if
26		USE_FLEX_NUM_BITS is equal to '1' and
27		RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then
28		the base station shall set this field according to Table
29		3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel
30		number of information bits per frame, corresponding to
31		REV_WALSH_ID field.

1		If USE_FLEX_NUM_BITS is equal to '1' and
2		RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000',
3		then the base station shall set the REV_SCH_NUM_BITS_IDX
4		field to indicate the Reverse Supplemental Channel number
5		of information bits per frame, corresponding to
6		REV_WALSH_ID field to be
7		NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]]
8		[REV_SCH_NUM_BITS_IDX].
9		
10	FOR_CFG_INCLUDED-	Forward Supplemental Channel configuration included.
11		The base station shall set this field to '1' if this message
12		contains a Forward Supplemental Channel configuration.
13		Otherwise, the base station shall set this field to '0'.
14	NUM_FOR_CFG_RECS	- Number of the Forward Supplemental Channel configuration
15		Records.
16		The base station shall set this field to one less than the
17		number of forward supplemental channel configuration
18		records consisting of the following three fields that are
19		included in this message.
20	The base station shall include NUM_FOR_CFG_RECS occurrences of the following fields	
21	only if the FOR_CFG_INCLUDED field is set to '1'.	
22	FOR_SCH_ID	- Forward Supplemental Channel identifier
23		The base station shall set this field to the identifier of the
24		Forward Supplemental Channel.
25	SCCL_INDEX	- Supplemental Channel Code list index.
26		The base station shall set this field to the index of the record
27		in the Supplemental Channel Code list.
28	FOR_SCH-	
29	_NUM_BITS_IDX	- Forward Supplemental Channel number of information bits
30		index.
31		If USE_FLEX_NUM_BITS is equal to '0' or if
32		USE_FLEX_NUM_BITS is equal to '1' and
33		FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to '0000',
34		then the base station shall set this field according to Table
35		3.7.3.3.2.37-4 to indicate the number of information bits per
36		frame and the length of the CRC field for the Forward
37		Supplemental Channel identified by FOR_SCH_ID
38		corresponding to SCCL_INDEX.

Table 3.7.3.3.2.37-4. F-SCH Number of

Information Bits per Frame

FOR_SCH_NUM _BITS_IDX (binary)	Number of information bits per frame		Number of CRC bits per frame
	RC 1, 3, 4, 6, 7	RC 2, 5, 8, 9	
0000	172	267	12
0001	360	552	16
0010	744	1,128	16
0011	1,512	2,280	16
0100	3,048	4,584	16
0101	6,120	5,178	16
0110	12,264	9,192	16
0111	Reserved	10,356	16
1000	Reserved	20,712	16
RESERVED	All other values are reserved		

If USE_FLEX_NUM_BITS_s is equal to '1' and FSCH_NBIT_TABLE_ID[FOR_SCH_ID] is not equal to '0000', then the base station shall set the FOR_SCH_NUM_BITS_IDX field to indicate that the number of information bits per frame for the Forward Supplemental channel identified by FOR_SCH_ID to be NUM_BITS[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_NUM_BITS_IDX].

The FOR_SCH_NUM_BITS_IDX field also specifies the number of CRC bits per frame for the Forward Supplemental Channel identified by FOR_SCH_ID. The number of CRC bits per frame is specified by CRC_LEN_IDX[FSCH_NBIT_TABLE_ID[FOR_SCH_ID]][FOR_SCH_NUM_BITS_IDX] and Table 3.7.5.20-4.

NUM_SUP_SHO - Number of Forward Supplemental Channels in Soft Handoff

The base station shall set this field to the size of the Forward Supplemental Channel Active Set minus one.

The base station shall include NUM_SUP_SHO+1 occurrences of the following fields for each Forward Supplemental channel corresponding to the FOR_SCH_ID and the SCCL_INDEX whose frames may be soft-combined by the mobile station:

1			
2	PILOT_PN	-	Pilot PN sequence offset index.
3			The base station shall set this field to the pilot PN sequence
4			offset for this pilot in units of 64 PN chips.
5	ADD_PILOT_REC_INCL	-	Additional pilot information included indicator.
6			The base station shall set this field to '1' if additional pilot
7			information listed in PILOT_REC_TYPE and RECORD_LEN
8			fields are included. The base station shall set this field to '0'
9			if the corresponding pilot is the common pilot and there is no
10			additional pilot information included.
11	PILOT_REC_TYPE	-	Pilot record type
12			If ADD_PILOT_REC_INCL is set to '1', the base station shall
13			set this field to the PILOT_REC_TYPE value shown in Table
14			3.7.2.3.2.21-6 corresponding to the type of Pilot Record
15			specified by this record.
16			If ADD_PILOT_REC_INCL is set to '0', the base station shall
17			omit this field.
18	RECORD_LEN	-	Pilot record length.
19			If ADD_PILOT_REC_INCL is set to '1', the base station shall
20			set this field to the number of octets in the type-specific fields
21			of this pilot record.
22			If ADD_PILOT_REC_INCL is set to '0', the base station shall
23			omit this field.
24	Type-specific fields	-	Pilot record type-specific fields.
25			If ADD_PILOT_REC_INCL is set to '1', the base station shall
26			include type-specific fields based on the
27			ACTIVE_PILOT_REC_TYPE of this pilot record as described in
28			3.7.6.1.
29			If ADD_PILOT_REC_INCL is set to '0', the base station shall
30			omit this field.
31	CODE_CHAN_SCH	-	Code channel on the Supplemental Channel.
32			The base station shall set this field to the code channel index
33			(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
34			to use on the Supplemental Channel of the Forward Traffic
35			Channel indexed by SCCL_INDEX.
36	QOF_MASK_ID_SCH	-	Quasi-orthogonal function index on the Supplemental
37			Channel.

The base station shall set this field to the index of the Quasi-orthogonal function (see 3.1.3.1.13 of [2]).

NUM_FOR_SCH - Number of Forward Supplemental Channels assigned.

The base station shall set this field to the number of forward Supplemental Channel assigned. The base station shall set this field to '00' if the assignment of Supplemental Channel is not included.

The base station shall include NUM_FOR_SCH occurrences of the following six fields (FOR_SCH_ID, FOR_SCH_DURATION, FOR_SCH_START_TIME_INCL, FOR_SCH_START_TIME, FOR_SCH_FER_REP, and SCCL_INDEX).

FOR_SCH_ID - Forward Supplemental Channel identifier.

The base station shall set this field to the identifier of the Forward Supplemental Channel pertaining to this record.

FOR_SCH_DURATION - Duration of Forward Supplemental Channel assignment.

The base station shall set this field to the duration (see Table 3.7.3.3.2.37-3), starting at the start time of the message specified by FOR_SCH_START_TIME, during which the mobile station is to process the Forward Supplemental Channel.

The base station shall set this field to '0000' to indicate that the mobile station should stop processing the Forward Supplemental Channel starting at the explicit start time of the message specified by FOR_SCH_START_TIME or at the implicit start time if FOR_SCH_START_TIME_INCL is set to '0'.

The base station shall set this field to '1111' to indicate that the mobile station should process the Forward Supplemental Channel, starting at the start time of the message specified by FOR_SCH_START_TIME, until a subsequent Forward Supplemental Channel assignment with the same FOR_SCH_ID field is received (see 2.6.6.2.5.1.1).

FOR_SCH-

_START_TIME_INCL - Start time included indicator.

If FOR_SCH_DURATION is not equal to '0000', the base station shall set this field to '1'. If FOR_SCH_DURATION is equal to '0000', the base station shall set this field as follows:

1		The base station shall set this field to '1' if
2		FOR_SCH_START_TIME is included in this message;
3		otherwise, the base station shall set this field to '0'.
4	FOR_SCH-	
5	_START_TIME	- Start time for Forward Supplemental Channel assignment.
6		If FOR_SCH_START_TIME_INCL is set to '0', the base station
7		shall omit this field; otherwise, the base station shall set this
8		field to the System Time, in units of time specified by
9		START_TIME_UNIT, (modulo 32) at which the mobile station
10		is to start processing the Forward Supplemental Channel
11		specified in this message. The start time for processing
12		Forward Supplemental Channels is the time for which
13		$(\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{FOR_SCH_START_TIME}) \bmod 32$
14		= 0,
15		where t is the System Time in units of 20 ms.
16	FOR_SCH_FER_REP	- Forward Supplemental Channel FER report indicator.
17		The base station shall set this field to '1' if the mobile station
18		is to report the Supplemental Channel frame counts (see
19		2.6.4.1.1); otherwise, the base station shall set this field to '0'.
20	SCCL_INDEX	- Supplemental Channel Code list index.
21		The base station shall set this field to the index of the record
22		in the Forward Supplemental Channel Code list
23		corresponding to the FOR_SCH_ID.
24	FPC_INCL	- Forward Link Power Control parameter included indicator.
25		If the forward power control related information is included in
26		this message, the base station shall set this field to '1';
27		otherwise, the base station shall set this field to '0'.
28	FPC_MODE_SCH	- Forward Power Control operational mode indicator used
29		during forward Supplemental Channel assignment interval.
30		If FPC_INCL is set to '1', the base station shall set the value
31		to the forward power control operation mode as specified in
32		Table 2.1.3.1.11-1 of [2]; otherwise, the base station shall
33		omit this field.
34	FPC_SCH-	
35	_INIT_SETPT_OP	- Initial Supplemental Channel Outer Loop Eb/Nt setpoint
36		option.
37		If FPC_INCL is set to '0', the base station shall omit this field;
38		otherwise, the base station shall set this field as follows:

1 The base station shall set this field to '0' to indicate that
 2 FPC_SCH_INIT_SETPT contains the absolute value of the
 3 initial F-SCH Eb/Nt setpoint. The base station shall set this
 4 field to '1' to indicate that FPC_SCH_INIT_SETPT contains the
 5 offset value of the initial F-SCH Eb/Nt setpoint relative to the
 6 current value used in the mobile station for the channel
 7 carrying the Forward Power Control Subchannel.

8 FPC_SEC_CHAN - Master Supplemental channel index.
 9
 10 If FPC_OLPC_SCH_INCL is included and set to '1', the base
 11 station shall set this field to the master Supplemental
 12 Channel index; otherwise, the base station shall omit this
 13 field.

14 NUM_SUP - Number of Supplemental Channels.
 15 If FPC_INCL is set to '0' the base station shall omit this field;
 16 otherwise, the base station shall set this field to the total
 17 number of the Supplemental Channels.

18 The base station shall include NUM_SUP occurrences of the following record:

19 SCH_ID - Supplemental channel index.
 20 The base station shall set this field to the Supplemental
 21 Channel index.

22 FPC_SCH_FER - Supplemental channel target Frame Error Rate.
 23 The base station shall set this field to the target Frame Error
 24 Rate on the Supplemental Channel, as specified in Table
 25 3.7.3.3.2.25-2.

26 FPC_SCH_INIT_SETPT - Initial Supplemental Channel Output Loop Eb/Nt setpoint
 27 The base station shall set this field to initial Supplemental
 28 Channel Outer Loop Eb/Nt setpoint (absolute value or offset
 29 value as indicated by FPC_SCH_INIT_SETPT_OP) as follows:
 30 If FPC_SCH_INIT_SETPT_OP is set to '0', the unit is 0.125
 31 dB;
 32 If FPC_SCH_INIT_SETPT_OP is set to '1', the unit is 0.125 dB
 33 and the offset is expressed as two's complement signed
 34 number.

35 FPC_SCH_MIN_SETPT - Minimum Supplemental Channel outer loop Eb/Nt setpoint.
 36 The base station shall set this field to minimum
 37 Supplemental Channel Outer Loop Eb/Nt setpoint, in units of
 38 0.125 dB.

39 FPC_SCH_MAX_SETPT - Maximum Supplemental Channel outer loop Eb/Nt setpoint.

1		The base station shall set this field to maximum
2		Supplemental Channel Outer Loop Eb/Nt setpoint, in units of
3		0.125 dB.
4	FPC_THRESH_SCH_INCL -	SCH Setpoint Report Threshold Included Indicator.
5		If FPC_INCL is set to '1' and SCH setpoint report threshold is
6		included in this message, the base station shall set this field
7		to '1'; otherwise, the base station shall set this field to '0'.
8	SETPT_THRESH_SCH -	SCH Setpoint Report Threshold.
9		If THRESH_SCH_INCL is set to '1', the base station shall set
10		the value to SETPT_THRESH_SCH (in units of 0.125 dB) above
11		which the outer loop report message will be sent by the
12		mobile station; otherwise, the base station shall omit this
13		field.
14	RPC_INCL -	Reverse Power Control parameter included indicator.
15		The base station shall set this field to '1' if RPC_NUM_SUP is
16		included in this message; otherwise the base station shall
17		set this field to '0'.
18	RPC_NUM_SUP -	Number of Supplemental Channels.
19		If RPC_INCL is set to '1', the base station shall set this field to
20		the total number of the Supplemental Channels minus one;
21		otherwise, the base station shall omit this field.
22	The base station shall include RPC_NUM_SUP +1 occurrences of the following two fields	
23	record:	
24	SCH_ID -	Supplemental channel index.
25		The base station shall set this field to the Supplemental
26		Channel index.
27	RLGAIN_SCH_PILOT -	Supplemental channel power offset adjustment relative to
28		Reverse Pilot Channel power for radio configurations greater
29		than 2.
30		The base station shall set this field to the correction factor to
31		be used by mobile stations setting the power of a
32		supplemental channel, expressed as a two's complement
33		value in units of 0.125 dB.
34	3X_SCH_INFO_INCL -	3X SCH information included indicator.
35		If the 3X Supplemental Channel information is included, the
36		base station shall set this field to '1'; otherwise, the base
37		station shall set this field to '0'.
38	NUM_3X_CFG -	Number of 3X Supplemental Channels to be configured

If 3X_SCH_INFO_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the number of 3X Forward Supplemental Channels to be configured. The base station shall set this field to '00' if the configuration of Supplemental Channel is not included.

The base station shall include NUM_3X_CFG occurrences of the following record if 3X_SCH_INFO_INCL is included and set to '1'.

FOR_SCH_ID - Forward Supplemental Channel identifier.

The base station shall set this field the identifier of the Forward Supplemental Channel pertaining to this record.

NUM_3X_REC - Number of 3X records

The base station shall set this field to the number of instances of the following record minus one included in this message.

SCCL_INDEX - Supplemental Channel Code list index.

The base station shall set this field to the index of the record in the Supplemental Channel Code list.

The base station shall include NUM_SUP_SHO+1 occurrences of the following fields for each Forward Supplemental channel corresponding to the FOR_SCH_ID and the SCCL_INDEX whose frames may be soft-combined by the mobile station:

3X_SCH_LOW_INCL - SCH code channel on the lowest SR3 frequency included indicator.

If the SCH on the lowest SR3 frequencies has a different code channel than the SCH on the center SR3 frequency, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

QOF_MASK_ID-

_SCH_LOW - QOF index for the SCH on the lowest SR3 frequency.

If 3X_SCH_LOW_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

The base station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) corresponding to the QOF index for the SCH on the lowest SR3 frequency.

1	CODE_CHAN-	
2	_SCH_LOW	- Code channel for the SCH on the lowest SR3 frequency.
3		If 3X_SCH_LOW_INCL is set to '0', the base station shall omit
4		this field; otherwise, the base station shall set this field as
5		follows:
6		The base station shall set this field to the code channel index
7		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
8		to use on the SCH on the lowest SR3 frequency. If Radio
9		Configuration 6 or 8 is used, the base station shall set this
10		field in the range 1 to 127 inclusive. If Radio Configuration 7
11		or 9 is used, the base station shall set this field in the range
12		1 to 255 inclusive.
13	3X_SCH_HIGH_INCL	- SCH code channel on the highest SR3 frequency included
14		indicator.
15		If the SCH on the highest SR3 frequencies has a different
16		code channel than the SCH on the center SR3 frequency, the
17		base station shall set this field to '1'; otherwise, the base
18		station shall set this field to '0'.
19	QOF_MASK_ID-	
20	_SCH_HIGH	- QOF index for the SCH on the highest SR3 frequency.
21		If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit
22		this field; otherwise, the base station shall set this field as
23		follows:
24		The base station shall set this field to the index of the Quasi-
25		orthogonal function (see Table 3.1.3.1.12-2 of [2])
26		corresponding to the QOF index for the SCH on the highest
27		SR3 frequency.
28	CODE_CHAN-	
29	_SCH_HIGH	- Code channel for the SCH on the highest SR3 frequency.
30		If 3X_SCH_HIGH_INCL is set to '0', the base station shall omit
31		this field; otherwise, the base station shall set this field as
32		follows:
33		The base station shall set this field to the code channel index
34		(see 2.1.3.1.9 and 3.1.3.1.13 of [2]) that the mobile station is
35		to use on the SCH on the highest SR3 frequency. If Radio
36		Configuration 6 or 8 is used, the base station shall set this
37		field in the range 1 to 127 inclusive. If Radio Configuration 7
38		or 9 is used, the base station shall set this field in the range
39		1 to 255 inclusive.
40		

1 3.7.3.3.2.38 Forward Supplemental Channel Assignment Mini Message

2 MSG_TAG: FSCAMM

3

Field	Length (bits)
FOR_SCH_ID	1
FOR_SCH_DURATION	4
FOR_SCH_START_TIME	5
SCCL_INDEX	4

1		
2	FOR_SCH_ID	- Forward Supplemental Channel identifier.
3		The base station shall set this field to the identifier of the
4		Forward Supplemental Channel.
5	FOR_SCH_DURATION	- Duration of Forward Supplemental Channel assignment.
6		The base station shall set this field to the duration (see Table
7		3.7.3.3.2.37-3), starting at the start time of the message
8		specified by FOR_SCH_START_TIME, during which the mobile
9		station is to process the Forward Supplemental Channel.
10		The base station shall set this field to '0000' to indicate that
11		the mobile station should stop processing the Forward
12		Supplemental Channel starting at the start time of the
13		message specified by FOR_SCH_START_TIME.
14		The base station shall set this field to '1111' to indicate that
15		the mobile station should process the Forward Supplemental
16		Channel, starting at the explicit start time of the message
17		specified by FOR_SCH_START_TIME, until a subsequent
18		Forward Supplemental Channel assignment with the same
19		FOR_SCH_ID field is received (see 2.6.6.2.5.1.1).
20	FOR_SCH-	
21	_START_TIME	- Start time for Forward Supplemental Channel assignment.
22		The base station shall set this field to the System Time, in
23		units of time specified by START_TIME_UNIT, (modulo 32) at
24		which the mobile station is to start processing the Forward
25		Supplemental Channel specified in this message. The start
26		time for processing Forward Supplemental Channels is the
27		time for which
28		$\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{FOR_SCH_START_TIME} \bmod 32$
29		= 0,
30		where t is the System Time in units of 20 ms.
31	SCCL_INDEX	- Supplemental Channel Code list index.
32		The base station shall set this field to the index of the record
33		in the Forward Supplemental Channel Code list corresponding
34		to the FOR_SCH_ID.
35		

1 3.7.3.3.2.39 Reverse Supplemental Channel Assignment Mini Message

2 MSG_TAG: RSAMM

3

Field	Length (bits)
REV_SCH_ID	1
REV_SCH_DURATION	4
REV_SCH_START_TIME	5
REV_SCH_NUM_BITS_IDX	4

1		
2	REV_SCH_ID	- Reverse Supplemental Channel identifier.
3		The base station shall set this field to the identifier of the
4		Reverse Supplemental Channel.
5	REV_SCH_DURATION	- Duration of Reverse Supplemental Channel assignment.
6		The base station shall set this field to '0000' to indicate that
7		the mobile station is to stop transmitting on the Reverse
8		Supplemental Channel specified by REV_SCH_ID at the start
9		time specified by START_TIME. The base station shall set
10		this field to '1111' to indicate that the mobile station may
11		transmit on the Reverse Supplemental Channel specified by
12		REV_SCH_ID, starting at the start time specified by
13		REV_SCH_START_TIME. The base station shall set this field
14		to the duration according to Table 3.7.3.3.2.37-3, starting at
15		the explicit action time specified by REV_SCH_START_TIME,
16		during which the mobile station may transmit on the Reverse
17		Supplemental Channel specified by REV_SCH_ID.
18	REV_SCH-	
19	_START_TIME	- Start time for <i>Reverse Supplemental Channel Assignment Mini</i>
20		<i>Message</i> .
21		The base station shall set this field to the System Time, in
22		units of time specified by START_TIME_UNIT, (modulo 32) at
23		which the mobile station may start transmitting on the
24		Reverse Supplemental Channel specified in this message.
25		The explicit start time for transmitting on the Reverse
26		Supplemental Channel is the time for which
27		$\lfloor t / (\text{START_TIME_UNIT} + 1) \rfloor - \text{REV_SCH_START_TIME} \bmod 32$
28		= 0,
29		where t is the System Time in units of 20 ms.
30	REV_SCH-	
31	_NUM_BITS_IDX	- Reverse Supplemental Channel number of information bits
32		per frame index.

