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

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PREFACE

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

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

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

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

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

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

CONTENTS

FIGURES

FIGURES

FIGURES

FIGURES

TABLES

TABLES

TABLES

TABLES

TABLES

TABLES

TABLES

TABLES

FOREWORD

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

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

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

Annex A. Reserved.

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

Annex C. Reserved.

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

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

Annex F. Mobile Station Database. This informative annex describes a database model 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 mod y indicates the remainder after dividing x by y: $x \bmod y = x - (y \times \lfloor x/y \rfloor)$.

NOTES

10. While communication between Layer 3 and Layer 2 is specified, there is no 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 TI.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.

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.

Auxiliary Transmit Diversity Pilot Channel. A pilot channel, counterpart to an Auxiliary Pilot Channel, that is transmitted by a CDMA base station from the non-primary antenna when orthogonal transmit diversity is employed.

Bad Frames. Frames classified as insufficient frame quality or as 9600 bps primary traffic only, with bit errors. See also Good Frames.

Band Class. A set of CDMA frequency assignments and a numbering scheme for these channels. See also CDMA Frequency Assignment.

Base Station. A fixed station used for communicating with mobile stations. Depending upon the context, the term base station may refer to a cell, a sector within a cell, an MSC, or other part of the cellular system. See also MSC.

Base Station Authentication Response (AUTHBS). An 18-bit pattern generated by the authentication algorithm. AUTHBS is used to confirm the validity of base station orders to update the Shared Secret Data.

Base Station Random Variable (RANDBS). A 32-bit random number generated by the mobile station for authenticating base station orders to update the Shared Secret Data.

Blank-and-Burst. The preemption of an entire Traffic Channel frame's primary traffic by signaling traffic or secondary traffic. Blank-and-burst is performed on a frame-by-frame basis.

BLOB. Block of Bits.

bps. Bits per second.

Broadcast Control Channel. A code channel in a Forward CDMA Channel used for transmission of control information from a base station to a mobile station.

Broadcast User Zone. A user zone that is identified to the mobile station by means of broadcast messages. It corresponds to the RF coverage area of a particular set of cells and sectors. See also CDMA Tiered Services and Mobile-Specific User Zone.

Call Disconnect. The process that releases the resources handling a particular call. The disconnect process begins either when the mobile station user indicates the end of the call by generating an on-hook condition or other call-release mechanism, or when the base station initiates a release.

Call History Parameter (COUNT). A modulo-64 event counter maintained by the mobile station and Authentication Center that is used for clone detection.

Candidate Frequency. The frequency, either analog or CDMA, for which the base station specifies a search set, using a *Candidate Frequency Search Request Message.*

Candidate Set. The set of pilots that have been received with sufficient strength by the mobile station to be successfully demodulated, but have not been placed in the Active Set by the base station. See also Active Set, Neighbor Set, and Remaining Set.

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 Enhaned Access header, and optionally Enhaned 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.

Erasure 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.

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

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

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

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

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

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

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

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

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

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

Forward Transmit Diversity Pilot Channel. A pilot channel transmitted by a CDMA base 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.

Home Location Register (HLR). The location register to which a MIN/IMSI is assigned for record purposes such as subscriber information.

Home System. The cellular or PCS system in which the mobile station subscribes for service.

Hopping Pilot Beacon. A pilot beacon that changes CDMA Frequency periodically to simulate multiple base stations operating on different frequencies. The transmission of the hopping pilot beacon is discontinuous on any CDMA Channel.

Idle Handoff. The act of transferring reception of the Paging Channel, Broadcast Control Channel or the Forward Common Control Channel from one base station to another, when the mobile station is in the *Mobile Station Idle State*.

Implicit Registration. A registration achieved by a successful transmission of an origination or page response on the r-csch.

IMSI. See International Mobile Station Identity.

IMSI_M. MIN-based IMSI using the lower 10 digits to store the MIN.

IMSI_O. Operational value of IMSI used by the mobile station for operation with the base station.

IMSI_T. True IMSI not associated with MIN. This could be 15 digits or fewer.

Interleaving. The process of permuting a sequence of symbols.

International Mobile Station Identity (IMSI). A method of identifying stations in the land mobile service as specified in [18].

kHz. Kilohertz (10^3 Hertz).

ksps. Kilo-symbols per second (10^3 symbols per second).

LAC. See Link Access Control.

Layering. A method of organization for communication protocols in which the transmitted or received information is transferred in pipeline fashion, within each station, in well-defined encapsulated data units between otherwise decoupled processing entities (“layers”). A layer is defined in terms of its communication protocol to a peer layer in another entity and the services it offers to the next higher layer in its own entity.

Layer 1. Layer 1 provides for the transmission and reception of radio signals between the base station and the mobile station. Also see Physical Layer.

Layer 2. Layer 2 provides for the correct transmission and reception of signaling messages, including partial duplicate detection. Layer 2 makes use of the services provided by Layer 1. See also Layering and Layer 3.

Layer 3. Layer 3 provides the control messaging for the cellular or PCS telephone system. Layer 3 originates and terminates signaling messages according to the semantics and timing of the communication protocol between the base station and the mobile station. 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.

Message. A data structure that conveys control information or application information. A message consists of a length field (MSG_LENGTH), a message body (the part conveying the information), and a CRC.

Message Body. The part of the message contained between the length field (MSG_LENGTH) and the CRC field.