1 If USE_FLEX_NUM_BITS is equal to '0' or if
2 USE_FLEX_NUM_BITS is equal to '1' and
3 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is equal to '0000', then
4 the base station shall set this field according to Table
5 3.7.3.3.2.37-2 to indicate the Reverse Supplemental Channel
6 number of information bits per frame, that the mobile station
7 may transmit on the reverse Supplemental Channel
8 identified by REV_SCH_ID.

9 If USE_FLEX_NUM_BITS_s is equal to '1' and
10 RSCH_NBIT_TABLE_ID[REV_SCH_ID] is not equal to '0000',
11 then the base station shall set the REV_SCH_NUM_BITS_IDX
12 field to indicate the Reverse Supplemental Channel number
13 of information bits per frame that the mobile station may
14 transmit on the Reverse Supplemental Channel identified by
15 REV_SCH_ID to be
16 NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]]
17 [REV_SCH_NUM_BITS_IDX].

18 The REV_SCH_NUM_BITS_IDX field also specifies the number
19 of CRC bits per frame for the Reverse Supplemental Channel
20 identified by REV_SCH_ID. The number of CRC bits per frame
21 is specified by
22 CRC_LEN_IDX[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SC
23 H_NUM_BITS_IDX] and Table 3.7.5.20-4.
24

1 3.7.3.3.2.40 Mobile Assisted Burst Operation Parameters Message

2 MSG_TAG: MABOPM

3

Field	Length (bits)
ORDER_FLAG	1

If ORDER_FLAG is set to '1', the base station shall include following record:

PS_MIN_DELTA	3
ORDER_INTERVAL	3

PERIODIC_FLAG	1
---------------	---

If PERIODIC_FLAG is set to '1', the base station shall include following record:

NUM_PILOTS	3
PERIODIC_INTERVAL	6

THRESHOLD_FLAG	1
----------------	---

If THRESHOLD_FLAG is set to '1', the base station shall include following record:

PS_FLOOR_HIGH	6
PS_FLOOR_LOW	6
PS_CEILING_HIGH	6
PS_CEILING_LOW	6
THRESHOLD_INTERVAL	6

ORDER_FLAG - Order change reporting flag.

The base station shall set this field to '1' to indicate that the mobile station is to send a *Pilot Strength Measurement Mini Message* to the base station whenever a received pilot strength measurement changes its relative order with respect to all other reported pilot strength measurements during supplemental channel burst operations; otherwise, the base station shall set this field to '0'.

If ORDER_FLAG is set to '1', the base stations shall include the following two-field record:

PS_MIN_DELTA - Minimum power strength delta.

The base station shall set this field to the minimum pilot strength measurement difference between two pilots (in units of 0.5 dB) that must be measured in order for the mobile station to send a *Pilot Strength Measurement Mini Messages* when the periodic rank order mode is enabled. A difference in pilot strength of at least $PS_MIN_DELTA / 2$ dB must be measured for ORDER_INTERVAL successive 20 ms intervals before a rank order based *Pilot Strength Measurement Mini Message* is generated.

ORDER_INTERVAL - Order interval.

The base station shall set this field to the minimum interval (in 20 ms units) during which the indicated pilot strength measurement difference (greater than or equal to PS_MIN_DELTA) must be measured by the mobile station in order for the mobile station to send a *Pilot Strength Measurement Mini Messages* when the periodic mode is enabled.

PERIODIC_FLAG - Periodic report flag.

The base station shall set this field to '1' to indicate that the mobile station is to send *Pilot Strength Measurement Mini Messages* periodically during supplemental channel burst operations; otherwise the base station shall set this field to '0'.

If PERIODIC_FLAG is set to '1', the base station shall include the following two-field record:

NUM_PILOTS - Number of pilots.

1		The base station shall set this field to the number of pilots for
2		which the mobile station is to send <i>Pilot Strength Measurement</i>
3		<i>Mini Messages</i> when the periodic mode is enabled.
4	PERIODIC_INTERVAL	- Periodic interval.
5		The base station shall set this field to the interval (in 20 ms
6		units) between <i>Pilot Strength Measurement Mini Messages</i> when
7		the periodic mode is enabled.
8	THRESHOLD_FLAG	- Threshold reporting flag.
9		The base station shall set this field to '1' to indicate that the
10		mobile station is to send <i>Pilot Strength Measurement Mini</i>
11		<i>Messages</i> whenever a measured pilot crosses below a lower
12		bound or exceeds an upper bound during Supplemental
13		channel burst operations; otherwise the base station shall set
14		this field to '0'.
15	If THRESHOLD_FLAG is set to '1', the base station shall include the following five-field	
16	record:	
17	PS_FLOOR_HIGH	- Lower bound reporting high water mark.
18		The base station shall set this field to the high water mark for
19		the lower bound below which the mobile station is to send <i>Pilot</i>
20		<i>Strength Measurement Mini Messages</i> when the threshold mode
21		is enabled.
22	PS_FLOOR_LOW	- Lower bound reporting low water mark.
23		The base station shall set this field to the low water mark for
24		the lower bound below which the mobile station is to send <i>Pilot</i>
25		<i>Strength Measurement Mini Messages</i> when the threshold mode
26		is enabled.
27	PS_CEILING_HIGH	- Upper bound reporting high water mark.
28		The base station shall set this field to the high water mark for
29		the upper bound above which the mobile station is to send
30		<i>Pilot Strength Measurement Mini Messages</i> when the threshold
31		mode is enabled.
32	PS_CEILING_LOW	- Upper bound reporting low water mark.
33		The base station shall set this field to the low water mark for
34		the upper bound above which the mobile station is to send
35		<i>Pilot Strength Measurement Mini Messages</i> when the threshold
36		mode is enabled.
37	THRESHOLD-	

1 _INTERVAL - Threshold reporting interval.

2 The base station shall set this field to the interval (in 20 ms

3 units) between *Pilot Strength Measurement Mini Messages* when

4 the threshold reporting mode is enabled.

5

1 3.7.3.3.2.41 User Zone Reject Message

2 MSG_TAG: UZRM

Field	Length (bits)
REJECT_UZID	16
REJECT_ACTION_INDI	3
UZID_ASSIGN_INCL	1
ASSIGN_UZID	0 or 16

- 3 REJECT_UZID - Rejected User Zone identifier.
- 4 The base station shall set this field to the User Zone
- 5 identifier of the User Zone rejected by the base station.
- 6 REJECT_ACTION_INDI - Rejection action indicator.
- 7 The base station shall set this field to the value shown in
- 8 Table 3.7.5.19-1 corresponding to the User Zone rejection
- 9 action field to identify the mobile station action.
- 10 UZID_ASSIGN_INCL - User Zone identifier assignment included indicator.
- 11 If assigned UZID information is included, the base station
- 12 shall set this field to '1'; otherwise, the base station shall set
- 13 this field to '0'.
- 14 ASSIGN_UZID - Assigned User Zone identifiers.
- 15 The base station shall set this field to the User Zone
- 16 identifier of the User Zone assigned to the mobile station.
- 17

1 3.7.3.3.2.42 User Zone Update Message

2 MSG_TAG: UZUM

3

Specific Field	Length (bits)
UZID	16

4 UZID - User Zone identifier.

5 The base station shall set this field to the User Zone
6 identifier supported by the base station.

7

3.7.3.3.2.43 Call Assignment Message

MSG_TAG: CLAM

Field	Length (bits)
RESPONSE_IND	1
TAG	0 or 4
ACCEPT_IND	0 or 1
REJECT_PKTDATA_IND	0 or 1
BYPASS_ALERT_ANSWER	0 or 1
SO_INCL	1
SO	0 or 16
CON_REF_INCL	1
CON_REF	0 or 8

RESPONSE_IND – Response indicator.

The base station shall set this field to '1' if this message is a response to an *Enhanced Origination Message* from the mobile station; otherwise, the base station shall set this field to '0'.

TAG – Transaction identifier.

If the RESPONSE_IND field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the value of the TAG field of the *Enhanced Origination Message* to which this message is the response; otherwise, the base station shall set this field to the identifier for this transaction.

ACCEPT_IND – Accepted indicator.

If the RESPONSE_IND field is set to '0', the base station shall omit this field; otherwise, the base station shall include this

field and shall set it as follows:

If the base station accepts the call request from the mobile station, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

REJECT_PKTDATA_IND – Packet data service option rejection indicator.

If the ACCEPT_IND field is not included or is included and is set to '1', the base station shall omit this field; otherwise, the base station shall include this field and shall set it as follows:

The base station shall set this field to '1' to indicate rejection of the packet data service option requested by the mobile station; otherwise, the base station shall set this field to '0'.

BYPASS_ALERT-

_ANSWER – Bypass alert indicator.

If the RESPONSE_IND field is set to '1', the base station shall omit this field; otherwise, the base station shall include this field and shall set it as follows:

If the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile Station Answer Substate* for this call, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

SO_INCL – Service option included indicator.

The base station shall set this field to '1' if the service option field is included in this message; otherwise, it the base station shall set this field to '0'.

SO – Service option.

If the SO_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and shall set it to the value of the service option number (as specified in [30]) that the base station proposes for this call.

CON_REF_INCL – Connection reference included indicator.

If the ACCEPT_IND field is not included or is included but is set to '1', the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

1 CON_REF – Connection reference.

2 If the CON_REF_INCL field is set to '0', the base station shall
3 omit this field; otherwise, the base station shall include this
4 field and shall set it to the value of the connection reference
5 that was/will be assigned to the service option connection
6 corresponding to this call.

7

3.7.3.3.2.44 Extended Alert With Information Message

MSG_TAG: EAWIM

Field	Length (bits)
CON_REF_INCL	1
CON_REF	0 or 8
NUM_REC	4

NUM_REC occurrences of the following three-field record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

CON_REF_INCL – Connection reference included indicator.

The base station shall set this field to '1' if the connection reference field is included in this message; otherwise, it shall set this field to '0'.

CON_REF – Connection reference.

If the CON_REF_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and shall set it to the value of the connection reference assigned to the service option connection of the call, to which this message corresponds.

NUM_REC – Number of records.

The base station shall set this field to the number of information records included with this message.

The base station shall include NUM_REC occurrences of the following three-field record as specified in 3.7.5.

RECORD_TYPE – Information record type.

The base station shall set this field as specified in 3.7.5.

1	RECORD_LEN	-	Information record length.
2			The base station shall set this field to the number of octets in
3			the type-specific fields included in this record.
4	Type-specific fields	-	Type-specific fields.
5			The base station shall include type-specific fields as specified
6			in 3.7.5.
7			

3.7.3.3.2.45 Extended Flash With Information Message

MSG_TAG: EFWIM

Field	Length (bits)
CON_REF_INCL	1
CON_REF	0 or 8
NUM_REC	4

NUM_REC occurrences of the following three-field record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	$8 \times \text{RECORD_LEN}$

CON_REF_INCL – Connection reference included indicator.

The base station shall set this field to '1' if the connection reference field is included in this message; otherwise, it shall set this field to '0'.

CON_REF – Connection reference.

If the CON_REF_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and shall set it to the value of the connection reference assigned to the service option connection of the call, to which this message corresponds.

NUM_REC – Number of records.

The base station shall set this field to the number of information records included with this message.

The base station shall include NUM_REC occurrences of the following three-field record as specified in 3.7.5.

RECORD_TYPE – Information record type.

The base station shall set this field as specified in 3.7.5.

1	RECORD_LEN	-	Information record length.
2			The base station shall set this field to the number of octets in
3			the type-specific fields included in this record.
4	Type-specific fields	-	Type-specific fields.
5			The base station shall include type-specific fields as specified
6			in 3.7.5.
7			

3.7.3.3.2.46 Security Mode Command Message

MSG_TAG: SMCM

Field	Length (bits)
USE_TIME	1
ACTION_TIME	0 or 6
SIG_ENCRYPT_MODE	3
NUM_RECS	3

NUM_RECS occurrences of the following two-field record

CON_REF	8
UI_ENCRYPT_MODE	3

KEY_SIZE	3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4

USE_TIME - Use action time indicator.

This field indicates whether an ACTION_TIME is specified in this message.

If an ACTION_TIME is specified in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACTION_TIME - Action time.

If the USE_TIME field is set to '1', the base station shall set this field to the System Time, in units of 80 ms (modulo 64), at which the message is to take effect. If the USE_TIME field is set to '0' the base station shall omit this field.

SIG_ENCRYPT_MODE - Common Channel encryption mode indicator.

The base station shall set it to signaling message encryption mode, as shown in Table 3.7.4.5-1.

NUM_REC - Number of user information encryption records.

The base station shall set this field to the number of user information encryption records included in this message.

The base station shall include NUM_REC occurrences of the following two-field record

1	CON_REF	-	Connection reference corresponding to the service option
2			connection requesting for encryption.
3			If this field is included, the base station shall set this field to
4			the connection reference of the service option connection
5			corresponding to this user information encryption.
6	UI_ENCRYPT_MODE	-	Encryption mode indicator for user information privacy.
7			The base station shall set this field to user information
8			encryption mode for the service option connection identified
9			by CON_REF as shown in Table 3.7.5.7-3.
10	KEY_SIZE	-	Key Size used for user information and signaling encryption
11			The base station shall set this field to the key-size for user
12			information encryption and signaling encryption according to
13			Table 3.7.4.5-2.
14	USE_NEW_KEY	-	Use new encryption key indication.
15			The base station shall include this field if either of the
16			UI_ENCRYPT_MODE or SIG_ENCRYPT_MODE is not equal to '000'.
17			If included, the base station shall set this field to '0' to indicate
18			that the stored encryption key to be used by the mobile station.
19			Otherwise, the base station shall set this field to '1' to indicate
20			that the new encryption key to be used by the mobile station.
21	KEY_SEQ	-	Encryption key sequence number.
22			The base station shall only include this field if USE_NEW_KEY is
23			included and is set to '0', the base station shall include this field
24			and shall set it to the encryption key sequence number to be
25			used by the mobile station.
26			The base station shall only include this field if USE_NEW_KEY is
27			included and is set to '0', the base station shall include this field
28			and shall set it to the encryption key sequence number to be
29			used by the mobile station.
30			
31			

3.7.4 Orders

Order Messages are sent by the base station on the f-csch and the f-dsch. The general PDU format used on the f-csch is defined in 3.7.2.3.2.7, and the general PDU format used on the f-dsch is defined in 3.7.3.3.2.1. There are many specific types of *Order Messages*, as shown in Table 3.7.4-1.

The base station may send on the f-csch any type of order shown in Table 3.7.4-1 with a 'Y' in the first column, but shall not send on the f-csch any type of order with an 'N' in the first column. The base station may send on the f-dsch any type of order shown in Table 3.7.4-1 with a 'Y' in the second column, but shall not send on the f-dsch any type of order with an 'N' in the second column.

An order consists of a 6-bit order code and zero or more order-specific fields. The base station shall set the ORDER field in the *Order Message* to the order code shown in Table 3.7.4-1 corresponding to the type of order being sent.

If the order qualification code in the fourth column of Table 3.7.4-1 is '00000000' and there are no other additional fields as shown by an 'N' in the sixth column, the base station shall include no order qualification code or other order-specific fields in the *Order Message*. The order qualification code of such a message is implicitly '00000000'.

If the order qualification code is not '00000000' and there are no other additional fields as shown in Table 3.7.4-1 by an 'N' in the sixth column, the base station shall include the order qualification code as the only order specific field in the *Order Message*.

If there are other additional fields as shown in Table 3.7.4-1 by a 'Y' in the sixth column, the base station shall include order-specific fields as specified in the corresponding subsection of this section.

Table 3.7.4-1. Order and Order Qualification Codes Used on the f-csch and the f-dsch
(Part 1 of 4)

f-csch Order	f-dsch Order	Order Code, ORDR (binary)	Order Qual- ification Code, ORDQ (binary)	ACTION _TIME can be specifie d	Addi- tional Fields other than ORDQ	Name/Function
Y	N	000001	00000000	N	N	<i>Abbreviated Alert Order</i>
Y	Y	000010	00000000	N	Y	<i>Base Station Challenge Confirmation Order</i> (see 3.7.4.1)
N	Y	000011	000000nn	Y	N	<i>Message Encryption Mode Order</i> (where nn is the mode per Table 3.7.2.3.2.8-2)
Y	N	000100	00000000	N	N	<i>Reorder Order</i>
N	Y	000101	0000nnnn	N	N	<i>Parameter Update Order</i> (where 'nnnn' is the Request Number)
Y	Y	000110	00000000	N	N	<i>Audit Order</i>
Y	N	001001	00000000	N	N	<i>Intercept Order</i>
N	Y	001010	00000000	N	N	<i>Maintenance Order</i>
Y	Y	010000	00000000	N	N	<i>Base Station Acknowledgment Order</i> (see [4])
N	Y	010001	00000000	N	N	<i>Pilot Measurement Request Order</i>
N	Y	010001	nnnnnnnn n (in the range of 00000001 to 11111111)	N	Y	<i>Periodic Pilot Measurement Request Order</i> (see 3.7.4.6)
Y	Y	010010	0001nnnn	N	N	<i>Lock Until Power-Cycled Order</i> (where nnnn is the lock reason)

Y	Y	010010	0010nnnn	N	N	<i>Maintenance Required Order</i> (where nnnn is the maintenance reason)
Y	N	010010	11111111	N	N	<i>Unlock Order</i>

Table 3.7.4-1. Order and Order Qualification Codes Used on the f-csch and the f-dsch
(Part 2 of 4)

f-csch Order	f-dsch Order	Order Code, ORDR (binary)	Order Qual- ification Code, ORDQ (binary)	ACTION _TIME can be specifie d	Addi- tional Fields other than ORDQ	Name/Function
N	Y	010011	00000000	Y	Y	<i>Service Option Request Order (Band Class 0 only) (see 3.7.4.2)</i>
N	Y	01010 0	00000000	Y	Y	<i>Service Option Response Order (Band Class 0 only; see 3.7.4.3)</i>
Y	Y	01010 1	00000000	N	N	<i>Release Order (no reason given)</i>
Y	Y	01010 1	00000010	N	N	<i>Release Order (indicates that requested service option is rejected)</i>
N	Y	010110	00000000	N	N	<i>Outer Loop Report Order</i>
N	Y	01011 1	00000000	Y	N	<i>Long Code Transition Request Order (request public)</i>
N	Y	01011 1	00000001	Y	N	<i>Long Code Transition Request Order (request private)</i>
N	Y	01100 1	0000nnnn	N	N	<i>Continuous DTMF Tone Order (where the tone is designated by 'nnnn' as defined in Table 2.7.1.3.2.4-4)</i>
N	Y	01100 1	11111111	N	N	<i>Continuous DTMF Tone Order (stop continuous DTMF tone)</i>
N	Y	01101 0	nnnnnnnn n	N	N	<i>Status Request Order (see 3.7.4.4)</i>

Y	N	01101 1	00000000	N	N	<i>Registration Accepted Order</i> (ROAM_INDI not included; see 3.7.4.5)
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1

Table 3.7.4-1. Order and Order Qualification Codes Used on the f-csch and the f-dsch
(Part 3 of 4)

f-csch Order	f-dsch Order	Order Code, ORD R (binary)	Order Qual- ification Code, ORDQ (binary)	ACTION _TIME can be specifie d	Addition al Fields other than ORDQ	Name/Function
Y	N	011011	00000001	N	N	<i>Registration Request Order</i>
Y	N	011011	00000010	N	N	<i>Registration Rejected Order</i>
Y	N	011011	00000100	N	N	<i>Registration Rejected Order (delete TMSI)</i>
Y	N	011011	00000101	N	Y	<i>Registration Accepted Order (ROAM_INDI included; see 3.7.4.5)</i>
Y	N	011011	00000110	N	Y	<i>Registration Accepted Order (ROAM_INDI, EXT_ENC_MSB, SIG_ENCRYPT_MODE, and KEY_SIZE included; see 3.7.4.5)</i>
N	Y	011101	nnnnnnnn n	Y	N	<i>Service Option Control Order (Band Class 0 only) (the specific control is designated by 'nnnnnnnn' as determined by each service option)</i>
Y	Y	011110	nnnnnnnn n	N	N	<i>Local Control Order (the specific order is designated by 'nnnnnnnn' as determined by each system)</i>
Y	N	011111	00000000	N	N	<i>Slotted Mode Order (transition to the slotted mode operation.)</i>

Table 3.7.4-1. Order and Order Qualification Codes Used on the f-csch and the f-dsch
(Part 4 of 4)

f-csch Order	f-dsch Order	Order Code, ORDER (binary)	Order Qual- ification Code, ORDQ (binary)	ACTION _TIME can be specifie d	Addition al Fields other than ORDQ	Name/Function
Y	Y	100000	00000000	N	Y	<i>Retry Order</i> (indicates that the requested operation is rejected and retry delay is included, see 3.7.4.7)
All other codes are reserved.						

3.7.4.1 Base Station Challenge Confirmation Order

The *Base Station Challenge Confirmation Order* can be sent on either the f-csch or on the f-dsch.

Order Specific Field	Length (bits)
ORDQ	8
AUTHBS	18
RESERVED	6

ORDQ - Order qualification code.

The base station shall set this field to '00000000'.

AUTHBS - Challenge response.

The base station shall set this field as specified in 2.3.12.1.5.

RESERVED - Reserved bits.

The base station shall set this field to '000000'.

3.7.4.2 Service Option Request Order

The *Service Option Request Order* can be sent only on the f-dsch.

Order Specific Field	Length (bits)
ORDQ	8
SERVICE_OPTION	16

ORDQ - Order qualification code.

The base station shall set this field to '00000000'.

SERVICE_OPTION - Service option.

The base station shall set this field to the service option code shown in [30], corresponding to the requested or alternative service option.

3.7.4.3 Service Option Response Order

The *Service Option Response Order* can be sent only on the f-dsch.

Order Specific Field	Length (bits)
ORDQ	8
SERVICE_OPTION	16

ORDQ - Order qualification code.

The base station shall set this field to '00000000'.

SERVICE_OPTION - Service option.

The base station shall set this field to the service option code shown in [30], corresponding to the accepted service option, or to '0000000000000000' to reject the last service option requested by the mobile station.

3.7.4.4 Status Request Order

The *Status Request Order* can be sent only on the f-dsch. The ORDQ field of the *Status Request Order* specifies the information record to be returned by the mobile station in the *Status Message*.

Order Specific Field	Length (bits)
ORDQ	8

ORDQ - Order qualification code.

The base station shall set this field to the order qualification code corresponding to the information record type to be returned by the mobile station in the *Status Message*, as shown in Table 3.7.4.4-1.

Table 3.7.4.4-1. Status Request ORDQ Values

Information Record Requested	ORDQ (binary)
Reserved	00000110
Call Mode	00000111
Terminal Information	00001000
Roaming Information	00001001
Security Status	00001010
IMSI	00001100
ESN	00001101
IMSI_M	00001110
IMSI_T	00001111
All other ORDQ values are reserved.	

3.7.4.5 Registration Accepted Order

The *Registration Accepted Order* can be sent only on the f-csch.

Order Specific Field	Length (bits)
ORDQ	8
ROAM_INDI	0 or 8
SIG_ENCRYPT_MODE	0 or 3
KEY_SIZE	0 or 3
USE_NEW_KEY	0 or 1
KEY_SEQ	0 or 4
RESERVED	0 – 7 (as needed)

ORDQ - Order qualification code.

If only ORDQ is included in the order, the base station shall set this field to '00000000'. If only ORDQ and ROAM_INDI are included in the order, the base station shall set this field to '00000101'. If ORDQ, ROAM_INDI, SIG_ENCRYPT_MODE, KEY_SIZE, and USE_NEW_KEY are included in the order, the base station shall set this field to '00000111'.

ROAM_INDI - Roaming display indication.

If ORDQ is set to '00000000', the base station shall omit this field.

If ORDQ is set to '00000101', the base station shall include this field and shall set it to the appropriate ROAM_INDI code corresponding to the MS roaming condition. These values are defined in [30].

SIG_ENCRYPT_MODE - Signaling message encryption mode indicator.

If ORDQ is set to '00000111', the base station shall include this field and shall set it to signaling message encryption mode, as shown in Table 3.7.4.5-1; otherwise the base station shall omit this field.

Table 3.7.4.5-1. Signaling Message Encryption Modes

SIG_ENCRYPT_MODE Field (binary)	Encryption Mode Used
000	Signaling Encryption disabled
001	Enhanced Cellular Message Encryption Algorithm enabled
010- 111	Reserved

KEY_SIZE – Key Size used for encryption

If ORDQ is set to '00000111', the base station shall include this field and set this field to the key-size used for encryption according to Table 3.7.4.5-2; otherwise, the base station shall omit this field.

Table 3.7.4.5-2. KEY_SIZE Values

KEY_SIZE (binary)	Descriptions
000	40 bits
001	64 bits
010	128 bits
011-111	Reserved

USE_NEW_KEY – Use new encryption key indication.

If SIG_ENCRYPT_MODE is set to '001' and '010', the base station shall include this field; otherwise, the base station shall omit this field. If this field is included, the base station shall set this field as follows:

The base station shall set this field to '0' to indicate that the stored encryption key to be used by the mobile station. The base station shall set this field to '1' to indicate that the new encryption key to be used by the mobile station.

KEY_SEQ – Encryption key sequence number.

If SIG_ENCRYPT_MODE is set to '001' or '010' and USE_NEW_KEY is set to '0', the base station shall include this field and shall set it to the encryption key sequence number to be used by the mobile station. If SIG_ENCRYPT_MODE is set to a value other than '001' or '010' or USE_NEW_KEY is set to '1', the base station shall omit this field.

1 RESERVED - Reserved bits.

2 The base station shall add reserved bits as needed in order to

3 make the total length of the fields included in this order

4 equal to an integer number of octets. The base station shall

5 set these bits to '0'.

6

3.7.4.6 Periodic Pilot Measurement Request Order

The *Periodic Pilot Measurement Request Order* can be sent only on the f-dsch.

Order Specific Field	Length (bits)
ORDQ	8
MIN_PILOT_PWR_THRESH	5
MIN_PILOT_EC_IO_THRESH	5
INCL_SETPT	1
RESERVED	6

ORDQ - Order qualification code.

If INCL_SETPT equals '0', the base station shall set this field to a report period, in units of 0.08 seconds, in the range of '00001010' to '1111110' inclusive; otherwise, the base station shall set this field to a report period, in units of 0.08 seconds, in the range of '00000001' to '11111110' inclusive. The base station shall set this field to '11111111' to request a one time *Periodic Pilot Strength Measurement Message*.

MIN_PILOT_PWR-

_THRESH - The threshold of the total received E_c of the pilots in the Active Set.

If the mobile station is to report pilot strength measurements periodically to the base station irrespective of the pilot power of the Active Set, the base station shall set this field to '11111'; otherwise, the base station shall set this field to the total E_c threshold, expressed as an unsigned binary number equal to:

$$\lceil (10 \times \log_{10}(\text{pilot_ec_thresh}) + 120) / 2 \rceil$$

where *pilot_ec_thresh* is the threshold of the mobile station received total E_c (in mW) of the pilots in the Active Set below which the mobile station is to send the pilot strength measurements periodically to the base station.

MIN_PILOT_EC -

_IO_THRESH - Pilot Strength Threshold of Serving Frequency.

1 If the mobile station is to ignore this threshold, the base
 2 station shall set this field to '11111'; otherwise, the base
 3 station shall set this field to the total E_c/I_0 threshold,
 4 expressed as an unsigned binary number equal to:

$$5 \quad \lfloor -20 \times \log_{10} \textit{pilot_streng_thresh} \rfloor,$$

6 where *pilot_streng_thresh* is the threshold of the total received
 7 E_c/I_0 of the pilots in Active Set (see 2.6.6.2.2) below which the
 8 mobile station is to send the pilot strength measurements
 9 periodically to the base station.

10 INCL_SETPT - Include Setpoint information indicator.

11 The base station shall set this field to '1' to indicate that the
 12 mobile station shall include outer loop E_b/N_t setpoint
 13 information in the *Periodic Pilot Strength Measurement*
 14 *Message*; otherwise, the base station shall set this field to '0'.

15 RESERVED - Reserved bits.

16 The base station shall set this field to '000000'.

17

3.7.4.7 Retry Order

The *Retry Order* can be sent on either the f-csch or on the f-dsch to indicate the requested service is rejected and specify the retry delay.

Order Specific Field	Length (bits)
ORDQ	8
RETRY_TYPE	3
RETRY_DELAY	0 or 8

ORDQ - Order qualification code.

The base station shall set this field to '00000000'.

RETRY_TYPE - Retry delay type.

The base station shall set this field specified as in Table 3.7.4.7-1.

Table 3.7.4.7-1 Retry Delay Type

Value (binary)	Retry Type	Usage
000	Clear all	The <i>Retry Order</i> is used to clear any existent retry delay
001	Origination	The <i>Retry Order</i> specifies the RETRY_DELAY for a <i>Packet Data Origination Message</i> or <i>Enhanced Origination Message</i>
010	Resource Request	The <i>Retry Order</i> specifies the RETRY_DELAY for a <i>Resource Request Message</i> or <i>Resource Request Mini Message</i>
011	Supplemental Channel Request	The <i>Retry Order</i> specifies the RETRY_DELAY for a <i>Supplemental Channel Request Message</i> or <i>Supplemental Channel Request Mini Message</i>
100-111	Reserved	

RETRY_DELAY - Retry delay.

If RETRY_TYPE is set to '000' the base station shall omit this field. Otherwise the base station shall include this field and set it as follows:

If RETRY_TYPE is set to '001', the base station shall set this field to the duration of the delay interval, as shown in Table 3.7.4.7-2, during which the mobile station is not permitted to send an *Origination Message* with the same Packet Data Service Option. The base station shall set this field to '00000000' to indicate that there is no retry delay or to clear a previously set retry delay.

Table 3.7.4.7-2 Retry Delay for RETRY_TYPE '001'

Bits	Description
7 (MSB)	Unit for the Retry Delay '0' – unit is 1s '1' – unit is 1 min
6 to 0	Retry Delay interval

If RETRY_TYPE is set to '010' or '011', the base station shall set this field to the duration of the delay interval in units of 320 ms during which the mobile station is not permitted to send another *Supplemental Channel Request (Mini) Message* or *Resource Request (Mini) Message*. The base station shall set RETRY_DELAY to '00000000' to indicate that there is no retry delay or to clear a previously set retry delay. The base station shall set RETRY_DELAY to '11111111' to indicate that the mobile station is to refrain from sending the request indefinitely.

3.7.5 Information Records

On the f-csch, information records may be included in the *Feature Notification Message*. On the f-dsch, information records may be included in the *Alert with Information Message*, the *Flash with Information Message*, the *Extended Alert with Information Message*, and the *Extended Flash with Information Message*. Table 3.7.5-1 lists the information record type values that may be used with each message type. The following sections describe the contents of each of the record types in detail.

Table 3.7.5-1. Information Record Types (Part 1 of 3)

Information Record	Record Type (binary)	Message Type	f-csch	f-dsch
Display	00000001	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Called Party Number	00000010	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Calling Party Number	00000011	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Connected Number	00000100	FWI	N	Y
Signal	00000101	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Message Waiting	00000110	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Service Configuration	00000111	SRQM	N	Y
		SRPM	N	Y
		SCM	N	Y
		GHDM	N	Y
		UHDM	N	Y
Called Party Subaddress	00001000	FNM	Y	N
		AWI	N	Y
		FWI	N	Y

1

Table 3.7.5-1. Information Record Types (Part 2 of 3)

Information Record	Record Type (binary)	Message Type	f-csch	f-dsch
Calling Party Subaddress	00001001	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Connected Subaddress	00001010	FWI	N	Y
Redirecting Number	00001011	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Redirecting Subaddress	00001100	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Meter Pulses	00001101	AWI	N	Y
		FWI	N	Y
Parametric Alerting	00001110	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Line Control	00001111	AWI	N	Y
		FWI	N	Y
Extended Display	00010000	FNM	Y	N
		AWI	N	Y
		FWI	N	Y

2

3

1

Table 3.7.5-1. Information Record Types (Part 3 of 3)

Information Record	Record Type (binary)	Message Type	f-csch	f-dsch
Non-Negotiable Service Configuration	00010011	SCM	N	Y
		GHDM	N	Y
		UHDM	N	Y
Multiple Character Extended Display	00010100	FNM	Y	N
		AWI	N	Y
		FWI	N	Y
Call Waiting Indicator	00010101	AWI	N	Y
		FWI	N	Y
Extended Record Type - International	11111110	Country-Specific		
All other record type values are reserved.				
“AWI” refers to either the <i>Alert With Information Message</i> or the <i>Extended Alert With Information Message</i> .				
“FWI” refers to either the <i>Flash With Information Message</i> or the <i>Extended Flash With Information Message</i> .				

2

3.7.5.1 Display

This information record allows the network to supply display information that may be displayed by the mobile station.

Type-Specific Field	Length (bits)
One or more occurrences of the following field:	
CHARi	8

CHARi - Character.

The base station shall include one occurrence of this field for each character to be displayed. The base station shall set each occurrence of this field to the ASCII representation corresponding to the character entered, as specified in [9], with the most significant bit set to '0'.

3.7.5.2 Called Party Number

This information record identifies the called party's number.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4

Zero or more occurrences of the following field:

CHARi	8
RESERVED	1

NUMBER_TYPE - Type of number.

The base station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the called number, as defined in [7], Section 4.5.9.

NUMBER_PLAN - Numbering plan.

The base station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the called number, as defined in [7], Section 4.5.9.

CHARi - Character.

The base station shall include one occurrence of this field for each character in the called number. The base station shall set each occurrence of this field to the ASCII representation corresponding to the character, as specified in [9], with the most significant bit set to '0'.

RESERVED - Reserved bits.

The base station shall set this field to '0'.

3.7.5.3 Calling Party Number

This information record identifies the calling party's number.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4
PI	2
SI	2

Zero or more occurrences of the following field:

CHARi	8
-------	---

RESERVED	5
----------	---

NUMBER_TYPE - Type of number.

The base station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the calling number, as defined in [7], Section 4.5.9.

NUMBER_PLAN - Numbering plan.

The base station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the calling number, as defined in [7], Section 4.5.9.

PI - Presentation indicator.

This field indicates whether or not the calling number should be displayed.

The base station shall set this field to the PI value shown in Table 2.7.4.4-1 corresponding to the presentation indicator, as defined in [7], Section 4.5.9.

SI - Screening indicator.

This field indicates how the calling number was screened.

The base station shall set this field to the SI value shown in Table 2.7.4.4-2 corresponding to the screening indicator value, as defined in [7], Section 4.5.9.

- 1 CHARi - Character.
- 2 The base stations shall include one occurrence of this field
- 3 for each character in the calling number. The base station
- 4 shall set each occurrence of this field to the ASCII
- 5 representation corresponding to the character, as specified in
- 6 [9], with the most significant bit set to '0'.
- 7 RESERVED - Reserved bits.
- 8 The base station shall set this field to '00000'.
- 9

3.7.5.4 Connected Number

This information record identifies the responding party to a call.

Type-Specific Field	Length (bits)
NUMBER_TYPE	3
NUMBER_PLAN	4
PI	2
SI	2

Zero or more occurrences of the following field:

CHARi	8
-------	---

RESERVED	5
----------	---

NUMBER_TYPE - Type of number.

The base station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the connected number, as defined in [7], Section 4.5.9.

NUMBER_PLAN - Numbering plan.

The base station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the connected number, as defined in [7], Section 4.5.9.

PI - Presentation indicator.

This field indicates whether or not the connected number should be displayed.

The base station shall set this field to the PI value shown in Table 2.7.4.4-1 corresponding to the presentation indicator, as defined in [7], Section 4.5.9.

SI - Screening indicator.

This field indicates how the connected number was screened.

The base station shall set this field to the SI value shown in Table 2.7.4.4-2 corresponding to the screening indicator value, as defined in [7], Section 4.5.9.

- 1 CHARi - Character.
- 2 The base station shall include one occurrence of this field for
- 3 each character in the connected number. The base station
- 4 shall set each occurrence of this field to the ASCII
- 5 representation corresponding to the character, as specified in
- 6 [9], with the most significant bit set to '0'.
- 7 RESERVED - Reserved bits.
- 8 The base station shall set this field to '00000'.
- 9

3.7.5.5 Signal

This information record allows the network to convey information to a user by means of tones and other alerting signals.

The Standard Alert is defined as SIGNAL_TYPE = '10', ALERT_PITCH = '00' and SIGNAL = '000001'.

Type-Specific Field	Length (bits)
SIGNAL_TYPE	2
ALERT_PITCH	2
SIGNAL	6
RESERVED	6

SIGNAL_TYPE - Signal type.

The base station shall set this field to the signal type value shown in Table 3.7.5.5-1.

Table 3.7.5.5-1. Signal Type

Description	SIGNAL_TYPE (binary)
Tone signal	00
ISDN Alerting	01
IS-54B Alerting	10
Reserved	11

ALERT_PITCH - Pitch of the alerting signal.

This field is ignored unless SIGNAL_TYPE is '10', IS-54B Alerting.

If SIGNAL_TYPE is '10', the base station shall set this field to the alert pitch shown in Table 3.7.5.5-2; otherwise, the base station shall set this field to '00'.

Table 3.7.5.5-2. Alert Pitch

Description	ALERT_PITCH (binary)
Medium pitch (standard alert)	00
High pitch	01
Low pitch	10
Reserved	11

SIGNAL - Signal code.

The base station shall set this field to the specific signal desired. If SIGNAL_TYPE is '00', the base station shall set this field as described in Table 3.7.5.5-3. If SIGNAL_TYPE is '01', the base station shall set this field as described in Table 3.7.5.5-4. If SIGNAL_TYPE is '10', the base station shall set this field as described in Table 3.7.5.5-5.

1

Table 3.7.5.5-3. Tone Signals (SIGNAL_TYPE = '00')

Description	SIGNAL (binary)
Dial tone on: a continuous 350 Hz tone added to a 440 Hz tone.	000000
Ring back tone on: a 440 Hz tone added to a 480 Hz tone repeated in a 2 s on, 4 s off pattern.	000001
Intercept tone on: alternating 440 Hz and 620 Hz tones, each on for 250 ms.	000010
Abbreviated intercept: alternating 440 Hz and 620 Hz tones, each on for 250 ms, repeated for four seconds.	000011
Network congestion (reorder) tone on: a 480 Hz tone added to a 620 Hz tone repeated in a 250 ms on, 250 ms off cycle.	000100
Abbreviated network congestion (reorder): a 480 Hz tone added to a 620 Hz tone repeated in a 250 ms on, 250 ms off cycle for four seconds.	000101
Busy tone on: a 480 Hz tone added to a 620 Hz tone repeated in a 500 ms on, 500 ms off cycle.	000110
Confirm tone on: a 350 Hz tone added to a 440 Hz tone repeated 3 times in a 100 ms on, 100 ms off cycle.	000111
Answer tone on: answer tone is not presently used in North American networks.	001000
Call waiting tone on: a 300 ms burst of 440 Hz tone.	001001
Pip tone on: four bursts of 480 Hz tone (0.1 s on, 0.1 s off).	001010
Tones off	111111
All other SIGNAL values are reserved	

2

3

1

Table 3.7.5.5-4. ISDN Alerting (SIGNAL_TYPE = '01')

Description	SIGNAL (binary)
Normal Alerting: 2.0 s on, 4.0 s off, repeating	000000
Intergroup Alerting: 0.8 s on, 0.4 s off, 0.8 s on, 4.0 s off, repeating	000001
Special/Priority Alerting: 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.8 s on, 4.0 s off, repeating	000010
Reserved (ISDN Alerting pattern 3)	000011
"Ping ring": single burst of 500 ms	000100
Reserved (ISDN Alerting pattern 5)	000101
Reserved (ISDN Alerting pattern 6)	000110
Reserved (ISDN Alerting pattern 7)	000111
Alerting off	001111
All other SIGNAL values are reserved	

2

Table 3.7.5.5-5. IS-54B Alerting (SIGNAL_TYPE = '10')

Description	SIGNAL (binary)
<i>No Tone: Off</i>	000000
<i>Long: 2.0 s on, 4.0 s off, repeating (standard alert)</i>	000001
<i>Short-Short: 0.8 s on, 0.4 s off, 0.8 s on, 4.0 s off, repeating</i>	000010
<i>Short-Short-Long: 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.8 s on, 4.0 s off, repeating</i>	000011
<i>Short-Short-2: 1.0 s on, 1.0 s off, 1.0 s on, 3.0 s off, repeating.</i>	000100
<i>Short-Long-Short: 0.5 s on, 0.5 s off, 1.0 s on, 0.5 s off, 0.5 s on, 3.0 s off, repeating.</i>	000101
<i>Short-Short-Short-Short: 0.5 s on, 0.5 s off, 0.5 s on, 0.5 s off, 0.5 s on, 0.5 s off, 0.5 s on, 2.5 s off, repeating.</i>	000110
<i>PBX Long: 1.0 s on, 2.0 s off, repeating.</i>	000111
<i>PBX Short-Short: 0.4 s on, 0.2 s off, 0.4 s on, 2.0 off, repeating.</i>	001000
<i>PBX Short-Short-Long: 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.8 s on, 1.0 s off, repeating.</i>	001001
<i>PBX Short-Long-Short: 0.4 s on, 0.2 s off, 0.8 s on, 0.2 s off, 0.4 s on, 1.0 s off, repeating.</i>	001010
<i>PBX Short-Short-Short-Short: 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.4 s on, 0.2 s off, 0.4 s on, 0.8 s off, repeating.</i>	001011
<i>Pip-Pip-Pip-Pip: 0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on, 0.1 s off, 0.1 s on.</i>	001100
All other SIGNAL values are reserved	

RESERVED - Reserved bits.