Message Capsule. A sequence of bits comprising a single message and padding. The padding always follows the message and may be of zero length.

Message Control and Status Block. In this document, a parameter block representing the PCI being transferred between Layer 3 and Layer 2.

Message CRC. The CRC check associated with a message. See also Cyclic Redundancy Code.

Message Field. A basic named element in a message. A message field may consist of zero or more bits.

Message Record. An entry in a message consisting of one or more fields that repeats in the message.

MHz. Megahertz (10^6 Hertz).

MIN. See Mobile Identification Number.

MNC. See Mobile Network Code.

Mobile Country Code (MCC). A part of the E.212 IMSI identifying the home country. See [18].

Mobile Directory Number. A dialable directory number that is not necessarily the same as the mobile station's air interface identification, i.e., MIN, IMSI_M or IMSI_T.

Mobile Identification Number (MIN). The 34-bit number that is a digital representation of the 10-digit number assigned to a mobile station.

Mobile Network Code (MNC). A part of the E.212 IMSI identifying the home network within the home country. See [18].

Mobile Protocol Capability Indicator (MPCI). A 2-bit field used to indicate the mobile station's capabilities.

Mobile-Specific User Zone. A user zone that is identified by the mobile station. The mobile station may consider parameters such as the identity of the serving system, cell, and sector, and the geographic location of that station in making the determination. See also CDMA Tiered Services, User Zone, Broadcast User Zone, Active User Zone, and Passive User Zone.

Mobile Station. A station in the Public Cellular Radio Telecommunications Service intended to be used while in motion or during halts at unspecified points. Mobile stations 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.

NMSI. See National Mobile Station Identity.

Non-Autonomous Registration. A registration method in which the base station initiates registration. See also Autonomous Registration.

Non-Slotted Mode. An operation mode of the mobile station in which the mobile station continuously monitors the Paging Channel, or the Forward Common Control Channel/ Broadcast Control Channel.

ns. Nanosecond (10^{-9} second).

NULL. Any value that is not in the specified range of a field.

Null Traffic Channel Data. One or more frames of a specified data sequence sent at the lowest agreed-upon rate of the negotiated radio configuration. Null Traffic Channel data may be sent when there is no primary, secondary, or signaling traffic available. Null Traffic Channel data serves to maintain the connectivity between the mobile station and the base station.

Number Assignment Module (NAM). A set of MIN/IMSI-related parameters stored in the mobile station.

Numeric Information. Numeric information consists of parameters that appear as numeric fields in messages exchanged by the base station and the mobile station and information used to describe the operation of the mobile station.

Optional Field. A field defined within a message structure that is optionally transmitted to the message recipient.

Order. A type of message that contains control codes for either the mobile station or the base station.

Ordered Registration. A registration method in which the base station orders the mobile station to send registration related parameters.

Orthogonal Transmit Diversity (OTD). An optional method of transmission of the Forward CDMA Channel that uses two antennas, each transmitting a fraction of the code symbols. It can be used to enhance performance in the presence of multipath fading radio propagation.

OTD. See Orthogonal Transmit Diversity

Overhead Message. A message sent by the base station on the Paging Channel or the Broadcast Control Channel to communicate base-station-specific and system-wide information to mobile stations.

Overload Class (OLC). The means used to control system access by mobile stations, typically in emergency or other overloaded conditions. Mobile stations are assigned one (or more) of sixteen overload classes. Access to the CDMA system can then be controlled on a per class basis by persistence values transmitted by the base station.

PACA. Priority Access and Channel Assignment. See PACA Call.

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

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

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

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

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

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

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

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

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

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

PCI. See Protocol Control Information.

PCS. See Personal Communications Services.

PCSC. See Personal Communications Switching Center.

PCS System. See Personal Communications Services System.

PDU. See Protocol Data Unit.

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

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

Personal Communications Switching Center (PCSC). See Mobile Switching Center (MSC).

Physical Channel. A communication path between stations, described in terms of the RF characteristics such as coding, power control policies, etc.

Physical Layer. The part of the communication protocol between the mobile station and the base station that is responsible for the transmission and reception of data. The physical layer in the transmitting station is presented a frame by the multiplex sublayer and transforms it into an over-the-air waveform. The physical layer in the receiving station transforms the waveform back into a frame and presents it to the multiplex sublayer above it.

Pilot Beacon. A transmit-only base station that broadcasts a Pilot Channel, a Sync Channel, optionally a Paging Channel or a Broadcast Control Channel, but no Forward Traffic Channels. The mobile station measures the pilot beacon to assist in CDMA hard handoffs and inter-frequency idle-mode handoffs.

Pilot Channel. A non-data-bearing signal transmitted by a CDMA station. See Forward Pilot Channel, Transmit Diversity Pilot Channel, Auxiliary Pilot Channel, Auxiliary Transmit Diversity Pilot Channel, and Reverse Pilot Channel.

Pilot PN Chip. One bit, or bit pair, of a pilot PN sequence, or the time interval corresponding thereto.

Pilot PN Sequence. A pair of modified maximal length PN sequences used to spread the quadrature components of a CDMA Channel.

Pilot PN Sequence Offset. The time offset of a Forward Pilot Channel from CDMA System time, as transmitted by the base station, expressed modulo the pilot period.

Pilot PN Sequence Offset Index. The pilot PN sequence offset in units of 64 PN chips of a Forward Pilot Channel, relative to the zero offset pilot PN sequence.