The base station shall set this field to '000000'.

1 3.7.5.6 Message Waiting

2 This information record conveys to the user the number of messages waiting.

3

Type-Specific Field	Length (bits)
MSG_COUNT	8

4

5 MSG_COUNT - Number of waiting messages.

6 The base station shall set this field to the number of
7 messages waiting.

8

3.7.5.7 Service Configuration

For the mobile station, this record is included in a *Status Response Message* to return the current service configuration, and in a *Service Request Message* and a *Service Response Message* to propose a service configuration.

For a base station, this record is included in a *Service Request Message* and a *Service Response Message* to propose a service configuration. It is included in a *Service Connect Message* to specify an actual service configuration to be used. It can be included in a *General Handoff Direction Message* and *Universal Handoff Direction Message* to specify an actual service configuration to be used.

Type-Specific Field	Length (bits)
FOR_MUX_OPTION	16
REV_MUX_OPTION	16
FOR_NUM_BITS	8
REV_NUM_BITS	8
NUM_CON_REC	8

NUM_CON_REC occurrences of the following variable-length record:

RECORD_LEN	8
CON_REF	8
SERVICE_OPTION	16
FOR_TRAFFIC	4
REV_TRAFFIC	4
UI_ENCRYPT_MODE	3
SR_ID	3
RLP_INFO_INCL	1
RLP_BLOB_LEN	0 or 4
RLP_BLOB	0 or (8 × RLP_BLOB_LEN)
QOS_PARMS_INCL	1
QOS_PARMS_LEN	0 or 5
QOS_PARMS	0 or variable
QOS_RESERVED	0-7
RESERVED	0-7 (as needed)

FCH_CC_INCL	1
FCH_FRAME_SIZE	0 or 1
FOR_FCH_RC	0 or 5
REV_FCH_RC	0 or 5

DCCH_CC_INCL	1
DCCH_FRAME_SIZE	0 or 2
FOR_DCCH_RC	0 or 5
REV_DCCH_RC	0 or 5

(continues on next page)

1

Type-Specific Field	Length (bits)
FOR_SCH_CC_INCL	1
NUM_FOR_SCH	0 or 2

NUM_FOR_SCH occurrences of the following three-field record

FOR_SCH_ID	2
FOR_SCH_MUX	16
SCH_CC_Type -specific field	Variable (see 3.7.5.7.1)

REV_SCH_CC_INCL	1
NUM_REV_SCH	0 or 2

NUM_REV_SCH occurrences of the following three-field record

REV_SCH_ID	2
REV_SCH_MUX	16
SCH_CC_Type -specific field	Variable (see 3.7.5.7.1)

RESERVED	0-7 (as needed)
----------	-----------------

2

3 FOR_MUX_OPTION - Forward Fundamental and Dedicated Control Channel
4 multiplex option.

5 The mobile station shall set this field as follows:

6 For a *Status Response Message*, the mobile station shall
7 set this field to the number of the multiplex option for the
8 Forward Fundamental Channel, Forward Dedicated
9 Control Channel, or both, if both present (e.g., 1
10 corresponds to Multiplex Option 1).

11 For a *Service Request Message* and a *Service Response*
12 *Message*, the mobile station shall set this field to the
13 number of the multiplex option for the Forward
14 Fundamental Channel, Forward Dedicated Control
15 Channel, or both, if both present.

16 The base station shall set this field as follows:

1 For a *Service Request Message* and a *Service Response*
 2 *Message*, the base station shall set this field to the
 3 number of the multiplex option for the Forward
 4 Fundamental Channel, Forward Dedicated Control
 5 Channel, or both, if both present.

6 For a *Service Connect Message*, *General Handoff Direction*
 7 *Message*, and a *Universal Handoff Direction Message*, the
 8 base station shall set this field to the number of multiplex
 9 option for the Forward Fundamental Channel, Forward
 10 Dedicated Control Channel, or both, if both present.

11 REV_MUX_OPTION - Reverse Fundamental and Dedicated Control Channel
 12 multiplex option.

13 The mobile station shall set this field as follows:

14 For a *Status Response Message*, the mobile station shall
 15 set this field to the number of the multiplex option for the
 16 Reverse Fundamental Channel, Reverse Dedicated
 17 Control Channel, or both, if both present(e.g., 1
 18 corresponds to Multiplex Option 1).

19 For a *Service Request Message* and a *Service Response*
 20 *Message*, the mobile station shall set this field to the
 21 number of the multiplex option for the Reverse
 22 Fundamental Channel, Reverse Dedicated Control
 23 Channel, or both, if both present.

24 The base station shall set this field as follows:

25 For a *Service Request Message* and a *Service Response*
 26 *Message*, the base station shall set this field to the
 27 number of the multiplex option for the Reverse
 28 Fundamental Channel, Reverse Dedicated Control
 29 Channel, or both, if both present.

30 For a *Service Connect Message*, *General Handoff Direction*
 31 *Message*, and a *Universal Handoff Direction Message*, the
 32 base station shall set this field to the number of the
 33 multiplex option for the Reverse Fundamental Channel,
 34 Reverse Dedicated Control Channel, or both, if both
 35 present.

36 FOR_NUM_BITS - Set of number of bits per frame of the Forward Fundamental
 37 Channel.

38 The mobile station shall set this field as follows:

The mobile station shall use the Forward Fundamental Channel transmission set of number of bits per frame specified in 2.7.4.28 for the specified Forward Traffic Channel multiplex option.

For a *Status Response Message*, the mobile station shall set the subfields corresponding to the Forward Traffic Channel transmission set of number of bits per frame of the current service configuration to '1', and shall set the remaining subfields to '0'. If FOR_MUX_OPTION is equal to 1 or 2, the mobile station shall set RESERVED to '0000'.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set the subfields corresponding to the Forward Traffic Channel transmission set of number of bits per frame of the proposed service configuration to '1', and shall set the remaining subfields to '0'. If FOR_MUX_OPTION is equal to 1 or 2, the mobile station shall set RESERVED to '0000'.

The base station shall set this field as follows:

The base station shall set this field to the Forward Fundamental Channel transmission set of number of bits per framespecified in 2.7.4.28 for the specified Forward Traffic Channel multiplex option.

For a *Service Request Message* or a *Service Response Message*, the base station shall set the subfields corresponding to the Forward Fundamental Channel transmission set of number of bits per frame of the proposed service configuration to '1', and shall set the remaining subfields to '0'. If FOR_MUX_OPTION is equal to 1 or 2, the base station shall set RESERVED to '0000'.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set the subfields corresponding to the Forward Fundamental Channel transmission set of number of bits per frame of the actual service configuration to be used to '1', and shall set the remaining subfields to '0'. If FOR_MUX_OPTION is equal to 1 or 2, the base station shall set RESERVED to '0000'.

REV_NUM_BITS - Set of number of bits per frameof the Reverse Fundamental Channel.

The mobile station shall set this field as follows:

The mobile station shall use the Reverse Fundamental Channel transmission set of number of bits per frame specified in 2.7.4.28 for the specified Reverse Traffic Channel multiplex option.

For a *Status Response Message*, the mobile station shall set the subfields corresponding to the Reverse Traffic Channel transmission set of number of bits per frame of the current service configuration to '1', and shall set the remaining subfields to '0'. If REV_MUX_OPTION is equal to 1 or 2, the mobile station shall set RESERVED to '0000'.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set the subfields corresponding to the Reverse Traffic Channel transmission set of number of bits per frame of the proposed service configuration to '1', and shall set the remaining subfields to '0'. If REV_MUX_OPTION is equal to 1 or 2, the mobile station shall set RESERVED to '0000'.

The base station shall set this field as follows:

The base station shall set this field to the Reverse Fundamental Channel transmission set of number of bits per frame specified in 2.7.4.28 for the specified Reverse Traffic Channel multiplex option.

For a *Service Request Message* or a *Service Response Message*, the base station shall set the subfields corresponding to the Reverse Fundamental Channel transmission set of number of bits per frame of the proposed service configuration to '1', and shall set the remaining subfields to '0'. If REV_MUX_OPTION is equal to 1 or 2, the base station shall set RESERVED to '0000'.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set the subfields corresponding to the Reverse Fundamental Channel transmission set of number of bits per frame of the actual service configuration to be used to '1', and shall set the remaining subfields to '0'. If REV_MUX_OPTION is equal to 1 or 2, the base station shall set RESERVED to '0000'.

NUM_CON_REC - Number of service option connection records.

The mobile station shall set this field as follows:

The mobile station shall set this field to the number of service option connection records included in the message.

The base station shall set this field as follows:

The base station shall set this field to the number of service option connection records included in the message.

For a *Status Response Message*, the mobile station shall include one occurrence of the following variable-length record for each service option connection of the current service configuration. For a *Service Request Message* and a *Service Response Message*, the mobile station shall include one occurrence of the following variable-length record for each service option connection of the proposed service configuration.

For a *Service Request Message* or a *Service Response Message*, the base station shall include one occurrence of the following variable-length record for each service option connection of the proposed service configuration.

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall include one occurrence of the following variable-length record for each service option connection of the actual service configuration to be used.

RECORD_LEN - Service option connection record length.

The mobile station shall set this field as follows:

The mobile station shall set this field to the number of octets included in this service option connection record including this field.

The base station shall set this field as follows:

The base station shall set this field to the number of octets included in this service option connection record including this field.

CON_REF - Service option connection reference.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to the service option connection reference.

1 For a *Service Request Message* and a *Service Response*
 2 *Message*, if the service option connection is part of the
 3 current service configuration, the mobile station shall set
 4 this field to the service option connection reference;
 5 otherwise, the mobile station shall set this field to
 6 '00000000'.

7 The base station shall set this field as follows:

8 For a *Service Request Message* or a *Service Response*
 9 *Message*: if the service option connection is part of the
 10 current service configuration, the base station shall set
 11 this field to the service option connection reference;
 12 otherwise, the base station shall set this field to
 13 '00000000'.

14 For a *Service Connect Message*, *General Handoff Direction*
 15 *Message*, and a *Universal Handoff Direction Message*, the
 16 base station shall set this field to the service option
 17 connection reference assigned to the service option
 18 connection.

19 SERVICE_OPTION - Service option.

20 The mobile station shall set this field as follows:

21 For a *Status Response Message*, the mobile station shall
 22 set this field to the service option in use with the service
 23 option connection.

24 For a *Service Request Message* and a *Service Response*
 25 *Message*, the mobile station shall set this field to the
 26 service option to be used with the service option
 27 connection.

28 The base station shall set this field as follows:

29 The base station shall set this field to the service option
 30 to be used with the service option connection.

31 FOR_TRAFFIC - Forward Traffic Channel traffic type.

32 The mobile station shall set this field as follows:

33 For a *Status Response Message*, the mobile station shall
 34 set this field to the FOR_TRAFFIC code shown in
 35 Table 3.7.5.7-1 corresponding to the Forward Traffic
 36 Channel traffic type in use with the service option
 37 connection.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field to the FOR_TRAFFIC code shown in Table 3.7.5.7-1 corresponding to the Forward Traffic Channel traffic type to be used with the service option connection.

The base station shall set this field as follows:

The base station shall set this field to the FOR_TRAFFIC code shown in Table 3.7.5.7-1 corresponding to the Forward Traffic Channel traffic type to be used with the service option connection.

Table 3.7.5.7-1. FOR_TRAFFIC Codes

FOR_TRAFFIC (binary)	Description
0000	The service option connection does not use Forward Traffic Channel traffic.
0001	The service option connection uses primary traffic on the Forward Traffic Channel.
0010	The service option connection uses secondary traffic on the Forward Traffic Channel.
All other FOR_TRAFFIC codes are reserved.	

REV_TRAFFIC - Reverse Traffic Channel traffic type.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to the REV_TRAFFIC code shown in Table 3.7.5.7-2 corresponding to the Reverse Traffic Channel traffic type in use with the service option connection.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field to the REV_TRAFFIC code shown in Table 3.7.5.7-2 corresponding to the Reverse Traffic Channel traffic type to be used with the service option connection.

The base station shall set this field as follows:

The base station shall set this field to the REV_TRAFFIC code shown in Table 3.7.5.7-2 corresponding to the Reverse Traffic Channel traffic type to be used with the service option connection.

Table 3.7.5.7-2. REV_TRAFFIC Codes

REV_TRAFFIC (binary)	Description
0000	The service option connection does not use Reverse Traffic Channel traffic.
0001	The service option connection uses primary traffic on the Reverse Traffic Channel.
0010	The service option connection uses secondary traffic on the Reverse Traffic Channel.
All other REV_TRAFFIC codes are reserved.	

UI_ENCRYPT_MODE - Encryption mode indicator for user information privacy.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to indicate the current user information encryption mode as shown in Table 3.7.5.7-3.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field to indicate the proposed user information encryption mode as shown in Table 3.7.5.7-3.

The base station shall set this field as follows:

For a *Service Request Message* or a *Service Response Message*: the base station shall set this field to the proposed user information encryption mode, as shown in Table 3.7.5.7-3.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set this field to the assigned user information encryption mode, as shown in Table 3.7.5.7-3.

Table 3.7.5.7-3. User information Encryption Modes

UI_ENCRYPT_MODE Field (binary)	Encryption Mode Used
000	User information Encryption disabled
001	User information Encryption with ORYX algorithm enabled
010- 111	Reserved

SR_ID – Service reference identifier.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to the service reference identifier in use.

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field as follows:

If the service option connection is a part of the current service configuration, the mobile station shall set this field to the service reference identifier in use.

If the service option connection is not a part of the current service configuration and this service option connection is proposed by the mobile station, and if the service instance provides a service reference identifier, the mobile station shall set this field to the service reference identifier specified by the service instance. If the service instance does not provide a service reference identifier, the mobile station shall set this field to the smallest unused service reference identifier value between 1 and 6 (inclusive).

If the service option connection is not a part of the current service configuration and this service option connection is proposed by the base station, the mobile station shall set this field to the value sent by the base station.

The base station shall set this field as follows:

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field as follows:

1			If the service option connection is a part of the current
2			service configuration, the base station shall set this field
3			to the service reference identifier in use; otherwise, the
4			base station shall set this field to the service reference
5			identifier to be used for the service instance
6			corresponding to this record.
7			For a <i>Service Connect Message</i> , <i>General Handoff Direction</i>
8			<i>Message</i> , and a <i>Universal Handoff Direction Message</i> , the
9			base station shall set this field to the service reference
10			identifier to be used for the service instance
11			corresponding to this record.
12	RLP_INFO_INCL	-	RLP information included indicator.
13			The mobile station shall set this field as follows:
14			The mobile station shall set this field to '1' if the
15			RLP_BLOB field is included in this record; otherwise, it
16			shall set this field to '0'.
17			The base station shall set this field as follows:
18			The base station shall set this field to '1' if the RLP_BLOB
19			field is included in this record; otherwise, it shall set this
20			field to '0'.
21	RLP_BLOB_LEN	-	RLP information block of bits length.
22			The mobile station shall set this field as follows:
23			If the RLP_INFO_INCL field is set to '0', the mobile station
24			shall omit this field; otherwise, it shall include this field
25			and set it as follows:
26			The mobile station shall set this field to the size of the
27			RLP_BLOB field in integer number of octets.
28			The base station shall set this field as follows:
29			If the RLP_INFO_INCL field is set to '0', the base station
30			shall omit this field; otherwise, it shall include this field
31			and set it as follows:
32			The base station shall set this field to the size of the
33			RLP_BLOB field in integer number of octets.
34	RLP_BLOB	-	Radio Link Protocol block of bits.

The mobile station shall set this field as follows:

If the RLP_INFO_INCL field is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall include this field and set it as follows:

For a *Status Response Message*, the mobile station shall set this field to the Radio Link Protocol block of bits for this service option connection.

For a *Service Request Message* or *Service Response Message*, the mobile station shall set this field to the proposed Radio Link Protocol block of bits for this service option connection, and shall add '0' bits to the end of the field as needed in order to make the length of this field equal to an integer number of octets.

The base station shall set this field as follows:

If the RLP_INFO_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to the Radio Link Protocol block of bits for this service option connection, and shall add '0' bits to the end of the field as needed in order to make the length of this field equal to an integer number of octets.

QOS_PARMS_INCL - Presence indicator for the QoS parameters.

The mobile station shall set this field as follows:

The mobile station shall set this field to '1', if QOS_PARMS field is included in the record; otherwise the base station shall set this field to '0'.

The base station shall set this field as follows:

The base station shall set this field to '1', if QOS_PARMS field is included in the record; otherwise, the base station shall set this field to '0'.

QOS_PARMS_LEN - Length of the block of QoS parameters.

The mobile station shall set this field as follows:

1 If QOS_PARMS_INCL is set to '1', the mobile station shall
 2 set this field to the combined length in octets, of the
 3 QOS_PARMS field and the immediately following
 4 QOS_RESERVED field; otherwise, the mobile station shall
 5 omit this field.

6 The base station shall set this field as follows:

7 If QOS_PARMS_INCL is set to '1', the base station shall set
 8 this field to the combined length in octets, of the
 9 QOS_PARMS field and the immediately following
 10 RESERVED field; otherwise, the base station shall omit
 11 this field.

12 QOS_PARMS - QoS parameters block.

13 The mobile station shall set this field as follows:

14 If QOS_PARMS_INCL is set to '1', the mobile station shall
 15 include this field in the record and set it to the set of QoS
 16 parameters requested for the respective connection.

17 The base station shall set this field as follows:

18 If QOS_PARMS_INCL is set to '1', the base station shall
 19 include this field in the record and set it to the set of QoS
 20 parameters requested or required for the respective
 21 connection.

22 QOS_RESERVED - Padding bits.

23 The mobile station shall set this field as follows:

24 If QOS_PARMS_INCL is set to '1', the mobile station shall
 25 include minimum necessary number of bits of '0', such
 26 that the combined length of the QOS_PARMS field and of
 27 this field is an integer number of octets; otherwise, the
 28 mobile station shall omit this field.

29 The base station shall set this field as follows:

30 If QOS_PARMS_INCL is set to '1', the base station shall
 31 include minimum necessary number of bits of '0', such
 32 that the combined length of the QOS_PARMS field and of
 33 this field is an integer number of octets; otherwise, the
 34 base station shall omit this field.

35 RESERVED - Reserved bits.

36 The mobile station shall set this field as follows:

The mobile station shall add reserved bits as needed in order to make the length of the entire record equal to an integer number of octets. The mobile station shall set these bits to '0'.

The base station shall set this field as follows:

The base station shall add reserved bits as needed in order to make the length of this record equal to an integer number of octets. The base station shall set these bits to '0'.

FCH_CC_INCL - Channel configuration for the Fundamental Channel included indicator.

The mobile station shall set this field as follows:

The mobile station shall set this field to '1', if Fundamental Channel Configuration information is included in the record; otherwise, the mobile station shall set this field to '0'.

The base station shall set this field as follows:

The base station shall set this field to '1', if the channel configuration information for the Fundamental Channel is included in this Service Configuration Record; otherwise, the base station shall set this field to '0'.

FCH_FRAME_SIZE - Fundamental Channel frame size supported indicator.

The mobile station shall set this field as follows:

If FCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to '1', if the 5ms frame size is used in the Forward and Reverse Fundamental Channel, in addition to 20ms frame, for the current service configuration; otherwise, the mobile station shall set this field to '0'.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to '1' to propose that the 5 ms frame size in addition to the 20 ms frame size is used for the proposed service configuration; otherwise the mobile station shall set this field to '0'.

The base station shall set this field as follows:

If the FCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

The base station shall set this field to '1' if the service configuration includes the use of 5 ms frame size in addition to 20ms frame size for the Forward and Reverse Fundamental Channel; otherwise, the base station shall set this field to '0'.

FOR_FCH_RC - Forward Fundamental Channel Radio Configuration.

The mobile station shall set this field as follows:

If FCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to the Forward Fundamental Channel Radio Configuration for the current service configuration.

For a *Service Request Message* or *Service Response Message*, the mobile station shall set this field to the Forward Fundamental Channel Radio Configuration for the proposed service configuration.

(see [2] Table 3.1.3.1-1)

The base station shall set this field as follows:

If the FCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field to the Forward Fundamental Channel Radio Configuration (see Table 3.1.3.1-1 of [2]) in the proposed service configuration.

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall set this field to the actual Forward Fundamental Channel Radio Configuration to be used.

REV_FCH_RC - Reverse Fundamental Channel Radio Configuration.

The mobile station shall set this field as follows:

If FCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set field to the Reverse Fundamental Channel Radio Configuration for the current service configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the Reverse Fundamental Channel Radio Configuration for the proposed service configuration.

(see [2] Table 2.1.3.1-1)

The base station shall set this field as follows:

If the FCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field to the Reverse Fundamental Channel Radio Configuration (see Table 2.1.3.1-1 of [2]) in the proposed service configuration.

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall set this field to the actual Reverse Fundamental Channel Radio Configuration to be used.

DCCH_CC_INCL - Channel configuration for the Dedicated Control Channel included indicator.

The mobile station shall set this field as follows:

The mobile station shall set this field to '1', if DCCH channel configuration information is included in this record; otherwise, the mobile station shall set this field to '0'.

The base station shall set this field as follows:

The base station shall set this field to '1', if channel configuration information for the Dedicated Control Channel is included in this Service Configuration Record; otherwise, the base station shall set this field to '0'.

DCCH_FRAME_SIZE - Dedicated Control Channel frame size.

The mobile station shall set this field as follows:

If DCCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to the frame size, as defined in Table 3.7.5.7-3, for the current service configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the frame size, as defined in Table 3.7.5.7-1, for the proposed service configuration.

The base station shall set this field as follows:

If the DCCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it according to the Table 3.7.5.7-3 as follows:

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall set this field to the actual Dedicated Control Channel frame size(s) to be used in the service configuration.

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field to the Dedicated Control Channel frame size for the proposed service configuration message.

Table 3.7.5.7-3. DCCH Frame Size

DCCH_FRAME_SIZE (binary)	Description
00	Reserved
01	20 ms frame size only
10	5 ms frame size only
11	Both 5 ms and 20 ms frame sizes

FOR_DCCH_RC - Forward Dedicated Control Channel Radio Configuration.

The mobile station shall set this field as follows:

If DCCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to the Forward Dedicated Control Channel Radio Configuration for the current service configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the forward Dedicated Control Channel Radio Configuration (see [2] Table 3.1.3.1-1) for the proposed service configuration.

The base station shall set this field as follows:

If the DCCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall set this field to the actual Forward Dedicated Control Channel Radio Configuration to be used (see Table 3.1.3.1-1 of [2]).

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field to the Forward Dedicated Control Channel Radio Configuration for the proposed service configuration.

REV_DCCH_RC - Reverse Dedicated Control Channel Radio Configuration.

The mobile station shall set this field as follows:

If DCCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to the Reverse Dedicated Control Channel Radio Configuration (see Table 2.1.3.1-1 of [2]) for the current service configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the Reverse Dedicated Control Channel Radio Configuration for the proposed service configuration.

The base station shall set this field as follows:

If the DCCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

For a *Service Connect Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message*, the base station shall set this field to the actual Reverse Dedicated Control Channel Radio Configuration to be used (see Table 2.1.3.1-1 of [2]).

For a *Service Request Message* or a *Service Response Message*, the base station shall set this field to the reverse Dedicated Control Channel Radio Configuration for the proposed service configuration.

FOR_SCH-

_CC_INCL - Channel configuration for the Forward Supplemental Channel included indicator.

The mobile station shall set this field as follows:

The mobile station shall set this field to '1', if the Forward Supplemental Channel Configuration information is included; otherwise, the mobile station shall set this field to '0'.

The base station shall set this field as follows:

The base station shall set this field to '1', if the channel configuration information for the forward Supplemental Channel is included in this Service Configuration Record; otherwise, the base station shall set this field to '0'.

NUM_FOR_SCH - Number of Forward Supplemental Channels.

The mobile station shall set this field as follows:

If FOR_SCH_CC_INCL field is set to '1', the mobile station shall include this field and set it as describe below; otherwise, the mobile station shall omit this field.

For a *Status Response Message*, the mobile station shall set this field to the number of Forward Supplemental Channels for the current service configuration and include one occurrence of the following three-field SCH record for each Supplemental Channel Configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the number of Forward Supplemental Channels for the proposed service configuration and include one occurrence of the following three-field SCH record for each Supplemental Channel Configuration.

The base station shall set this field as follows:

If the FOR_SCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of Forward Supplemental Channels associated with this service configuration.

If the NUM_FOR_SCH field is present and is set to any value other than '00', the base station shall include one occurrence of the following three-field record for each Forward Supplemental Channel included in this record:

FOR_SCH_ID - Forward Supplemental Channel Identification

The mobile station shall set this field as follows:

The mobile station shall set this field to the identification of the Supplemental Channel included in this Forward Supplemental Channel Configuration record.

The base station shall set this field as follows:

The base station shall set this field to the identifier of the Forward Supplemental Channel pertaining to this record.

FOR_SCH_MUX - Forward Supplemental Channel Multiplex Option.

The mobile station shall set this field as follows:

The mobile station shall set this field to the Multiplex Option of the Supplemental (see 2.2.4.4.1.5 of [3]) for this service configuration.

The base station shall set this field as follows:

The base station shall set this field to the Multiplex Option associated with the maximum data rate for this Forward Supplemental Channel (see 2.2.4.4.1.5 of [3]).

SCH_CC-

_Type-specific field - Supplemental Channel Configuration Information.

The mobile station shall set this field as follows:

1 The mobile station shall set this field to the subfields of
 2 the Channel Configuration record defined in 3.7.5.7.1, for
 3 this Supplemental Channel included in the service
 4 configuration.

5 The base station shall set this field as follows:

6 The base station shall set this field as defined in 3.7.5.7.1
 7 for this Forward Supplemental Channel.

8 REV_SCH_CC_INCL - Channel configuration for the Reverse Supplemental
 9 Channel included indicator.

10 The mobile station shall set this field as follows:

11 The mobile station shall set this field to '1', if the Reverse
 12 Supplemental Channel Configuration information is
 13 included; otherwise, the mobile station shall set this field
 14 to '0'.

15 The base station shall set this field as follows:

16 The base station shall set this field to '1' if the channel
 17 configuration information for the reverse Supplemental
 18 Channel is included in this service configuration record;
 19 otherwise, the base station shall set this field to '0'.

20 NUM_REV_SCH - Number of Reverse Supplemental Channels.

21 The mobile station shall set this field as follows:

22 If REV_SCH_CC_INCL field is set to '1', the mobile station
 23 shall include this field and set it as described below;
 24 otherwise, the mobile station shall omit this field.

25 For a *Status Response Message*, the mobile station shall
 26 set this field to the number of Reverse Supplemental
 27 Channels for the current service configuration and
 28 include one occurrence of the following three-field record
 29 for each reverse Supplemental Channel Configuration.

30 For a *Service Request Message* or a *Service Response*
 31 *Message*, the mobile station shall set this field to the
 32 number of Reverse Supplemental Channels for the
 33 proposed service configuration and include one
 34 occurrence of the following three-field record for each
 35 reverse Supplemental Channel Configuration.

36 The base station shall set this field as follows:

If the REV_SCH_CC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of Reverse Supplemental Channels associated with this service configuration.

If the NUM_REV_SCH field is present and is set to any value other than '00', the base station shall include one occurrence of the following three-field record for each Reverse Supplemental Channel included in this record:

REV_SCH_ID - Reverse Supplemental Channel Identification

The mobile station shall set this field as follows:

The mobile station shall set this field to the identifier of the Supplemental Channel included in this Reverse Supplemental Channel Configuration record.

The base station shall set this field as follows:

The base station shall set this field to the identifier of the Reverse Supplemental Channel pertaining to this record.

REV_SCH_MUX - Reverse Supplemental Channel Multiplex Option

The mobile station shall set this field as follows:

The mobile station shall set this field to the Multiplex Option associated with this Reverse SCH (see 2.2.4.4.1.5 of [3]).

The base station shall set this field as follows:

The base station shall set this field to the Multiplex Option associated with the maximum data rate for this Reverse Supplemental Channel (see 2.2.4.4.1.5 of [3]).

SCH_CC-
_Type-specific field - Supplemental Channel Configuration Information.

The mobile station shall set this field as follows:

The mobile station shall set this field to the subfields of the Channel Configuration record defined in 3.7.5.7.1, for this Reverse Supplemental Channel included in the service configuration.

The base station shall set this field as follows:

The base station shall set this field as defined in 3.7.5.7.1 for this Reverse Supplemental Channel.

1 RESERVED - Reserved bits.

2 The mobile station shall set this field as follows:

3 The mobile station shall add reserved bits as needed in
4 order to make the length of the entire information record
5 equal to an integer number of octets. The mobile station
6 shall set these bits to '0'.

7 The base station shall set this field as follows:

8 The base station shall add reserved bits as needed in
9 order to make the length of the entire message equal to
10 an integer number of octets. The base station shall set
11 these bits to '0'.
12

3.7.5.7.1 Channel Configuration for the Supplemental Channel

The channel configuration information for the Supplemental Channel consists of the following subfields:

Subfields	Length (bits)
SCH_REC_LEN	4
SCH_RC	5
CODING	1
FRAME_40_USED	1
FRAME_80_USED	1
MAX_RATE	4

SCH_REC_LEN - Supplemental Channel channel configuration record length.
The mobile station or base station shall set this field to the number of octets included in this Supplemental Channel channel configuration record including this SCH_REC_LEN field.

SCH_RC - Supplemental Channel Radio Configuration.
The mobile station or base station shall set this field to the Radio Configuration for this Supplemental Channel. Radio Configurations are defined Table 3.1.3.1-1 of [2] for the Forward Supplemental Channel and Table 2.1.3.1-1 of [2] for the Reverse Supplemental Channel.

CODING - Coding type.
The mobile station or base station shall set this field to '1' if the mobile station or the base station is to use Convolutional Coding when the number of channel bits per frame is less than 360 and Turbo Coding when the number of channel bits per frame is equal to or greater than 360. The mobile station or base station shall set this field to '0' if the mobile station or the base station uses Convolution Coding for all block sizes.

FRAME_40_USED - 40ms frame used indicator
The mobile station or base station shall set this field to '1' if 40ms frame is used; otherwise, the mobile station or base station shall set this field to '0'.

1			If a f-dtch logical channel corresponding to the same sr_id is
2			mapped to both forward Supplemental Channels 0 and 1, then
3			the mobile station or base station shall specify the same
4			frame length for both forward Supplemental Channels 0 and
5			1.
6			If a r-dtch logical channel corresponding to the same sr_id is
7			mapped to both reverse Supplemental Channels 0 and 1, then
8			the mobile station or base station shall specify the same
9			frame length for both forward Supplemental Channels 0 and
10			1.
11			The base station shall not set both FRAME_40_USED and
12			FRAME_80_USED fields set to '1'.
13			
14	FRAME_80_USED	-	80ms frame used indicator.
15			The mobile station or base station shall set this field to '1' if
16			80ms frame is to be used; otherwise, the mobile station or
17			base station shall set this field to '0'.
18			If a f-dtch logical channel corresponding to the same sr_id is
19			mapped to both forward Supplemental Channels 0 and 1, then
20			the mobile station or base station shall specify the same
21			frame length for both forward Supplemental Channels 0 and
22			1.
23			If a r-dtch logical channel corresponding to the same sr_id is
24			mapped to both reverse Supplemental Channels 0 and 1, then
25			the mobile station or base station shall specify the same
26			frame length for both reverse Supplemental Channels 0 and
27			1.
28			Then the base station shall not set both FRAME_40_USED and
29			FRAME_80_USED fields set to '1'.
30	MAX_RATE	-	Maximum supplemental channel rate
31			The mobile station or base station shall set this field
32			according to Table 2.7.4.27.3-2 to indicate the maximum
33			forward supplemental channel frame rate supported.
34	RESERVED	-	Reserved bits.
35			The mobile station or base station shall add reserved bits as
36			needed in order to make the length of the entire information
37			record equal to an integer number of octets. The mobile
38			station or base station shall set these bits to '0'.
39			

3.7.5.8 Called Party Subaddress

This information record identifies the called party subaddress.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT - The extension bit.

The base station shall set this field to '1'.

SUBADDRESS_TYPE - Type of subaddress.

The base station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.8.

ODD/EVEN_INDICATOR - The indicator of odd/even bits.

The base station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.8. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED - Reserved bits.

The base station shall set this field to '000'.

CHAR_i - Character.

The base station shall include one occurrence of this field for each character in the called party subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

1 When the SUBADDRESS_TYPE field is set to '010', user-
2 specified subaddress field is encoded according to the user
3 specification, subject to a maximum length of 20 octets.
4 When interworking with CCITT Recommendation X.25
5 networks, BCD coding should be applied.
6

3.7.5.9 Calling Party Subaddress

This information record identifies the calling party subaddress.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT - The extension bit.

The base station shall set this field to '1'.

SUBADDRESS_TYPE - Type of subaddress.

The base station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.10.

ODD/EVEN INDICATOR - The indicator of odd/even bits.

The base station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.10. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED - Reserved bits.

The base station shall set this field to '000'.

CHAR_i - Character.

The base station shall include one occurrence of this field for each character in the calling party subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

1 When the SUBADDRESS_TYPE field is set to '010', user-
2 specified subaddress field is encoded according to the user
3 specification, subject to a maximum length of 20 octets.
4 When interworking with CCITT Recommendation X.25
5 networks, BCD coding should be applied.
6

3.7.5.10 Connected Subaddress

This information record identifies the subaddress of the responding party.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT - The extension bit.

The base station shall set this field to '1'.

SUBADDRESS_TYPE - Type of subaddress.

The base station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in [7], Section 4.5.14.

ODD/EVEN INDICATOR - The indicator of odd/even bits.

The base station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in [7], Section 4.5.14. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED - Reserved bits.

The base station shall set this field to '000'.

CHAR_i - Character.

The base station shall include one occurrence of this field for each character in the connected subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

1 When the SUBADDRESS_TYPE field is set to '010', user-
2 specified subaddress field is encoded according to the user
3 specification, subject to a maximum length of 20 octets.
4 When interworking with CCITT Recommendation X.25
5 networks, BCD coding should be applied.
6

3.7.5.11 Redirecting Number

This information record identifies the Redirecting Number.

Type-Specific Field	Length (bits)
EXTENSION_BIT_1	1
NUMBER_TYPE	3
NUMBER_PLAN	4
EXTENSION_BIT_2	0 or 1
PI	0 or 2
RESERVED	0 or 3
SI	0 or 2
EXTENSION_BIT_3	0 or 1
RESERVED	0 or 3
REDIRECTION_REASON	0 or 4

Zero or more occurrences of the following field:

CHAR _i	8
-------------------	---

EXTENSION_BIT_1 - The extension bit.

If the PI and SI are included in this record, the base station shall set this field to '0'; otherwise, the base station shall set this field to '1'.

NUMBER_TYPE - Type of number.

The base station shall set this field to the NUMBER_TYPE value shown in Table 2.7.1.3.2.4-2 corresponding to the type of the redirecting number, as defined in ANSI T1.625 §6.1.3.7.

NUMBER_PLAN - Numbering plan.

The base station shall set this field to the NUMBER_PLAN value shown in Table 2.7.1.3.2.4-3 corresponding to the numbering plan used for the redirecting number, as defined in ANSI T1.625 §6.1.3.7.

EXTENSION_BIT_2 - The extension bit.

1			If the EXTENSION_BIT_1 is set to '0' and
2			REDIRECTION_REASON is included in this record, the base
3			station shall set this field to '0'. If the EXTENSION_BIT_1 is
4			set to '0' and REDIRECTION_REASON is not included in this
5			record, the base station shall set this field to '1'. If the
6			EXTENSION_BIT_1 is set to '1', the base station shall omit
7			this field.
8	PI	-	Presentation indicator.
9			This field indicates whether or not the redirecting number
10			should be displayed.
11			if the EXTENSION_BIT_1 is set to '0', the base station shall
12			set this field to the PI value shown in Table 2.7.4.4-1
13			corresponding to the presentation indicator, as defined in
14			ANSI T1.625 §6.1.3.7; otherwise, the base station shall omit
15			this field.
16	RESERVED	-	Reserved bits.
17			If the EXTENSION_BIT_1 is set to '0', the base station shall
18			set this field to '000'; otherwise, the base station shall omit
19			this field.
20	SI	-	Screening indicator.
21			This field indicates how the redirecting number was
22			screened.
23			If the EXTENSION_BIT_1 is set to '0', the base station shall
24			set this field to the SI value shown in Table 2.7.4.4-2
25			corresponding to the screening indicator value, as defined in
26			ANSI T1.625 6.1.3.7; otherwise, the base station shall omit
27			this field.
28	EXTENSION_BIT_3	-	The extension bit.
29			If the EXTENSION_BIT_2 is set to '0', the base station shall
30			set this field to '1'; otherwise, the base station shall omit this
31			field.
32	RESERVED	-	Reserved bits.
33			If the EXTENSION_BIT_2 is set to '0', the base station shall
34			set this field to '000'; otherwise, the base station shall omit
35			this field.
36	REDIRECTION_REASON	-	The reason for redirection.

If the EXTENSION_BIT_2 is set to '0', the base station shall set this field to the REDIRECTION_REASON value shown in Table 3.7.5.5.11-1 corresponding to the redirection reason, as defined in ANSI T1.625 6.1.3.7; otherwise, the base station shall omit this field.

Table 3.7.5.11-1. Redirection Reason

Description	REDIRECTION- REASON (binary)
Unknown	0000
Call forwarding busy or called DTE busy	0001
Call forwarding no reply (circuit-mode only)	0010
Called DTE out of order (packet-mode only)	1001
Call forwarding by the called DTE (packet-mode only)	1010
Call forwarding unconditional or Systematic call redirection	1111
Reserved	others

CHARi - Character.

The base stations shall include one occurrence of this field for each character in the Redirecting Number. The base station shall set each occurrence of this field to the ASCII representation corresponding to the character, as specified in [9], with the most significant bit set to '0'.

3.7.5.12 Redirecting Subaddress

This information record identifies the subaddress of the responding party.

Type-Specific Field	Length (bits)
EXTENSION_BIT	1
SUBADDRESS_TYPE	3
ODD/EVEN_INDICATOR	1
RESERVED	3

Zero or more occurrences of the following field:

CHARi	8
-------	---

EXTENSION_BIT - The extension bit.

The base station shall set this field to '1'.

SUBADDRESS_TYPE - Type of subaddress.

The base station shall set this field to the SUBADDRESS_TYPE value shown in Table 2.7.4.19-1 corresponding to the type of the subaddress, as defined in ANSI T1.625 §6.1.3.8.

ODD/EVEN INDICATOR - The indicator of odd /even bits.

The base station shall set this field to the ODD/EVEN_INDICATOR value shown in Table 2.7.4.19-2 corresponding to the indicator of even/odd bits, as defined in ANSI T1.625 §6.1.3.8. It is only used when the type of subaddress is "User specified" and the coding is BCD.

RESERVED - Reserved bits.

The base station shall set this field to '000'.

CHARi - Character.

The base station shall include one occurrence of this field for each character in the redirecting subaddress.

When the SUBADDRESS_TYPE field is equal to '000', the NSAP address shall be encoded using the preferred binary encoding specified in CCITT Recommendation X.213 or ISO 8348 AD2.

1 When the SUBADDRESS_TYPE field is set to '010', user-
2 specified subaddress field is encoded according to the user
3 specification, subject to a maximum length of 20 octets.
4 When interworking with CCITT Recommendation X.25
5 networks, BCD coding should be applied.
6

3.7.5.13 Meter Pulses

This information record identifies the number of meter pulses and frequency of the alert tone.

Type-Specific Field	Length (bits)
PULSE_FREQUENCY	11
PULSE_ON_TIME	8
PULSE_OFF_TIME	8
PULSE_COUNT	4
RESERVED	1

PULSE_FREQUENCY - Pulse frequency.

The base station shall set this field to the frequency of the alert signals in units of 10 Hz or to zero to indicate that line polarity control is to be used. If this field is set to zero, the PULSE_ON_TIME and PULSE_OFF_TIME shall be the period of line polarity reversal and normal line polarity, respectively.

PULSE_ON_TIME - Pulse on time.

The base station shall set this field to the period of the meter pulses in units of 5 ms.

PULSE_OFF_TIME - Pulse off time.

The base station shall set this field to the period of the inter-pulse spacing in units of 5 ms.

PULSE_COUNT - Pulse count.

The base station shall set this field to the number of meter pulses.

RESERVED - Reserved bits.

The base station shall set this field to '0'.

3.7.5.14 Parametric Alerting

This information record allows the network to convey information to a user by means of programmable alerting signals.