Pilot Strength. The ratio of pilot power to total power in the signal bandwidth of a CDMA Forward or Reverse Channel. See also E_C/I_O.

PN. Pseudonoise.

PN Chip. One bit in a PN sequence, or the time duration of such a bit. It corresponds to the smallest modulation interval in a CDMA system.

PN Sequence. Pseudonoise sequence. A deterministic, periodic binary sequence having limited statistical similarity to a Bernoulli (coin-tossing).

Power Control Bit. A bit sent on the Forward Power Control Subchannel or Reverse Power Control Subchannel to signal the mobile station or base station to increase or decrease its transmit power.

Power Control Group. A 1.25 ms interval on the Forward Traffic Channel and the Reverse Traffic Channel. See also Power Control Bit.

Power-Down Registration. An autonomous registration method in which the mobile 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

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

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

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

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

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

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

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

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

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

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

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

UTC. Universal Temps Coordiné. See Universal Coordinated Time.

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

Walsh Chip. See [2].

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

Wireless Local Loop. Wireless alternative access mechanism to provide standard telecommunication services using standard wireline terminal via a radio link between the 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.*

ACCESS_HO_ALLOWED$_S$ – Handoff permitted to the corresponding neighbor base station while in the *System Access State*.

ACCESS_HO_LIST – List of pilots to which access handoff or access probe handoff is permitted.

ACC_HO_LIST_UPD$_S$ – Access handoff list update permitted indicator.

ACCESS_HO_MSG_RSP$_S$ – Access handoff permitted in the *System Access State* between the time that the mobile station receives a message and responds to that message.

ACCESS_PROBE_HO$_S$ – Access probe handoff permitted during an access attempt in the *Mobile Station Origination Attempt Substate* or the *Page Response Substate*.

ACC_MSG_SEQ$_S$ – Last received *Access Parameters Message* or *Enhanced Access Parameters Message* sequence number.

ACC_PROBE_HO_OTHER_MSG$_S$ – Access probe handoff permitted for Access Channel messages other than the *Origination Message* and the *Page Response Message*.

ACH_ACC_TMO$_S$ – Access Channel acknowledgment timeout, in units of 80 ms.

ACK_WAITING$_S$[i] – Acknowledgment status indicator for message sequence number i. Set to YES if an acknowledgment is pending for the message; otherwise, set to NO.

ADD_INTERCEPT$_S$ – The intercept in the inequality criterion for adding a pilot to the Active Set.

AGE$_S$ – Neighbor list age. For each pilot in the Neighbor Set, the mobile station increments this counter each time a *Neighbor List Update Message* or an *Extended Neighbor List Update Message* is received. When AGE$_S$ exceeds NGBHR_MAX_AGE, the pilot is deleted from the Neighbor Set.

ALIGN_TIMING_USED$_S$ – Indicates whether the mobile station aligns the times of visits away from the Serving Frequency, as requested by the base station, in the periodic search procedures.

ANALOG_CHAN$_S$ – Analog channel number for CDMA-to-analog handoff.

ANALOG_NGHBR_LIST – List containing information about neighboring analog systems.

AN_CHAN_TYPE$_S$ – Analog voice channel type.

ASSIGNED_QPAGECH$_S$ – Assigned Quick Paging Channel number.

AUTH$_S$ – Current authentication mode.

AUTO_MSG_INTERVAL – Autonomous message interval.

AUTO_MSG_SUPPORTED – Autonomous message supported indicator.

BAD_FRAMES$_S$ – Bad frames count. The number of received bad frames.

BASE_CLASS$_S$ – Base station class of the current base station.

BASE_ID$_S$ – Base station identification of the current base station.

BASE_LAT$_S$ – Latitude of the current base station, in units of 0.25 seconds.

BASE_LONG$_S$ – Longitude of the current base station, in units of 0.25 seconds.

BEGIN_PREAMBLE$_S$ – A stored variable in the mobile station that contains the size of the preamble that shall be transmitted on a Reverse Supplemental Code Channel at the beginning of a Reverse Supplemental Code Channel transmission.

BKOFF$_S$ – Access Channel probe sequence backoff range.

BRAT$_S$ – Data rate of the Broadcast Control Channel.

BYPASS_ALERT_ANSWER$_S$ – Mobile station termination bypass indicator. This is set to '1' if the mobile station is to bypass the *Waiting for Order Substate* and the *Waiting for Mobile Station Answer Substate*, and proceed directly to the *Conversation Substate* when Layer 3 receives a *forward dedicated channel-acquired* indication from Layer 2.

CDMABAND$_S$. CDMA band class. The CDMA band class currently used by the mobile station.

CDMACH$_S$ – CDMA Channel number. The CDMA Channel number currently used by the mobile station.

CF_CDMABAND$_S$ – Candidate Frequency CDMA band class. The CDMA band class specified in the *Candidate Frequency Search Request Message.*

CF_CDMACH$_S$ – Candidate Frequency CDMA Channel number. The CDMA Channel number specified in the *Candidate Frequency Search Request Message.*

CF_PILOT_INC$_S$ – PILOT_INC to be used by the mobile station after an inter-frequency hard handoff to the CDMA Candidate Frequency is successfully completed.

CF_SEARCH_PRIORITY_INCL$_S$ – Candidate Frequency neighbor pilots' search priority included indicator.

CF_SRCH_OFFSET_INCL$_S$ – Candidate Frequency neighbor pilot search window offset included indicator.

CF_SRCH_WIN_NGHBR_INCL$_S$ – Candidate Frequency neighbor pilots' search window included indicator.

CF_SRCH_WIN_N$_S$ – Search window size for the Candidate Frequency Search Set.

CF_SRCH_WIN_R$_S$ – Search window size to be used for the Remaining Set after an inter-frequency hard handoff to the CDMA Candidate Frequency is successfully completed.

CF_T_ADD$_S$ – Pilot detection threshold to be used on the CDMA Candidate Frequency. The stored value is a positive value in units of 0.5 dB.

CH_INDs **–** A two-bit physical channel indicator, based on the currently established physical channels. The least significant bit denotes the Fundamental Channel, and the most significant bit denotes the Dedicated Control Channel.

CHAN_LST_MSG_SEQ$_S$ – *CDMA Channel List Message* sequence number.

CODE_CHAN_LIST – Code Channel List. A descriptive structure used to manage the Forward Fundamental Channel, and Forward Supplemental Code Channels, if any, associated with the mobile station's Active Set.

COMPLETE_PUF_FRAME$_S$ – Number of power control groups required to make the PUF probe an integer number of frames.

COMPLETE_SEARCH$_S$ – Flag to indicate if the mobile station is to complete the search of the Candidate Frequency Search Set after it has determined that the inter-frequency handoff attempt to the CDMA Candidate Frequency is unsuccessful.

CONFIG_MSG_SEQ$_S$ – Current message sequence number for the *System Parameters Message, Neighbor List Message, Extended Neighbor List Message, General Neighbor List Message, CDMA Channel List Message, Extended System Parameters Message, Global Service Redirection Message, Private Neighbor List Message, User Zone Identification Message, Extended CDMA Channel List Message, Extended Global Service Redirection Message.*

COUNTER_ENABLED$_S$ – Timer-based registration indicator. Set to YES if timer-based registration is enabled; otherwise, set to NO.

CURR_ACC_MSG_SEQ – Current *Access Parameter Message* or *Enhanced Access Parameters Message* sequence number.

CURRENT_ACTIVE_PILOT$_S$ – Identifies the current pilot in the Active Set during an access attempt.

CURRENT_PUF_PROBE$_S$ – Number of the next PUF probe to be transmitted within the PUF attempt.

DAYLT$_S$ – Daylight Savings Time indicator.

DECORR – Hashing function input used to decorrelate hashing function applications for the same mobile station.

DEFAULT_CONFIG$_S$ – Mobile station current default configuration.

DELETE_FOR_TMSI$_S$ – A storage variable in the mobile station that indicates whether the mobile station should delete its current TMSI if the TMSI was assigned in a different TMSI zone.

DIFF_RX_PWR_THRESH$_S$ – Threshold for the difference between the received power on the Serving Frequency and the received power on the CDMA Candidate Frequency for the mobile station to search for pilots on the CDMA Candidate Frequency.

DISTANCE – Distance from registered base station to current base station, used for distance-based registration.

DROP_INTERCEPT$_S$ – The intercept in the inequality criterion for dropping a pilot from the Active Set.

DSCC$_S$ – Digital supervisory color code.

DTX_S – Discontinuous transmission mode for analog channel assignment and CDMA-to-analog handoff.

$EACH\_ACC\_TMO_S$ – Enhanced Access Channel acknowledgment timeout, in units of 20 ms.

$EACH\_SLOT_S$ – See [2].

$EACH\_SLOT\_OFFSET1_S$ – See [2].

$EACH\_SLOT\_OFFSET2_S$ – See [2].

$EC\_IO\_THRESH_S$ – Pilot E_C/I_O threshold used for system reselection.

EC_THRESH_S – Pilot power threshold used for system reselection.

$ENCRYPT\_MODE_S$ – Current message encryption mode.

EXCL_P_REV_MS – Exclude from redirection by MOB_P_REV indicator.

$EXT\_NGHBR\_LST\_MSG\_SEQ_S$ – *Extended Neighbor List Message* sequence number.

$EXT\_CHAN\_LST_S$ – *Extended CDMA Channel List Message* sent indicator.

$EXT\_CHAN\_LST\_MSG\_SEQ_S$ – *Extended CDMA Channel List Message* sequence number.

$EXT\_GLOBAL\_REDIRECT_S$ – *Extended Global Service Redirection Message* sent indicator.

$EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_S$ – *Extended Global Service Redirection Message* sequence number.

$EXT\_SYS\_PARAMETER_S$ – *Extended System Parameters Message* sent indicator.

$EXT\_SYS\_PAR\_MSG\_SEQ_S$ – *Extended System Parameters Message* sequence number.

$FCCCH_S$ – Current Forward Common Control Channel number.

$FIRST\_ACTIVE\_PILOT_S$ – While the mobile station is in the *System Access State*, identifies the pilot to which the first access probe was transmitted, upon entering the *System Access State*.

$FOR\_DURATION_S$ – A stored variable in the mobile station that contains the duration (in units of 80 ms) of a forward Supplemental Code Channel transmission that begins at time $FOR\_START\_TIME_S$.

$FOR\_FCH\_RC_S$ – Forward Fundamental Channel Radio Configuration.

$FOR\_FRAME\_40\_MAX\_RATE_S$ – The maximum data rate for the mobile station's transmission at 40 ms frame length on the Forward Supplemental Channel.

$FOR\_FRAME\_80\_MAX\_RATE_S$ – The maximum data rate for the mobile station's transmission at 80 ms frame length on the Forward Supplemental Channel.