Type-Specific Field	Length (bits)
CADENCE_COUNT	8
NUM_GROUPS	4

NUM_GROUPS occurrences of the following record:

AMPLITUDE	8
FREQ_1	10
FREQ_2	10
ON_TIME	8
OFF_TIME	8
REPEAT	4
DELAY	8

RESERVED	4
----------	---

CADENCE_COUNT - Cadence count.

The base station shall set this field to the number of times the cadence of tone groups will be generated between 0x01 and 0xFE. The base station shall set this field to 0x00 to indicate that the mobile station should end alert tone generation. The base station shall set this field to 0xFF to indicate that the cadence will repeat indefinitely.

NUM_GROUPS - Number of groups.

The base station shall set this field to the number of groups.

AMPLITUDE - Amplitude.

The base station shall set this field to the amplitude level of the tone group in units of -1 dBm.

FREQ_1 - Tone frequency 1.

The base station shall set this field to the first frequency of the tone group in units of 5 Hz.

1	FREQ_2	-	Tone frequency 2.
2			The base station shall set this field to the second frequency of
3			the tone group in units of 5 Hz. Setting this field to zero
4			creates a single frequency tone.
5	ON_TIME	-	On time.
6			The base station shall set this field to the duration of the tone
7			group in units of 50 ms.
8	OFF_TIME	-	Off time.
9			The base station shall set this field to the duration of the
10			spacing between tones in units of 50 ms.
11	REPEAT	-	Repeat.
12			The base station shall set this field to the number of times
13			the tone group should repeat. The base station shall set this
14			field to 0xFF to indicate that the tone group will repeat
15			indefinitely.
16	DELAY	-	Delay.
17			The base station shall set this field to the length of time
18			before the next tone group begins in units of 50 ms.
19			
20	RESERVED	-	Reserved bits.
21			The base station shall set this field to '0000'.
22			

3.7.5.15 Line Control

This information record allows the network to convey line control information.

Type-Specific Field	Length (bits)
POLARITY_INCLUDED	1
TOGGLE_MODE	0 or 1
REVERSE_POLARITY	0 or 1
POWER_DENIAL_TIME	8
RESERVED	0 - 7 (as needed)

POLARITY_INCLUDED - Polarity parameter included.

If the mobile station is to change the line polarity, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

TOGGLE_MODE - If POLARITY_INCLUDED is set to '1', the base station shall include this field and set it to '1' to toggle the line polarity or to '0' to set the polarity to the absolute value indicated in the REVERSE_POLARITY field.

REVERSE_POLARITY - Reverse polarity.

If POLARITY_INCLUDED is set to '1' and TOGGLE_MODE is equal to '0', the base station shall include this field and set it to '1' to reverse the tip and ring polarity or to '0' to use normal polarity. If POLARITY_INCLUDED is set to '1' and TOGGLE_MODE is set to '1', the base station shall include this field and set it to '0'; otherwise, the base station shall omit this field.

POWER_DENIAL_TIME - Power denial timeout.

The base station shall include this field and set it to the duration of the power denial in increments of 5 ms.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the entire message equal to an integer number of octets. The base station shall set these bits to '0'.

3.7.5.16 Extended Display

This information record allows the network to supply supplementary service display information that may be displayed by the mobile station.

Type-Specific Field	Length (bits)
EXT_DISPLAY_IND	1
DISPLAY_TYPE	7

One or more occurrences of the following record:

DISPLAY_TAG	8
DISPLAY_LEN	8

DISPLAY_LEN occurrences of the following field if the DISPLAY_TAG field is not equal to '10000000' or '10000001':

CHARi	8
-------	---

EXT_DISPLAY_IND - The indicator of Extended Display Information record.

The base station shall set this field to '1'.

DISPLAY_TYPE - The type of display.

The base station shall set this field to the DISPLAY_TYPE value shown in Table 3.7.5.16-1 corresponding to the type of display, as defined in [8] Annex D.

Table 3.7.5.16-1. Display Type

Description	DISPLAY_TYPE (binary)
Normal	0000000
All other DISPLAY_TYPE values are reserved.	

DISPLAY_TAG - The indicator of the display information.

There are three types of display tags: mandatory control tags (Blank and Skip), display text tags, and optional control tags, see [8] Annex D.

1 The base station shall set this field to the DISPLAY_TAG
2 value shown in Table 3.7.5.16-2 corresponding to the type of
3 information contained in the following CHARi field, as defined
4 in [8] Annex D.
5
6

Table 3.7.5.16-2. Mandatory Control Tags and Display Text Tags

Description	DISPLAY_TAG (binary)
Blank	10000000
Skip	10000001
Continuation	10000010
Called Address	10000011
Cause	10000100
Progress Indicator	10000101
Notification Indicator	10000110
Prompt	10000111
Accumulated Digits	10001000
Status	10001001
Inband	10001010
Calling Address	10001011
Reason	10001100
Calling Party Name	10001101
Called Party Name	10001110
Original Called Name	10001111
Redirecting Name	10010000
Connected Name	10010001
Originating Restrictions	10010010
Date & Time of Day	10010011
Call Appearance ID	10010100
Feature Address	10010101
Redirection Name	10010110
Redirection Number	10010111
Redirecting Number	10011000
Original Called Number	10011001
Connected Number	10011010
Text (e.g., ASCII)	10011110

1 DISPLAY_LEN - The display length.
2 The base station shall set this field to the number of octets of
3 display text. See [8] Annex D.
4 CHARi - Character.
5 The base station shall include DISPLAY_LEN occurrences of
6 this field, one for each character to be displayed, except for
7 blank and skip. The base station shall set each occurrence of
8 this field to the ASCII representation corresponding to the
9 character entered, as specified in [9], with the most
10 significant bit set to '0'.
11

1 3.7.5.17 Extended Record Type - International

2 The use of this record type is country-specific. The first ten bits of the type-specific fields
3 shall include the Mobile Country Code (MCC) associated with the national standards
4 organization administering the use of the record type. Encoding of the MCC shall be as
5 specified in 2.3.1.3. The remaining six bits of the first two octets of the type-specific fields
6 shall be used to specify the country-specific record type.

7

1 3.7.5.18 Reserved
2

- 1 3.7.5.19 Reserved
- 2

3.7.5.20 Non-Negotiable Service Configuration

This record is included in a *Service Connect Message* to specify the non-negotiable service configuration parameters to be used by the mobile station. This record can be included in a *General Handoff Direction Message* or a *Universal Handoff Direction Message* to specify the non-negotiable service configuration parameters to be used by the mobile station.

Type Specific Field	Length (bits)
FPC_INCL	1
FPC_PRI_CHAN	0 or 1
FPC_MODE	0 or 3
FPC_OLPC_FCH_INCL	0 or 1
FPC_FCH_FER	0 or 5
FPC_FCH_MIN_SETPT	0 or 8
FPC_FCH_MAX_SETPT	0 or 8
FPC_OLPC_DCCH_INCL	0 or 1
FPC_DCCH_FER	0 or 5
FPC_DCCH_MIN_SETPT	0 or 8
FPC_DCCH_MAX_SETPT	0 or 8

GATING_RATE_INCL	1
PILOT_GATING_RATE	0 or 2

FOR_SCH_INCL	1
NUM_FOR_SCH	0 or 2

If FOR_SCH_INCL = '1', include NUM_FOR_SCH occurrences of the following four-field record

FOR_SCH_ID	2
FOR_MULTI_FRAME_OFFSET	2

(continues on next page)

Type Specific Field	Length (bits)
REV_SCH_INCL	1
NUM_REV_SCH	0 or 2

If REV_SCH_INCL = '1', include NUM_REV_SCH occurrences of the following four-field record

REV_SCH_ID	2
REV_MULTI_FRAME_OFFSET	2

LPM_IND	2
NUM_LPM_ENTRIES	0 or 4

If LPM_IND = '01', include NUM_LPM_ENTRIES occurrences of the following six-field record:

SR_ID	3
LOGICAL_RESOURCE	4
PHYSICAL_RESOURCE	4
FORWARD_FLAG	1
REVERSE_FLAG	1
PRIORITY	4

NUM_REC	3
---------	---

NUM_REC occurrences of the following variable-length record:

RECORD_LEN	8
SR_ID	3
SDB_SO_OMIT	1
RESERVED	0-7 (as needed)

(continues on next page)

1

Type Specific Field	Length (bits)
USE_FLEX_NUM_BITS	1
USE_OLD_FLEX_TABLE	0 or 1
NUM_BITS_TABLES_COUNT	0 or 3

If USE_FLEX_NUM_BITS is equal to '1', then
NUM_BITS_TABLES_COUNT+1 occurrences of the following
record

NUM_BITS_TABLE_ID	4
NUM_RECS	4

If USE_FLEX_NUM_BITS is equal to '1', then NUM_RECS +1
occurrences of the following record

NUM_BITS_IDX	4
NUM_BITS	16
CRC_LEN_IDX	3

USE_VAR_RATE	1
USE_OLD_VAR_TABLE	0 or 1
VAR_RATE_TABLES_COUNT	0 or 3

If USE_VAR_RATE is equal to '1', then
VAR_RATE_TABLES_COUNT+1 occurrences of the following
record

VAR_RATE_TABLE_ID	3
NUM_RECS	4

If USE_VAR_NUM_BITS is equal to '1', then NUM_RECS +1
occurrences of the following record

NUM_BITS_IDX	4
MASK	NUM_BITS_IDX

If USE_FLEX_NUM_BITS is equal to '1', include the
following fields

USE_OLD_FLEX_MAPPING	1
FSCHO_NBIT_TABLE_ID	0 or 4

(continues on next page)

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3

1

Type Specific Field	Length (bits)
RSCH0_NBIT_TABLE_ID	0 or 4
FSCH1_NBIT_TABLE_ID	0 or 4
RSCH1_NBIT_TABLE_ID	0 or 4
FFCH_NBIT_TABLE_ID	0 or 4
RFCH_NBIT_TABLE_ID	0 or 4
FDCCH_NBIT_TABLE_ID	0 or 4
FDCCH_NBITS_IDX	0 or 4
RDCCH_NBIT_TABLE_ID	0 or 4
RDCCH_NBITS_IDX	0 or 4

If USE_VAR_RATE is equal to '1', include the following fields

USE_OLD_VAR_MAPPING	1
FSCH0_VAR_TABLE_ID	0 or 3
RSCH0_VAR_TABLE_ID	0 or 3
FSCH1_VAR_TABLE_ID	0 or 3
RSCH1_VAR_TABLE_ID	0 or 3
R_INC_RATE_ALLOWED	0 or 1
F_INC_RATE_ALLOWED	0 or 1

LTU_INFO_INC	1
USE_OLD_LTU_TABLE	0 or 1

If LTU_INFO_INC is equal to '1' and USE_OLD_LTU_TABLE is equal to '0', then the following fields related to the LTU Size Table shall be included

NUM_LTU_TABLES	0 or 2
----------------	--------

Include NUM_LTU_TABLES + 1 instances of the following records

LTU_TABLE_ID	3
--------------	---

(continues on next page)

2

3

1

Type Specific Field	Length (bits)
NUM_ROWS	4

Include NUM_ROWS + 1 instances of the following records

NBITS_IDX	4
LTU_LEN	16

USE_OLD_LTU_MAPPING	0 or 1
FSCH0_LTU_TAB_ID	0 or 3
RSCH0_LTU_TAB_ID	0 or 3
FSCH1_LTU_TAB_ID	0 or 3
RSCH1_LTU_TAB_ID	0 or 3

If USE_FLEX_NUM_BITS is equal to '1' and at least one of FFCH_NBIT_TABLE_ID, RFCH_NBIT_TABLE_ID, FDCCH_NBIT_TABLE_ID, or RDCCH_NBIT_TABLE_ID is not equal to '0000', then include the following fields

USE_OLD_PARTITION_TABLE	0 or 1
NUM_PARTITION_TABLES	0 or 2

Include NUM_PARTITION_TABLES + 1 instances of the following records

PARTITION_TABLE_ID	3
NUM_ROWS	5

Include NUM_ROWS + 1 instances of the following records

CATEGORY	5
MUX_HEADER_LEN	3
MUX_HEADER	MUX_HEADER_LEN

(continues on next page)

2

3

1

Type Specific Field	Length (bits)
NUM_PARTITIONS	3

Include NUM_PARTITIONS + 1 instances of the following record

SR_ID	3
SRV_NUM_BITS	9

USE_OLD_PART_MAPPING	0 or 1
FFCH_PART_TAB_ID	0 or 3
RFCH_PART_TAB_ID	0 or 3
FDCCH_PART_TAB_ID	0 or 3
RDCCH_PART_TAB_ID	0 or 3

2

RESERVED	0-7 (as needed)
----------	-----------------

3

4

5

FPC_INCL - Forward power control information included indicator.

6

The base station shall set this field to '1' if the forward power control information parameters are included in this record; otherwise, it shall set this field to '0'.

7

8

9

FPC_PRI_CHAN - Power Control Subchannel indicator.

10

If the FPC_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

11

12

13

The base station shall set this field to '0' if the mobile station is to perform the primary inner loop estimation on the received Forward Fundamental Channel and the base station is to multiplex the Power Control Subchannel on Forward Fundamental Channel; the base station shall set this field to '1' if the mobile station is to perform the primary inner loop estimation on the received Forward Dedicated Control Channel and the base station is to multiplex the Power Control Subchannel on Forward Dedicated Control Channel.

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1			If only Fundamental Channel is assigned, the base station
2			shall set this field to '0'. If only the Dedicated Control
3			Channel is assigned, the base station shall set this field to
4			'1'.
5	FPC_MODE	-	Forward Power Control operation mode indicator.
6			If the FPC_INCL field is set to '0', the base station shall omit
7			this field; otherwise, the base station shall include this field
8			and set it as follows:
9			The base station shall set this field to the value of the forward
10			power control operation mode as specified in Table 2.1.3.1.11-
11			1 of [2].
12	FPC_OLPC_FCH_INCL	-	Fundamental Channel Outer Loop Power Control parameter
13			included indicator.
14			If the FPC_INCL field is set to '0', the base station shall omit
15			this field; otherwise, the base station shall include this field
16			and set it as follows:
17			If the forward link Fundamental Channel outer loop power
18			control parameters are included in this record, the base
19			station shall set this field to '1'; otherwise, the base station
20			shall set this field to '0'.
21	FPC_FCH_FER	-	Fundamental Channel target Frame Error Rate.
22			If FPC_OLPC_FCH_INCL is included and set to '1', the base
23			station shall set this field to the target Frame Error Rate on
24			the Forward Fundamental Channel, as specified in Table
25			3.7.3.3.2.25-2; otherwise, the base station shall omit this
26			field.
27	FPC_FCH_MIN_SETPT	-	Minimum Fundamental Channel Outer Loop Eb/Nt setpoint.
28			If FPC_OLPC_FCH_INCL is included and set to '1', the base
29			station shall set this field to minimum Fundamental Channel
30			Outer Loop Eb/Nt setpoint, in units of 0.125dB; otherwise, the
31			base station shall omit this field.
32	FPC_FCH_MAX_SETPT	-	Maximum Fundamental Channel Outer Loop Eb/Nt setpoint.
33			If FPC_OLPC_FCH_INCL is set to '1', the base station shall set
34			this field to maximum Fundamental Channel Outer Loop
35			Eb/Nt setpoint, in units of 0.125dB; otherwise, the base
36			station shall omit this field.
37	FPC_OLPC_DCCH_INCL	-	Dedicated Control Channel Outer Loop Power Control
38			parameter included indicator.

1			If the FPC_INCL field is set to '0', the base station shall omit
2			this field; otherwise, the base station shall include this field
3			and set it as follows:
4			If the forward link Dedicated Control Channel outer loop
5			power control parameters are included in this message, the
6			base station shall set this field to '1'; otherwise, the base
7			station shall set this field to '0'.
8	FPC_DCCH_FER	-	Dedicated Control Channel target Frame Error Rate.
9			If FPC_OLPC_DCCH_INCL is included and set to '1', the base
10			station shall set this field to the target Frame Error Rate on
11			the Forward Dedicated Control Channel, as specified in Table
12			3.7.3.3.2.25-2; otherwise, the base station shall omit this
13			field.
14	FPC_DCCH_MIN_SETPT	-	Minimum Dedicated Control Channel Outer Loop Eb/Nt
15			setpoint.
16			If FPC_OLPC_DCCH_INCL is included and set to '1', the base
17			station shall set this field to minimum Dedicated Control
18			Channel Outer Loop Eb/Nt setpoint, in units of 0.125dB;
19			otherwise, the base station shall omit this field.
20	FPC_DCCH_MAX_SETPT	-	Maximum Dedicated Control Channel Outer Loop Eb/Nt
21			setpoint.
22			If FPC_OLPC_DCCH_INCL is included and set to '1', the base
23			station shall set this field to maximum Dedicated Control
24			Channel Outer Loop Eb/Nt setpoint, in units of 0.125dB;
25			otherwise, the base station shall omit this field.
26	GATING_RATE_INCL	-	Reverse Pilot Channel Gating rate included flag.
27			The base station shall set this field to '1' if the
28			PILOT_GATING_RATE field is included; otherwise, it shall set
29			this field to '0'.
30	PILOT_GATING_RATE	-	Reverse Pilot Channel Gating rate.
31			If the GATING_RATE_INCL field is set to '0', the base station
32			shall omit this field; otherwise, the base station shall set this
33			field as follows: The base station shall set this field to the
34			PILOT_GATING_RATE field shown in Table 3.7.5.20-1
35			corresponding to the gating rate on the Reverse Pilot
36			Channel.

Table 3.7.5.20-1. Reverse Pilot Gating rate

PILOT_GATING_RATE field (binary)	Meaning
00	Gating rate 1
01	Gating rate $\frac{1}{2}$
10	Gating rate $\frac{1}{4}$
11	Reserved

FOR_SCH_INCL - Forward Supplemental Channel information included indicator.

The base station shall set this field to '1', if the forward Supplemental Channel information is included; otherwise, the base station shall set this field to '0'.

NUM_FOR_SCH - Number of Forward Supplemental Channels.

If the FOR_SCH_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of Forward Supplemental Channels associated with this service configuration.

If the NUM_FOR_SCH field is present and is set to any value other than '00', the base station shall include one occurrence of the following two field record for each Forward Supplemental Channel included in this record:

FOR_SCH_ID - Forward Supplemental Channel Identification.

The base station shall set this field to the identifier of the Forward Supplemental Channel pertaining to this record.

**FOR_MULTI-
_FRAME_OFFSET** - Forward Supplemental Channel multiple frame offset.

The base station shall set this field to the multiple frame offset of this Forward Supplemental Channel. The frames of this Forward Supplemental Channel are delayed by $(\text{FRAME_OFFSET} \times 1.25 + \text{FOR_MULTI_FRAME_OFFSET} \times 20)$ ms relative to system timing (see [2]).

REV_SCH_INCL - Reverse Supplemental Channel information included indicator.

The base station shall set this field to '1' if the reverse Supplemental Channel information is included; otherwise, the base station shall set this field to '0'.

NUM_REV_SCH - Number of Reverse Supplemental Channels.

If the REV_SCH_INCL field is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to the number of Reverse Supplemental Channels associated with this service configuration.

If the NUM_REV_SCH field is present and is set to any value other than '00', the base station shall include one occurrence of the following four field record for each Reverse Supplemental Channel included in this record:

REV_SCH_ID - Reverse Supplemental Channel Identification.

The base station shall set this field to the identifier of the Reverse Supplemental Channel pertaining to this record.

REV_MULTI-
_FRAME_OFFSET - Reverse Supplemental Channel multiple frame offset.

The base station shall set this field to the multiple frame offset with this Reverse Supplemental Channel. The frames of this Reverse Supplemental Channel are delayed by $(\text{FRAME_OFFSET} \times 1.25 + \text{REV_MULTI_FRAME_OFFSET} \times 20)$ ms relative to system timing (see [2]).

LPM_IND - Logical to Physical Mapping indicator.

The base station shall set this field to the LPM_IND field value shown in Table 3.7.5.20-2 corresponding to the Logical to Physical Mapping indicator.

Table 3.7.5.20-2. Logical to Physical Mapping indicator

LPM_IND Field (binary)	Logical to Physical Mapping indicator
00	Use the default Logic-to-Physical Mapping
01	Use the Logic-to-Physical Mapping included in this record
10	Use the previous stored Logic-to-Physical Mapping
11	Reserved

NUM_LPM_ENTRIES - Number of Logical-to-Physical Mapping entries.

If the LPM_IND field is set to '01', the base station include this field and set it as follows; otherwise, the base station shall omit this field:

The base station shall set this field to the number of Logical-to-Physical Mapping entries that are included in this record.

If the NUM_LPM_ENTRIES field is included and is not equal to '0000', the base station shall include NUM_LPM_ENTRIES occurrences of the following six-field record for each Logical-to-Physical Mapping entry:

SR_ID - Service reference identifier.