$FOR\_LINKED\_HDM\_SEQ_S$ – Storage variable containing the most recent forward sequence number of the *General Handoff Direction Message* to which a *Supplemental Channel*

Assignment Message forward assignment was linked.

FOR_NID_REG$_S$ – Foreign NID roamer autonomous registration enable.

FOR_RC$_S$ – Forward Channel Radio Configuration.

FOR_SCH_DURATION$_S$ – A stored variable in the mobile station which contains the duration of a forward Supplemental Channel transmission which begins at time FOR_SCH_START_TIME$_S$.

FOR_SCH_FRAME_LENGTH$_S$ – The Forward Supplemental Channel frame length.

FOR_SCH_START_TIME$_S$ – A stored variable in the mobile station which contains the System Time, in units of time specified by START_TIME_UNIT$_S$, (modulo 32) at which the mobile station shall start (or resume) processing Forward Supplemental Channels.

FOR_SID_REG$_S$ – Foreign SID roamer autonomous registration enable.

FOR_START_TIME$_S$ – A stored variable in the mobile station that contains the System Time, in units of 80 ms, (modulo 64) at which the mobile station shall start (or resume) processing Forward Supplemental Code Channels.

FPC_DCCH_CURR_SETPT$_S$ – Current power control subchannel outer loop setpoint for the Forward Dedicated Control Channel.

FPC_DCCH_FER$_S$ – Target frame error rate for the Forward Dedicated Control Channel.

FPC_DCCH_MAX_SETPT$_S$ – Maximum value of the power control subchannel outer loop setpoint for the Forward Dedicated Control Channel.

FPC_DCCH_MIN_SETPT$_S$ – Minimum value of the power control subchannel outer loop setpoint for the Forward Dedicated Control Channel.

FPC_DELTA_SCH_SETPT$_S$ – The difference between the Fundamental Channel current power control subchannel outer loop setpoint and the Supplemental Channel current power control subchannel outer loop setpoint.

FPC_DELTA_SETPT$_S$ – The difference between the Fundamental Channel current power control subchannel outer loop setpoint and the Dedicated Control Channel current power control subchannel outer loop setpoint.

FPC_FCH_CURR_SETPT$_S$ – Current power control subchannel outer loop setpoint for the Forward Fundamental Channel.

FPC_FCH_FER$_S$ – Target frame error rate for the Forward Fundamental Channel.

FPC_FCH_MAX_SETPT$_S$ – Maximum value of the power control subchannel outer loop setpoint for the Forward Fundamental Channel.

FPC_FCH_MIN_SETPT$_S$ – Minimum value of the power control subchannel outer loop setpoint for the Forward Fundamental Channel.

FPC_MODE$_S$ – Forward power control operating mode.

FPC_MODE_NO_SCH$_S$ – Forward power control operating mode except during the forward Supplemental Channel assignment interval.

FPC_MODE_SCH$_S$ – Forward power control operating mode during the forward Supplemental Channel assignment interval.

FPC_PRI_CHAN$_S$ – Primary power control subchannel measured channel.

FPC_SEC_CHAN$_S$ – Index of Forward Supplemental Channel to be measured by the secondary power control subchannel.

FPC_SCH_CURR_SETPT$_S$[i] – Current power control subchannel outer loop setpoint for Forward Supplemental Channel i.

FPC_SCH_FER$_S$[i] – Target frame error rate for Forward Supplemental Channel i.

FPC_SCH_MAX_SETPT$_S$[i] – Maximum value of the power control subchannel outer loop setpoint for Forward Supplemental Channel i.

FPC_SCH_MIN_SETPT$_S$[i] – Minimum value of the power control subchannel outer loop setpoint for Forward Supplemental Channel i.

FPC_SETPT_THRESH$_S$ – Power control subchannel outer loop setpoint report threshold for the Dedicated Control Channel.

FPC_SETPT_THRESH_SCH$_S$ – Power control subchannel outer loop setpoint report threshold for the Supplemental Channel.

FRAME_OFFSET$_S$ – Current Traffic Channel frame offset, in units of 1.25 ms.

GEN_NGHBR_LST_MSG_SEQ$_S$ – *General Neighbor List Message* sequence number.

GLOBAL_REDIRECT$_S$ – *Global Service Redirection Message* sent indicator.

GLOB_SERV_REDIR_MSG_SEQ$_S$ – *Global Service Redirection Message* sequence number.

GRANTED_MODE$_S$ – Mobile station current granted mode.

HASH_KEY – Hashing function input that determines the return value. Derived from IMSI_O.

HDM_SEQ$_S$ – Last received *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message* sequence number.

HOME_REG$_S$ – Home (non-roaming) autonomous registration enable.

IGNORE_SCAM$_S$ – Identifies whether a mobile station will process the reverse supplemental channel assignment portion of the subsequent Supplemental Channel Assignment Message.

IMSI_11_12$_S$ – The 11th and 12th digits of the IMSI used for address matching.

IMSI_O_ADDR_NUM$_S$- The number of digits in the NMSI of the Operational IMSI (IMSI_O) minus four.

IMSI_O_S$_S$ – The last 10-digits of Operational IMSI (IMSI_O).

IMSI_O_11_12$_S$ – The 11th and 12th digits of the Operational IMSI (IMSI_O).

INIT_PWR$_S$ – Initial power offset for Access Channel probes.

LC_STATE$_S$ – Long code state obtained from the *Sync Channel Message*.

LP_SEC$_S$ – Leap seconds count (offset of CDMA system time from UTC).

LTM_OFF$_S$ – Local time offset from UTC, in units of 15 minutes.

MAX_CAP_SZ$_S$ – Maximum number of Access Channel or *Enhanced Access Channel* frames in an Access Channel message capsule, less 3.

MAX_NUM_ALT_SO$_S$ – The maximum number of alternative service option numbers that the mobile station is allowed to include in the *Origination Message* or in the *Page Response Message*.

MAX_NUM_PROBE_HO$_S$ – The maximum number of times that a mobile station is permitted to perform an access probe handoff.

MAX_PWR_PUF$_S$ – Maximum number of PUF probes to be transmitted at maximum mobile station output power during a PUF attempt.

MAX_REQ_SEQ$_S$ – Maximum number of access probe sequences for an Access Channel or Enhanced Access Channel request.

MAX_RSP_SEQ$_S$ – Maximum number of access probe sequences for an Access Channel or Enhanced Access Channel response.

MAX_SLOT_CYCLE_INDEX$_S$ – Maximum value of the slot cycle index allowed by the current base station.

MCC$_S$ – The Mobile Country Code used for address matching.

MCC_O$_S$ – The Mobile Country Code of IMSI_O.

MC_RR_PAR_MSG_SEQ$_S$ – *MC-RR System Parameters Message* sequence number.

MEM$_S$ – Analog message encryption mode for CDMA-to-analog handoff.

MIN_PILOT_EC_IO_THRESH$_S$ – Threshold for total E_C/I_O of pilots in the Serving Frequency Active Set used in the Periodic Serving Frequency Pilot Report Procedure.

MIN_PILOT_PWR_THRESH$_S$ – Threshold for total E_C of pilots in the Serving Frequency Active Set used in the Periodic Serving Frequency Pilot Report Procedure.

MIN_P_REV$_S$ – Minimum mobile station protocol revision level required for access to the CDMA system.

MIN_TOTAL_PILOT_EC_IO$_S$ – Total pilot strength threshold for the mobile station to attempt to demodulate the Forward Traffic Channel on the CDMA Candidate Frequency.

MOB_QOS$_S$ – Indicator of whether the mobile station is allowed to request QoS settings in

the *Origination Message*.

MOB_TERM$_S$ – Mobile station termination indicator. Set to '1' if the mobile station will accept mobile station terminated calls in its current roaming status.

MSG_PSIST$_S$ – Persistence modifier for Access Channel message and Enhanced Access data transmissions.

MS_LAT$_S$ – The latitude of the mobile station as estimated by the base station.

MS_LOC_TSTAMP$_S$ – The time corresponding to the estimate of mobile station's latitude and longitude.

MS_LONG$_S$ – The longitude of the mobile station as estimated by the base station.

MULT_NIDS$_S$ – Multiple NID storage indicator. Set to '1' if the mobile station may store more than one entry in SID_NID_LIST$_S$ for each SID.

MULT_SIDS$_S$ – Multiple SID storage indicator. Set to '1' if the mobile station may store entries in SID_NID_LIST$_S$ having different SIDs.

NAR_AN_CAP$_S$ – Narrow analog voice channel capability.

NDSS_ORIG$_S$ – NDSS Origination Indicator. Indicator used when the mobile station is NDSS-redirected while originating a call.

NGHBR_BAND$_S$ – Neighbor band class.

NGHBR_CONFIG$_S$ – Neighbor base station channel allocation configuration.

NGHBR_FREQ$_S$ – Neighbor CDMA channel number.

NGHBR_LST_MSG_SEQ$_S$ – *Neighbor List Message* sequence number.

NGHBR_MAX_AGE$_S$ – Neighbor set maximum age for retention in the set.

NGHBR_PN$_S$ – Neighbor base station Pilot Channel PN sequence offset in units of 64 PN chips.

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

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

NGHBR_SET_ACCESS_INFO$_S$ – Neighbor Set access handoff or access probe handoff information included indicator.

NGHBR_SET_ENTRY_INFO$_S$ – Neighbor Set access entry handoff information included indicator.

NGHBR_SET_SIZE$_S$ – Size of the Neighbor Set.

NGHBR_TIMING_INCL$_S$ – Indicates that hopping pilot beacon timing information is included.

NGHBR_TX_DURATION$_S$ – Hopping pilot beacon transmit time duration.

NGHBR_TX_OFFSET$_S$ – Hopping pilot beacon transmit time offset.

NGHBR_TX_PERIOD$_S$ – Hopping pilot beacon transmit time period.

NID$_S$ – Network identification. A network is a subset of the base stations within a cellular or PCS system.

NOM_PWR$_S$ – Nominal transmit power offset. A correction factor to be used by mobile stations in the open loop power estimate.

NUM_ANALOG_NGHBR$_S$ – Number of neighboring analog systems.

NUM_FCCCH$_S$ – Number of Forward Common Control Channels supported on the current CDMA channel**.**

NUM_PREAMBLE$_S$ – Number of Traffic Channel preamble.

NUM_QPCH$_S$ – Number of Quick Paging Channels supported on the current CDMA channel.