The base station shall set this field to the identifier of the service reference to which this Logical to Physical Mapping entry applies.

LOGICAL_RESOURCE - Logical resource identifier.

The base station shall set this field to the logical resource identifier shown in Table 3.7.5.20-3 which is to be mapped by this Logical to Physical Mapping entry.

Table 3.7.5.20-3. Logical Resource Identifier.

LOGICAL_RESOURCE (binary)	Logical Resource
0000	dtch
0001	dsch
0010 – 1111	Reserved

PHYSICAL_RESOURCE - Physical resource identifier.

The base station shall set this field to the physical resource identifier shown in Table 3.7.5.20-4 to which the logical channel specified in this Logical to Physical Mapping entry is to be mapped.

Table 3.7.5.20-4. Physical Resource Identifier.

PHYSICAL_RESOURCE (binary)	Physical Resource
0000	FCH
0001	DCCH
0010	SCH0
0011	SCH1
0100 – 1111	Reserved

FORWARD_FLAG - Forward mapping indicator.

The base station shall set this field to '1' if the logical to physical channel mapping specified in this record applies to forward logical channels; otherwise, the base station shall set this field to '0'.

REVERSE_FLAG - Reverse mapping indicator.

The base station shall set this field to '1' if the logical to physical channel mapping specified in this record applies to reverse logical channels; otherwise, the base station shall set this field to '0'.

PRIORITY - Multiplexing priority.

The base station shall set this field to '0000'.

NUM_REC - Number of service-specific records.

The base station shall set this field to the number of the following variable-length records included in the message.

The base station shall include one occurrence of the following variable-length record for each service option connection for which this record needs to be specified.

RECORD_LEN - Record length.

The base station shall set this field to the number of octets included in this variable-length record including this field.

SR_ID - Service reference identifier.

The base station shall set this field to the identifier of the service reference associated with this service-specific record.

SDB_SO_OMIT - Short Data Burst service option number omitted indicator.

1		The base station shall set this field to '1' if the mobile station
2		is required to omit the service option number when sending
3		Short Data Burst (see IS-707-A-2) for this service option
4		connection; otherwise, the base station shall set this field to
5		'0'.
6	RESERVED	- Reserved bits.
7		The base station shall add reserved bits as needed in order to
8		make the length of this record equal to an integer number of
9		octets. The base station shall set these bits to '0'.
10	USE_FLEX_NUM_BITS	- Use flexible (non-default) number of bits per frame indicator.
11		The base station shall set this field to '0' to indicate that the
12		number of bits per frame shall follow the default mapping
13		identified in Table 3.7.3.3.2.37-2 and Table 3.7.3.3.2.37-1.
14		The base station shall set this field to '1' to indicate a non-
15		default mapping between the number of information bits per
16		frame, NUM_BITS, and a four-bit index field NUM_BITS_IDX is
17		specified in this message for at least a forward or reverse
18		dedicated channel.
19	USE_OLD_FLEX_TABLE	- Use the previously downloaded Flexible Rate Table indicator.
20		The base station shall include this field only if
21		USE_FLEX_NUM_BITS is equal to '1'. If this field is included,
22		the base station shall set this field to '1' to indicate that the
23		mobile station is to use the previously downloaded Flexible
24		Rate Table. The base station shall set this field to '0' if the
25		fields related to downloading the Flexible Rate Table are
26		included in this message.
27	NUM_BITS-	
28	_TABLES_COUNT	- Number of instances of the Flexible Rate Table included in
29		this message.
30		The base station shall include this field only if
31		USE_OLD_FLEX_TABLE field is included and is set to '0'. If
32		this field is included, the base station shall set this field to
33		one less than the number of instances of the Flexible Rate
34		Table included in this message.
35	If USE_OLD_FLEX_TABLE is equal to '0', the base station shall include	
36	NUM_BITS_TABLES_COUNT+1 instances of the Flexible Rate Table	
37	NUM_BITS_TABLE_ID	- Flexible Rate Table ID.

1 The base station shall set this field to the ID of the Flexible
 2 Rate Table that follows. The value of '0000' is reserved to
 3 indicate the default table.

4 NUM_RECS - Number of records in the Flexible Rate Table.

5 The base station shall set this field to one less than the
 6 number of three-field records that follows

7 The base station shall include NUM_RECS+1 instances of the following three fields:

8 NUM_BITS_IDX - Index to the number of bits array.

9 The base station shall set this field to the index to the array
 10 that identifies the number of bits per frame.

11 NUM_BITS - Number of bits array.

12 The base station shall set this field to the number of
 13 information bits per frame corresponding to the index
 14 specified by NUM_BITS_IDX. The base station shall set the
 15 number of information bits per frame in accordance with the
 16 number of information bits per frame specified by the service
 17 option numbers included in the service configuration record.

18 CRC_LEN_IDX - Array of Number of CRC bits.

19 The base station shall set this field to specify the number of
 20 CRC bits per frame corresponding to the index specified by
 21 NUM_BITS_IDX according to Table 3.7.5.20-4. The base
 22 station shall not specify more than one value of the CRC
 23 length for the same number of bits per frame for a specific
 24 channel (i.e., for a given channel, the number of information
 25 bits per frame uniquely specifies the length of the CRC field).

26

Table 3.7.5.20-4. CRC_LEN_IDX

CRC_LEN_IDX (binary)	Number of CRC bits per frame
000	0
001	6
010	8
011	10
100	12
101	16
110-111	Reserved

27

1 USE_VAR_RATE - Use variable rate on supplemental channels indicator.

2 The base station shall set this field to '1' to indicate that at

3 least one of the forward or reverse supplemental channels is

4 to operate in the variable rate mode (i.e., the rate of the

5 supplemental channel can be picked from a pre-determined

6 set of rates autonomously).

7 The base station shall set this bit to '0' to indicate that

8 variable rate on supplemental channels are not allowed.

9 USE_OLD_VAR_TABLE - Use the previously downloaded Variable Rate Table indicator.

10 The base station shall include this field only if

11 USE_VAR_RATE is equal to '1'. If this field is included, the

12 base station shall set this field to '1' to indicate that the

13 mobile station is to use the previously downloaded Variable

14 Rate Mask Table. The base station shall set this field to '0' if

15 the fields related to downloading the Variable Rate Mask

16 Table are included in this message.

17 VAR_RATE-

18 _TABLES_COUNT - Number of instances of the Variable Rate Mask Table

19 included in this message.

20 The base station shall include this field only if

21 USE_OLD_VAR_TABLE field is included and is set to '0'. If this

22 field is included, the base station shall set this field to one

23 less than the number of instances of the Variable Rate Mask

24 table included in this message as follows.

25 If USE_OLD_VAR_TABLE is equal to '0', the base station shall include

26 VAR_RATE_TABLES_COUNT + 1 instances of the Variable Rate Mask table

27 VAR_RATE_TABLE_ID - Variable Rate Mask table ID.

28 The base station shall set this field to the ID of the Variable

29 Rate Mask table that follows. The value of '000' is reserved to

30 indicate no variable rate operation.

31 NUM_RECS - Number of records in the Variable Rate Mask table.

32 The base station shall set this field to one less than the

33 number of two-field records that follows

34 The base station shall include NUM_RECS+1 instances of the following two fields:

35 NUM_BITS_IDX - Index to the number of bits array.

36 The base station shall set this field to the index to the array

37 that identifies the number of bits per supplemental channel

38 frame.

1	MASK	-	Number of bits array.
2			The base station shall set this field to a mask that identifies
3			the other members of the Variable Rate Set. The base
4			station shall set the i^{th} LSB bit ($i=1, \dots, \text{NUM_BITS_IDX}$) of this
5			field to '1' to indicates that the number of bits per frame
6			specified by the index NUM_BITS_IDX-i is to be included in
7			the Supplemental Variable Rate Set.
8	USE_OLD-		
9	_FLEX_MAPPING	-	Use the previously downloaded mapping between the
10			channels and Flexible Rate Tables.
11			The base station shall include this field only if
12			USE_FLEX_NUM_BITS field is set to '1'. If this field is
13			included, the base station shall set this field to '1' to indicate
14			that the mobile station is to use the previously downloaded
15			mapping between the channels and Flexible Rate Tables. The
16			base station shall set this field to '0', if the following eight
17			fields are included in this message.
18	FSCHO_NBIT_TABLE_ID	-	Forward Supplemental Channel 0 Flexible Rate Table ID.
19			The base station shall include this field only if
20			USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
21			this field is included, the base station shall set this field to
22			the ID of the Flexible Rate Table corresponding to Forward
23			Supplemental Channel 0. The base station shall set this field
24			to '0000' to indicate that the Flexible Rate feature is not used
25			for Forward Supplemental 0.
26	RSCHO_NBIT_TABLE_ID	-	Reverse Supplemental Channel 0 Flexible Rate Table ID.
27			The base station shall include this field only if
28			USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
29			this field is included, the base station shall set this field to
30			the ID of the Flexible Rate Table corresponding to Reverse
31			Supplemental Channel 0. The base station shall set this field
32			to '0000' to indicate that the Flexible Rate feature is not used
33			for Reverse Supplemental 0.
34	FSCH1_NBIT_TABLE_ID	-	Forward Supplemental Channel 1 Flexible Rate Table ID.
35			The base station shall include this field only if
36			USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
37			this field is included, the base station shall set this field to
38			the ID of the Flexible Rate Table corresponding to Forward
39			Supplemental Channel 1. The base station shall set this field
40			to '0000' to indicate that the Flexible Rate feature is not used
41			for Forward Supplemental 1.

- 1 RSCH1_NBIT_TABLE_ID - Reverse Supplemental Channel 1 Flexible Rate Table ID.
- 2 The base station shall include this field only if
- 3 USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
- 4 this field is included, the base station shall set this field to
- 5 the ID of the Flexible Rate Table corresponding to Reverse
- 6 Supplemental Channel 1. The base station shall set this field
- 7 to '0000' to indicate that the Flexible Rate feature is not used
- 8 for Reverse Supplemental 1.
- 9 FFCH_NBIT_TABLE_ID - Forward Fundamental Channel Flexible Rate Table ID.
- 10 The base station shall include this field only if
- 11 USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
- 12 this field is included, the base station shall set this field to
- 13 the ID of the Flexible Rate Table corresponding to the Forward
- 14 Fundamental Channel. The base station shall set this field
- 15 to '0000' to indicate that the Flexible Rate feature is not used
- 16 for the Forward Fundamental Channel.
- 17 RFCH_NBIT_TABLE_ID - Reverse Fundamental Channel Flexible Rate Table ID.
- 18 The base station shall include this field only if
- 19 USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
- 20 this field is included, the base station shall set this field to
- 21 the ID of the Flexible Rate Table corresponding to the Reverse
- 22 Fundamental Channel. The base station shall set this field
- 23 to '0000' to indicate that the Flexible Rate feature is not used
- 24 for the Reverse Fundamental Channel.
- 25 FDCCH_NBIT_TABLE_ID - Forward Dedicated Control Channel Flexible Rate Table ID.
- 26 The base station shall include this field only if
- 27 USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
- 28 this field is included, the base station shall set this field to
- 29 the ID of the Flexible Rate Table corresponding to the Forward
- 30 Dedicated Control Channel. The base station shall set this
- 31 field to '0000' to indicate that the Flexible Rate feature is not
- 32 used for the Forward Dedicated Control Channel.
- 33 FDCCH_NBITS_IDX - Forward Dedicated Control Channel number of information
- 34 bits per frame index.

1		The base station shall include this field only if the
2		FDCCH_NBITS_TABLE_ID field is included and is not equal to
3		'0000'. If included, the base station shall set this field to
4		indicate the number of information bits per Forward
5		Dedicated Control Channel frame. The number of
6		information bits per frame is specified by the Flexible Rate
7		Table associated with Forward Dedicated Control Channel and
8		FDCCH_NBITS_IDX as the index to the table (i.e.,
9		NUM_BITS _S [FDCCH_NBITS_TABLE_ID _r][FDCCH_NBITS_IDX].
10	RDCCH_NBIT_TABLE_ID -	Reverse Dedicated Control Channel Flexible Rate Table ID.
11		The base station shall include this field only if
12		USE_OLD_FLEX_MAPPING field is included and is set to '0'. If
13		this field is included, the base station shall set this field to
14		the ID of the Flexible Rate Table corresponding to the Reverse
15		Dedicated Control Channel. The base station shall set this
16		field to '0000' to indicate that the Flexible Rate feature is not
17		used for the Reverse Dedicated Control Channel.
18	RDCCH_NBITS_IDX -	Reverse Dedicated Control Channel number of information
19		bits per frame index.
20		The base station shall include this field only if the
21		RDCCH_NBITS_TABLE_ID field is included and is not equal to
22		'0000'. If included, the base station shall set this field to
23		indicate the number of information bits per Reverse
24		Dedicated Control Channel frame. The number of
25		information bits per frame is specified by the Flexible Rate
26		Table associated with Reverse Dedicated Control Channel
27		and RDCCH_NBITS_IDX as the index to the table (i.e.,
28		NUM_BITS _S [RDCCH_NBITS_TABLE_ID _r][RDCCH_NBITS_IDX].
29	USE_OLD_VAR_MAPPING -	Use the previously downloaded mapping between the
30		channels and Variable Rate Mask Tables.
31		The base station shall include this field only if
32		USE_VAR_RATE field is set to '1'. If this field is included, the
33		base station shall set this field to '1' to indicate that the
34		mobile station is to use the previously downloaded mapping
35		between the channels and Variable Rate Mask Tables. The
36		base station shall set this field to '0', if the following four
37		fields are included in this message.
38	FSCHO_VAR_TABLE_ID -	Forward Supplemental Channel 0 Variable Rate Mask Table
39		ID.

The base station shall include this field only if USE_OLD_VAR_MAPPING field is included and is set to '1'. If this field is included, the base station shall set this field to the ID of the Variable Rate Mask Table corresponding to Forward Supplemental Channel 0. The base station shall set this field to '000' to indicate that no variable rate operation is performed on the F-SCH0.

RSCH0_VAR_TABLE_ID - Reverse Supplemental Channel 0 Variable Rate Mask Table ID.

The base station shall include this field only if USE_OLD_VAR_MAPPING field is included and is set to '1'. If this field is included, the base station shall set this field to the ID of the Variable Rate Mask Table corresponding to Reverse Supplemental Channel 0. The base station shall set this field to '000' to indicate that the mobile station is not to autonomously change the rate of the R-SCH0.

FSCH1_VAR_TABLE_ID - Forward Supplemental Channel 1 Variable Rate Mask Table ID.

The base station shall include this field only if USE_OLD_VAR_MAPPING field is included and is set to '1'. If this field is included, the base station shall set this field to the ID of the Variable Rate Mask Table corresponding to Forward Supplemental Channel 1. The base station shall set this field to '000' to indicate that no variable rate operation is performed on the F-SCH1.

RSCH1_VAR_TABLE_ID - Reverse Supplemental Channel 1 Variable Rate Mask Table ID.

The base station shall include this field only if USE_OLD_VAR_MAPPING field is included and is set to '1'. If this field is included, the base station shall set this field to the ID of the Variable Rate Mask Table corresponding to Reverse Supplemental Channel 1. The base station shall set this field to '000' to indicate that the mobile station is not to autonomously change the rate of the R-SCH1.

R_INC_RATE_ALLOWED - Reverse increase rate within Variable Rate Set Allowed indicator.

1		The base station shall include this field only if
2		USE_VAR_RATE field is included and is set to '1'. If this field
3		is included, the base station shall set this field to '1' to
4		indicate that the mobile station is allowed to switch between
5		any of the rates (i.e., number of bits per frame) in the
6		Variable Rate Set for the Reverse Supplemental channels.
7		The base station shall set this field to '0' to indicate that only
8		a downward transition in rate within the rates (i.e., number
9		of bits per frame) in the Variable Rate Set for the Reverse
10		Supplemental channels is allowed.
11	F_INC_RATE_ALLOWED	- Forward increase rate within Variable Rate Set Allowed
12		indicator.
13		The base station shall include this field only if
14		USE_VAR_RATE field is included and is set to '1'. If this field
15		is included, the base station shall set this field to '1' to
16		indicate that the base station is allowed to switch between
17		any of the rates (i.e., number of bits per frame) in the
18		Variable Rate Set for the Forward Supplemental channels.
19		The base station shall set this field to '0' to indicate that only
20		a downward transition in rate within the rates (i.e., number
21		of bits per frame) in the Variable Rate Set for the Forward
22		Supplemental channels is possible.
23	LTU_INFO_INC	- LTU Size Tables included indicator.
24		The base station shall set this field to '1' to indicate that LTU
25		Size Table information is included in this message;
26		otherwise, the base station shall set this field to '0'. The base
27		station shall include at least one LTU Size Table if
28		USE_FLEX_NUM_BITS is equal to '1' and at least one of
29		FSCH0_NBIT_TABLE_ID, FSCH1_NBIT_TABLE_ID,
30		RSCH0_NBIT_TABLE_ID, or RSCH1_NBIT_TABLE_ID is not
31		equal to '0000' (i.e., the base station is to specify the LTU size
32		table for the supplemental channels that are using the
33		flexible rate feature).
34	USE_OLD_LTU_TABLE	- Use the previously downloaded LTU Table indicator.
35		The base station shall include this field only if
36		USE_FLEX_NUM_BITS is equal to '1' and LTU_INFO_INC is
37		equal to '1'. If this field is included, the base station shall set
38		this field to '1' to indicate that the mobile station is to use the
39		previously downloaded LTU Table. The base station shall set
40		this field to '0' if the fields related to downloading the LTU
41		Table are included in this message.
42		

If USE_OLD_LTU_TABLE is equal to '0', the base station shall include the following fields related to the LTU Size Table information:

NUM_LTU_TABLES - Number of LTU tables included.

If USE_OLD_LTU_TABLE is equal to '0', the base station shall include this field. If this field is included, the base station shall set this field to the number of LTU Tables minus one included in this message.

If USE_OLD_LTU_TABLE is equal to '0', then the base station shall include NUM_LTU_TABLES + 1 occurrences of the following fields:

LTU_TABLE_ID - LTU Table ID.

The base station shall set this field to the ID of the LTU Table that follows.

NUM_ROWS - Number of configurations associated with the LTU Table identified by LTU_TABLE_ID.

The base station shall set this field to one less than the number of rows of the LTU Table identified by LTU_TABLE_ID.

If USE_OLD_LTU_TABLE is equal to '0', then the base station shall include the NUM_ROWS + 1 occurrences of the following fields:

NBITS_IDX - Number of bits per frame index.

The base station shall set this field to the 4-bit index that specified the number of information bits per supplemental channel frame.

LTU_LEN - Length of the LTU.

The base station shall set this field to the length of an LTU (in units of bits) corresponding to the number of information bits per frame specified by NBITS_IDX. The base station shall set this field to zero to indicate that no LTUs are supported for the number of information bits per frame specified by NBITS_IDX.

USE_OLD-
_LTU_MAPPING - Use the previously downloaded mapping between the channels and LTU Tables.

1		The base station shall include this field only if
2		USE_FLEX_NUM_BITS is equal to '1' and at least one of
3		FSCH0_NBIT_TABLE_ID, FSCH1_NBIT_TABLE_ID,
4		RSCH0_NBIT_TABLE_ID, or RSCH1_NBIT_TABLE_ID is not
5		equal to '0000' (i.e., the base station is to specify the LTU size
6		table for the supplemental channels that are using the
7		flexible rate feature). If this field is included, the base station
8		shall set this field to '1' to indicate that the mobile station is
9		to use the previously downloaded mapping between the
10		channels and LTU Tables. The base station shall set this
11		field to '0', if the following four fields are included in this
12		message.
13	FSCH0_LTU_TAB_ID	- Forward Supplemental Channel LTU Size Table ID.
14		If USE_OLD_LTU_MAPPING is equal to '0', the base station
15		shall include this field. If this field is included, the base
16		station shall set this field to the LTU Table ID to be used for
17		the Forward Supplemental Channel 0. The base station shall
18		set this field to '000' to indicate that the default LTU sizes are
19		to be used (The default LTU size is not applicable to
20		supplemental channels with multiplex options that use
21		MuxPDU Type 5; see [3]).
22	RSCH0_LTU_TAB_ID	- Reverse Supplemental Channel LTU Size Table ID.
23		If USE_OLD_LTU_MAPPING is equal to '0', the base station
24		shall include this field. If this field is included, the base
25		station shall set this field to the LTU Table ID to be used for
26		the Reverse Supplemental Channel 0. The base station shall
27		set this field to '000' to indicate that the default LTU sizes are
28		to be used (The default LTU size is not applicable to
29		supplemental channels with multiplex options that use
30		MuxPDU Type 5; see [3]).
31	FSCH1_LTU_TAB_ID	- Forward Supplemental Channel LTU Size Table ID.
32		If USE_OLD_LTU_MAPPING is equal to '0', the base station
33		shall include this field. If this field is included, the base
34		station shall set this field to the LTU Table ID to be used for
35		the Forward Supplemental Channel 1. The base station shall
36		set this field to '000' to indicate that the default LTU sizes are
37		to be used (The default LTU size is not applicable to
38		supplemental channels with multiplex options that use
39		MuxPDU Type 5; see [3]).
40	RSCH1_LTU_TAB_ID	- Reverse Supplemental Channel LTU Size Table ID.