NUM_REV_CODES$_S$ – A storage variable in the mobile station that contains the number of Reverse Supplemental Code Channels that will be utilized in the next Reverse Supplemental Code Channel transmission beginning at time REV_START_TIME$_S$. A value of 0 indicates no Reverse Supplemental Code Channel transmission will be permitted (i.e., there is no pending Reverse Supplemental Code Channel transmission).

NUM_STEP$_S$ – Number of access probes or enhanced access probes in a single access probe sequence or enhanced access probe sequence.

OTHER_REPORTED_LIST – List of other pilots that have pilot strengths exceeding T_ADD and that are not included in ACCESS_HO_LIST.

PACA$_S$ – PACA call indicator. Set to enabled to indicate that the mobile station is waiting for a priority access channel assignment; otherwise, set to disabled. In Sections 2 and 3, PACA$_S$ = 0 is equivalent to setting PACA$_S$ to disabled and PACA$_S$ = 1 is equivalent to setting PACA$_S$ to enabled.

PACA_CANCEL – PACA call cancel indicator. Set to ‘1’ when the mobile station is directed by the user to cancel the PACA call; otherwise, set to ‘0’.

PACA_SID$_S$ – PACA system identifier. Equal to the SID of the system on which the mobile station originated a PACA call.

PACA_TIMEOUT$_S$ – PACA state timer duration. Specifies how long the mobile station should wait for a *PACA Message* from the base station.

PACKET_ZONE_ID$_S$ – Packet data services zone identifier of the base station.

PAGECH$_S$ – Current CDMA Paging Channel number.

PAGED – Indicator for a page match detected while the mobile station is in the *System Access State.*

PAGE_CHAN$_S$ – Number of Paging Channels supported on the current CDMA channel.

PAM_SZ$_S$ – Number of frames in the Access Channel or Enhanced Access Channel preamble, less 1.

PARAMETER_REG$_S$ – Parameter-change registration enable.

PERIODIC_SEARCH$_S$ – Flag to indicate if the mobile station is to perform a periodic search on the Candidate Frequency.

PGSLOT – Value obtained from the hashing function, used to determine the mobile station's assigned Paging Channel slots.

PILOT_ARRIVAL – Time of occurrence, as measured at the mobile station antenna connector, of the earliest arriving usable multipath component of the pilot. The arrival time is measured relative to the mobile station's time reference.

PILOT_GATING_RATE$_S$ – Reverse pilot gating rate on the Reverse Pilot Channel.

PILOT_GATING_USE_RATE – Reverse pilot gating rate enable indicator. It indicates whether or not the Reverse Pilot Channel is gated.

PILOT_INC$_S$ – Pilot PN sequence offset index increment. The interval between pilots, in units of 64 PN chips, for base stations in a system.

PILOT_PN$_S$ – Pilot Channel PN sequence offset, in units of 64 PN chips, for a base station.

PILOT_PN_PHASE – Calculated Pilot Channel PN phase, in chips, including the PN sequence offset and the arrival time relative to the mobile station's time reference.

PILOT_REPORT$_S$ – Pilot reporting indicator.

POTENTIAL_CDMACH$_S$ – The CDMA Channel number that could potentially be used by the mobile station.

POWER_DOWN_REG$_S$ – Power down registration enable indicator.

POWER_UP_REG$_S$ – Power up registration enable indicator.

PPSMM_PERIOD$_S$ – The period used in the Periodic Serving Frequency Pilot Report Procedure.

PRAT$_S$ – Data rate of the Paging Channels.

P_REV$_S$ – Protocol revision level supported by a base station.

P_REV_IN_USE$_S$ – Protocol revision level currently in use by a mobile station.

PREF_MSID_TYPE$_S$ – Preferred mobile station identifier field type.

PREVIOUS_ACTIVE_PILOT$_S$ – Identifies the pilot, if any, which was in the Active Set immediately prior to the current pilot in the Active Set, during the current access attempt.

PRI_NGHBR_LIST$_S$ – *Private Neighbor List Message* sent indicator.

PRI_NGHBR_PN – Private Neighbor base station Pilot Channel PN sequence offset in units of 64 PN chips.

PRI_NGHBR_REC – Record containing information about a private neighbor base station (see also PRI_NGHBR_REC_LIST).

PRI_NGHBR_REC_LIST – Private neighbor base station record list. A descriptive structure used to manage the base station's information records about private neighbor base stations (see also PRI_NGHBR_REC).

PRI_NGHBR_LST_MSG_SEQ$_S$ – *Private Neighbor List Message* sequence number.

PROBE_BKOFF$_S$ – Access Channel probe backoff range, in slots.

PROBE_PN_RAN$_S$ – Range for hashing function selection of the delay prior to transmission of Access Channel probes. Value is $\log_2$(range + 1).

PSIST$_S$ – Persistence value for the mobile station's overload class.

PUF_FREQ_INCL$_S$ – Flag to indicate whether the mobile station is to transmit a PUF probe on the serving frequency or on a target frequency.

PUF_INIT_PWR$_S$ – Power increase (in dB) of the first PUF pulse in a PUF attempt.

PUF_INTERVAL$_S$ – Number of frames between the start of each PUF probe.

PUF_PULSE_SIZE$_S$ – Duration of a PUF pulse in power control groups.

PUF_PWR_STEP$_S$ – Amount (in dB) by which the mobile station is to increment the power of a PUF pulse above nominal power from one PUF pulse to the next.

PUF_SETUP_SIZE$_S$ – Number of power control groups within a PUF probe before the transmission of the PUF pulse.