If USE_OLD_LTU_MAPPING is equal to '0', the base station shall include this field. If this field is included, the base station shall set this field to the LTU Table ID to be used for the Reverse Supplemental Channel 1. The base station shall set this field to '000' to indicate that the default LTU sizes are to be used (The default LTU size is not applicable to supplemental channels with multiplex options that use MuxPDU Type 5; see [3]).

USE_OLD-

_PARTITION_TABLE - Use the previously downloaded Partition Table indicator.

The base station shall include this field only if USE_FLEX_NUM_BITS is equal to '1' and at least one of FFCH_NBIT_TABLE_ID, RFCH_NBIT_TABLE_ID, FDCCH_NBIT_TABLE_ID, or RDCCH_NBIT_TABLE_ID is not equal to '0000'. If this field is included, the base station shall set this field to '1' to indicate that the mobile station is to use the previously downloaded Partition Table. The base station shall set this field to '0' if the fields related to downloading the Partition Table are included in this message.

If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include the following fields

NUM-

_PARTITION_TABLES - Number of partition tables.

If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include this field. If this field is included, the base station shall set this field to one less than the number of Partition Tables corresponding to an FCH or DCCH included in this message.

If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include the NUM_PARTITION_TABLES + 1 occurrences of the following fields:

PARTITION_TABLE_ID - Partition Table ID.

The base station shall set this field to the ID of the Partition Table that follows.

NUM_ROWS - Number of configurations associated with the Partition Table identified by PARTITION_TABLE_ID.

The base station shall set this field to one less than the number of rows of the Partition Table identified by PARTITION_TABLE_ID.

If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include NUM_ROWS + 1 occurrences of the following fields:

1	CATEGORY	-	Category number.
2			The base station shall set this field to the category number of
3			the entry of the Partition Table identified by number of bits
4			per each service as specified below. The base station shall
5			not set this field to '00001' or '00010'. The base station shall
6			place rows of the Partition Table corresponding to the same
7			number of total information bits per frame consecutively.
8			See [3].
9	MUX_HEADER_LEN	-	Multiplex Sublayer Header Length.
10			The base station shall set this field to the length of the
11			multiplex sublayer header corresponding to the entry of the
12			Partition Table identified by number of bits per each service
13			as specified below.
14	MUX_HEADER	-	Multiplex Sublayer Header.
15			The base station shall set this field to the multiplex sublayer
16			header corresponding to the entry of the Partition Table
17			identified by number of bits per each service as specified
18			below.
19	NUM_PARTITIONS	-	Number of partitions.
20			The base station shall set this field to one less than the
21			number of partitions corresponding to each service (including
22			signaling) included in the entry of the Partition Table
23			identified by CATEGORY.
24	If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include		
25	NUM_PARTITIONS + 1 occurrences of the following fields:		
26	SR_ID	-	Service Reference ID.
27			The base station shall set this field to the sr_id of the service
28			(sr_id = '000' for signaling) present in this category.
29	SRV_NUM_BITS	-	Number of bits allocated to the service.
30			The base station shall set this field to the number of bits
31			allocated to the service (including signaling) identified by
32			SR_ID.
33	USE_OLD-		
34	_PART_MAPPING	-	Use the previously downloaded mapping between the
35			channels and Partition Tables.

The base station shall include this field only if USE_FLEX_NUM_BITS is equal to '1' and at least one of FFCH_NBIT_TABLE_ID, RFCH_NBIT_TABLE_ID, FDCCH_NBIT_TABLE_ID, or RDCCH_NBIT_TABLE_ID is not equal to '0000'. If this field is included, the base station shall set this field to '1' to indicate that the mobile station is to use the previously downloaded mapping between the channels and Partition Tables. The base station shall set this field to '0', if the following four fields are included in this message.

FFCH_PART_TAB_ID - Forward Fundamental Channel Partition Table ID.

If USE_OLD_PART_MAPPING is equal to '0', the base station shall include this field. If this field is included, the base station shall set this field to the Partition Table ID to be used for the Forward Fundamental Channel. The base station shall set this field to '000' to indicate that the default number of bits per service is to be used (see MuxPDU Type 1 and 2 Categories and Formats for the FCH and DCCH in [3]). The base station shall set this field to a value other than '000' if the FFCH_NBIT_TABLE_ID field is not set to '0000'.

RFCH_PART_TAB_ID - Reverse Fundamental Channel Partition Table ID.

If USE_OLD_PART_MAPPING is equal to '0', the base station shall include this field. If this field is included, the base station shall set this field to the Partition Table ID to be used for the Reverse Fundamental Channel. The base station shall set this field to '000' to indicate that the default number of bits per service is to be used (see MuxPDU Type 1 and 2 Categories and Formats for the FCH and DCCH in [3]). The base station shall set this field to a value other than '000' if the RFCH_NBIT_TABLE_ID field is not set to '0000'.

FDCCH_PART_TAB_ID - Forward Dedicated Control Channel Partition Table ID.

If USE_OLD_PART_MAPPING is equal to '0', the base station shall include this field. If this field is included, the base station shall set this field to the Partition Table ID to be used for the Forward Dedicated Control Channel. The base station shall set this field to '000' to indicate that the default number of bits per service is to be used (see MuxPDU Type 1 and 2 Categories and Formats for the FCH and DCCH in [3]). The base station shall set this field to a value other than '000' if the FDCCH_NBIT_TABLE_ID field is not set to '0000'.

RDCCH_PART_TAB_ID - Reverse Dedicated Control Channel Partition Table ID.

1 If USE_OLD_PART_MAPPING is equal to '0', the base station
2 shall include this field. If this field is included, the base
3 station shall set this field to the Partition Table ID to be used
4 for the Reverse Dedicated Control Channel. The base station
5 shall set this field to '000' to indicate that the default number
6 of bits per service is to be used (see MuxPDU Type 1 and 2
7 Categories and Formats for the FCH and DCCH in [3]). The
8 base station shall set this field to a value other than '000' if
9 the RDCCH_NBIT_TABLE_ID field is not set to '0000'.

10 RESERVED - Reserved bits.

11 The base station shall add reserved bits as needed in order to
12 make the length of the entire record equal to an integer
13 number of octets. The base station shall set these bits to '0'.
14

3.7.5.21 Multiple Character Extended Display

This information record allows the network to supply supplementary service multiple character display information that may be displayed by the mobile station.

Type-Specific Field	Length (bits)
MC_EXT_DISPLAY_IND	1
DISPLAY_TYPE	7

One or more occurrences of the following record:

DISPLAY_TAG	8
NUM_RECORD	8

NUM_RECORD occurrences of the following record if the DISPLAY_TAG field is not equal to '10000000' or '10000001':

DISPLAY_ENCODING	8
NUM_FIELDS	8

NUM_FIELDS occurrences of the following field:

CHAR _i	Variable
-------------------	----------

RESERVED	0 - 7 (as needed)
----------	-------------------

MC_EXT_DISPLAY_IND - The indicator of Multiple Character Extended Display information record.

The base station shall set this field to '1'.

DISPLAY_TYPE - The type of display.

The base station shall set this field to the DISPLAY_TYPE value shown in Table 3.7.5.16-1 corresponding to the type of display, as defined in [8] Annex D.

DISPLAY_TAG - The indicator of the display information.

There are three types of display tags: mandatory control tags (Blank and Skip), display text tags, and optional control tags, see [8] Annex D.

The base station shall set this field to the DISPLAY_TAG value shown in Table 3.7.5.16-2 corresponding to the type of information contained in the following CHAR_i field, as defined in [8] Annex D.

1	NUM_RECORD	-	The number of records displaying.
2			The base station shall set this field to the number of records
3			of display text.
4	DISPLAY_ENCODING	-	Display encoding.
5			See [30].
6			Support of an encoding method does not imply that the entire
7			encodable character set must be supported. In general, once
8			the supported character set is determined, various subsets of
9			the character set can be supported. If a message is
10			comprised entirely of characters from a supported subset of a
11			character set, it can be displayed. If a message contains an
12			unsupported character of a character set, it can be discarded.
13	NUM_FIELDS	-	Number of occurrences of the CHARi field.
14			The base station shall set this field to the number of
15			characters included in this record.
16	CHARi	-	Character.
17			The base station shall include NUM_FIELDS occurrences of
18			this field, one for each character to be displayed, except for
19			blank and skip.
20	RESERVED	-	Reserved bits.
21			The base station shall add reserved bits as needed in order to
22			make the length of the entire record equal to an integer
23			number of octets. The base station shall set these bits to '0'.
24			

3.7.5.22 Call Waiting Indicator

This information record allows the base station to inform the mobile station that a call waiting call is available. This indicator may be used to suppress the generation of the local dial tone in mobile stations that provide locally generated dial tone.

Type-Specific Field	Length (bits)
CALL_WAITING_INDICATOR	1
RESERVED	7

CALL_WAITING-

_INDICATOR - Call waiting indicator.

The base station shall set this field to a '1' to indicate to the mobile station that a call is waiting. The base station shall set this field to a '0' if the call waiting call is not answered by the mobile station and the call waiting call goes away.

RESERVED - Reserved bits.

The base station shall set this field to '00000000'.

3.7.6 Information Elements

3.7.6.1 Pilot Record Type Specific Fields

If PILOT_REC_TYPE is equal to '000', the Pilot Record Type Specific fields include the following fields:

Field	Length (bits)
TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	4

TD_POWER_LEVEL - TD transmit power level.

The base station or mobile station shall set this field to the TD transmit power level relative to that of the Forward Pilot Channel, as specified in Table 3.7.6.1-1.

Table 3.7.6.1-1. TD Transmit Power Level

TD_POWER_LEVEL	Transmit Power Level
00	9 dB below the Forward Pilot Channel transmit power
01	6 dB below the Forward Pilot Channel transmit power
10	3 dB below the Forward Pilot Channel transmit power
11	Same as the Forward Pilot Channel transmit power

TD_MODE - Transmit Diversity mode.

The base station or mobile station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.6.1-2.

Table 3.7.6.1-2. TD Mode

TD_MODE	Descriptions
00	OTD (Orthogonal Transmit Diversity) mode
01	STS (Space Time Spreading) mode
10-11	Reserved

RESERVED - Reserved bits.

The base station or mobile station shall set this field to '000000'.

If PILOT_REC_TYPE is equal to '001', the base station or mobile station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index.

The base station or mobile station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh Code.

The base station or mobile station shall set this field to the WALSH_LENGTH value shown in Table 3.7.6.1-3 corresponding to the length of the Walsh code for the pilot that is used as the Auxiliary pilot.

Table 3.7.6.1-3. Walsh Code Length

WALSH_LENGTH (binary)	Length of the Walsh Code
'000'	64
'001'	128
'010'	256
'011'	512
'100' – '111'	Reserved

AUX_PILOT_WALSH - Walsh Code for the Auxiliary Pilot.

The base station or mobile station shall set this field to the Walsh code corresponding to the Auxiliary pilot.

RESERVED - Reserved bits.

The base station or mobile station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If PILOT_REC_TYPE is equal to '010', the base station or mobile station shall include the following fields:

Field	Length (bits)
QOF	2
WALSH_LENGTH	3
AUX_TD_WALSH	WALSH_LENGTH+6
AUX_TD_POWER_LEVEL	2
TD_MODE	2
RESERVED	0 to 7 (as needed)

QOF - Quasi-orthogonal function index for the Auxiliary Transmit Diversity Pilot.

The base station or mobile station shall set this field to the index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

WALSH_LENGTH - Length of the Walsh code.

The base station or mobile station shall set this field to the WALSH_LENGTH value shown in 3.7.6.1-3 corresponding to the length of the Walsh code for the pilots that are used as Auxiliary pilot in the transmit diversity mode.

AUX_TD_WALSH - Walsh Code for the Auxiliary Transmit Diversity Pilot.

The base station or mobile station shall set this field to the Walsh code corresponding to the Auxiliary Transmit Diversity Pilot.

AUX_TD-
_POWER_LEVEL - Auxiliary Transmit Diversity Pilot Power Level.

The base station or mobile station shall set this field to the Auxiliary Transmit Diversity Pilot transmit power level relative to that of the Auxiliary Pilot as specified in Table 3.7.6.1-4.

Table 3.7.6.1-4. Auxiliary Transmit Diversity Pilot Transmit Power Level

AUX_TD_POWER_LEVEL	Transmit Power Level
00	9 dB below the Auxiliary Pilot Channel transmit power
01	6 dB below the Auxiliary Pilot Channel transmit power
10	3 dB below the Auxiliary Pilot Channel transmit power
11	Same as the Auxiliary Pilot Channel transmit power

TD_MODE - Transmit Diversity mode.

The base station or mobile station shall set this field to the Transmit Diversity mode, as specified in Table 3.7.6.1-2.

RESERVED - Reserved bits.

The base station or mobile station shall set all the bits of this field to '0' to make the entire record octet-aligned.

If PILOT_REC_TYPE is equal to '011', the base station or mobile station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3

SR3_PRIMARY_PILOT – Primary SR3 pilot.

The base station or mobile station shall set this field to the value shown in Table 3.7.6.1-5 corresponding to the position of the primary SR3 pilot.

Table 3.7.6.1-5. The Position of the Primary SR3 Pilot

SR3_PRIMARY_PILOT (Binary)	Position
00	The primary pilot is on the lowest SR3 frequency
01	The primary pilot is on the center SR3 frequency
10	The primary pilot is on the highest SR3 frequency
11	Reserved

SR3_PILOT_POWER1 – Relative power level between the primary SR3 pilot and the pilot on the lower frequency of the two remaining SR3 frequencies.

The base station or mobile station shall set this field to the value shown in Table 3.7.6.1-6 corresponding to the power level of the primary pilot with respect to the pilot on the lower frequency of the two remaining SR3 frequencies.

Table 3.7.6.1-6. Pilot Transmission Power

SR3_PILOT_POWER1 (Binary)	Relative Transmission Power
000	0
001	1dB
010	2dB
011	3dB
100	4dB
101	5dB
110	6dB
111	7dB

SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

The base station or mobile station shall set this field to the value shown in Table 3.7.6.1-6 corresponding to the power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

If PILOT_REC_TYPE is equal to '100', the base station or mobile station shall include the following fields:

Field	Length (bits)
SR3_PRIMARY_PILOT	2
SR3_PILOT_POWER1	3
SR3_PILOT_POWER2	3
QOF	2
WALSH_LENGTH	3
AUX_PILOT_WALSH	WALSH_LENGTH+6
ADD_INFO_INCL1	1
QOF1	0 or 2
WALSH_LENGTH1	0 or 3
AUX_PILOT_WALSH1	0 or WALSH_LENGTH1+6
ADD_INFO_INCL2	1
QOF2	0 or 2
WALSH_LENGTH2	0 or 3
AUX_PILOT_WALSH2	0 or WALSH_LENGTH2+6
RESERVED	0 – 7 (as needed)

1

2 SR3_PRIMARY_PILOT – Primary SR3 pilot.

3 The base station or mobile station shall set this field to the
4 value shown in Table 3.7.6.1-5 corresponding to the position
5 of the primary SR3 pilot.

6 SR3_PILOT_POWER1 – Relative power level between the primary SR3 pilot and the
7 pilot on the lower frequency of the two remaining SR3
8 frequencies.

9 The base station or mobile station shall set this field to the
10 value shown in Table 3.7.6.1-6 corresponding to the power
11 level of the primary pilot with respect to the pilot on the lower
12 frequency of the two remaining SR3 frequencies.

13 SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the
14 pilot on the higher frequency of the two remaining SR3
15 frequencies.

1		The base station or mobile station shall set this field to the
2		value shown in Table 3.7.6.1-6 corresponding to the power
3		level of the primary pilot with respect to the pilot on the
4		higher frequency of the two remaining SR3 frequencies.
5	QOF	- Quasi-orthogonal function index.
6		The base station or mobile station shall set this field to the
7		index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2
8		of [2]) on the frequency of the primary pilot.
9	WALSH_LENGTH	- Length of the Walsh Code.
10		The base station or mobile station shall set this field to the
11		WALSH_LENGTH value shown in Table 3.7.6.1-3
12		corresponding to the length of the Walsh code for the pilot that
13		is used as the Auxiliary pilot on the frequency of the primary
14		pilot.
15	AUX_PILOT_WALSH	- Walsh Code for the Auxiliary Pilot.
16		The base station or mobile station shall set this field to the
17		Walsh code corresponding to the Auxiliary pilot on the
18		frequency of the primary pilot.
19	ADD_INFO_INCL1	- Additional information included for the pilot on the lower
20		frequency of the two remaining SR3 frequencies.
21		If the additional information for the pilot on the lower
22		frequencies of the two remaining SR3 frequencies is the
23		same as pilot on the primary frequency, the base station or
24		mobile station shall set this field to '0'; otherwise, the base
25		station or mobile station shall set this field to '1'.
26	QOF1	- Quasi-orthogonal function index for the pilot on the lower
27		frequency of the two remaining SR3 frequencies.
28		If ADD_INFO_INCL1 is set to '0', the base station or mobile
29		station shall omit this field; otherwise, the base station or
30		mobile station shall set this field as follows:
31		The base station or mobile station shall set this field to the
32		index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2
33		of [2]) on the lower frequency of the two remaining SR3
34		frequencies.
35	WALSH_LENGTH1	- Length of the Walsh Code for the pilot on the lower frequency
36		of the two remaining SR3 frequencies.
37		If ADD_INFO_INCL1 is set to '0', the base station or mobile
38		station shall omit this field; otherwise, the base station or
39		mobile station shall set this field as follows:

1		The base station or mobile station shall set this field to the
2		WALSH_LENGTH value shown in Table 3.7.6.1-3
3		corresponding to the length of the Walsh code for the pilot that
4		is used as the Auxiliary pilot on the lower frequency of the
5		two remaining SR3 frequencies.
6	AUX_PILOT_WALSH1	- Walsh Code for the Auxiliary Pilot on the lower frequency of
7		the two remaining SR3 frequencies.
8		If ADD_INFO_INCL1 is set to '0', the base station or mobile
9		station shall omit this field; otherwise, the base station or
10		mobile station shall set this field as follows:
11		The base station or mobile station shall set this field to the
12		Walsh code corresponding to the Auxiliary pilot on the lower
13		frequency of the two remaining SR3 frequencies.
14	ADD_INFO_INCL2	- Additional information included for the pilot on the higher
15		frequency of the two remaining SR3 frequencies.
16		If the additional information for the pilot on the higher
17		frequencies of the two remaining SR3 frequencies is the
18		same as pilot on the primary frequency, the base station or
19		mobile station shall set this field to '0'; otherwise, the base
20		station or mobile station shall set this field to '1'.
21	QOF2	- Quasi-orthogonal function index for the pilot on the higher
22		frequency of the two remaining SR3 frequencies.
23		If ADD_INFO_INCL2 is set to '0', the base station or mobile
24		station shall omit this field; otherwise, the base station or
25		mobile station shall set this field as follows:
26		The base station or mobile station shall set this field to the
27		index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2
28		of [2]) on the higher frequency of the two remaining SR3
29		frequencies.
30	WALSH_LENGTH2	- Length of the Walsh Code for the pilot on the higher
31		frequency of the two remaining SR3 frequencies.
32		If ADD_INFO_INCL2 is set to '0', the base station or mobile
33		station shall omit this field; otherwise, the base station or
34		mobile station shall set this field as follows:
35		The base station or mobile station shall set this field to the
36		WALSH_LENGTH value shown in Table 3.7.6.1-3
37		corresponding to the length of the Walsh code for the pilot that
38		is used as the Auxiliary pilot on the higher frequency of the
39		two remaining SR3 frequencies.

1	AUX_PILOT_WALSH2	-	Walsh Code for the Auxiliary Pilot on the higher frequency of
2			the two remaining SR3 frequencies.
3			If ADD_INFO_INCL2 is set to '0', the base station or mobile
4			station shall omit this field; otherwise, the base station or
5			mobile station shall set this field as follows:
6			The base station or mobile station shall set this field to the
7			Walsh code corresponding to the Auxiliary pilot on the higher
8			frequency of the two remaining SR3 frequencies.
9	RESERVED	-	Reserved bits.
10			The base station or mobile station shall set all the bits of this
11			field to '0' to make the entire record octet-aligned.
12			
13			