PUF_SF_CDMABAND$_S$ – Serving Frequency CDMA band class.

PUF_SF_CDMACH$_S$ – Serving Frequency CDMA Channel number.

PUF_TF_CDMABAND$_S$ – Target Frequency CDMA band class.

PUF_TF_CDMACH$_S$ – Target Frequency CDMA Channel number.

PUF_TX_PWR$_S$ – Mobile station's output power for the PUF pulse.

PWR_CNTL_STEP$_S$ – Power control step size assigned by the base station that the mobile station is to use for closed loop power control.

PWR_PERIOD_ENABLE$_S$ – Forward power control periodic reporting enabled indicator.

PWR_REP_DELAY$_S$ – Power report delay. The period that the mobile station waits following an autonomous *Power Measurement Report* before restarting frame counting for power control purposes.

PWR_REP_FRAMES$_S$ – Power control reporting frame count. The number of frames over which the mobile station is to count frame errors. Value is $2 \times \log_2$(frames / 5).

PWR_REP_THRESH$_S$ – Power control reporting threshold. The number of bad frames to be received in a measurement period before the mobile station is to generate a *Power Measurement Report Message*.

PWR_STEP$_S$ – Power increment for successive access probes, in units of 1.0 dB.

PWR_THRESH_ENABLE$_S$ – Forward power control threshold reporting enabled indicator.

QPAGECH$_S$ – Current Quick Paging Channel number.

QPCH_CCI_SUPPORTED$_S$ – Flag to indicate if configuration change indicators are supported on the Quick Paging Channel.

QPCH_POWER_LEVEL_PAGE$_S$ – Relative power level of the transmitted Quick Paging Channel Paging Indicator modulation symbols, relative to the Forward Pilot Channel.

QPCH_POWER_LEVEL_CONFIG$_S$ – Relative power level of the transmitted Quick Paging Channel Configuration Change Indicator modulation symbols, relative to the Forward Pilot Channel.

QPCH_RATE$_S$ – Indicator rate of the current Quick Paging Channel(s).

QPCH_SUPPORTED$_S$ – Flag to indicate if the Quick Paging Channel is supported by the base station.

RA – Random access channel number. The Access Channel number generated (pseudo-randomly) by the mobile station.

RAND$_S$ – Authentication random challenge value.

RANDC – The eight most-significant bits of the random challenge value used by the mobile station.

RANDOM_TIME – Random time. A portion of SYS_TIME used to seed the random number generator.

RC_CAP_REQUESTED$_S$ – Radio Configuration Capability indicator. When set to “1” the mobile station shall include the Radio Configuration capabilities that it supports in the *Origination Message and Page Response Message*.

RCCCH_SLOT$_S$ – See [2].

RCCCH_SLOT_OFFSET1$_S$ – See [2].

RCCCH_SLOT_OFFSET2$_S$ – See [2].

REDIRECTION$_S$ – Service redirection indicator. Set to enabled to indicate that service redirection is currently in effect; otherwise, set to disabled.

REDIRECT_REC$_S$ – Holds the service redirection criteria specified in the redirection record of the most recently received *Global Service Redirection Message* or *Service Redirection Message*.

REG_COUNT$_S$ – The timer-based registration counter.

REG_COUNT_MAX$_S$ – Timer-based registration count limit. The timer-based registration counter expiration value computed from REG_PRD$_r$.

REG_DIST$_S$ – Registration distance. Distance from last registration that causes a distance-based registration to occur.

REG_ENABLED$_S$ – Autonomous registrations enabled indicator.

REGISTERED$_S$ – Mobile station registered indicator.

REG_PRD$_S$ – Registration period. The time interval between timer-based registrations. Value is $4 \times \log_2$(time / 0.08 s).

REG_PSIST$_S$ – Persistence modifier for registration accesses (except ordered registrations).

REG_ZONE$_S$ – Registration zone number of the base station.

REJECT_UZID$_S$ – User Zone identifier of the User Zone rejected by the base station.

RESELECT_INCLUDED$_S$ – System reselection information included indicator. When this is set to '1', the system reselection procedure is enabled.

RESUME_PREAMBLE$_S$ – A storage variable in the mobile station that contains the size of the preamble that shall be transmitted on a Reverse Supplemental Code Channel at the beginning of transmission on a Reverse Supplemental Code Channel when resuming transmission following an interruption when discontinuous transmission is occurring.

RETRY_DELAY$_S$[i] – A storage variable in the mobile station that contains the system time before which the mobile station may not transmit a specific message. The type of message that cannot be transmitted is specified by RETRY_TYPE, represented here by i. A RETRY_DELAY$_S$[i] value of 0 indicates no retry delay is in effect, and a value of '11111111' indicates an infinite retry delay.

RETRY_DELAY_UNIT$_S$ – The units for the value of RETRY_DELAY$_S$. Possible values are 1000ms and 60000ms.

RETRY_DELAY_VALUE$_S$ – The unitless value of the retry delay.

RETRY_TYPE$_S$ – The retry delay type. It specifies the type of message to which the retry delay value applies. If set to a value of 0, it indicates that all retry delay values should be cleared.

RETURN_CAUSE$_S$ – Reason for the mobile station registering or accessing the system.

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

RETURN_IF_HANDOFF_FAIL$_S$ – Return if handoff fail indicator. Indicates if the mobile station is to resume using the Active Set on the Serving Frequency following an unsuccessful hard handoff attempt.

REV_DTX_DURATION$_S$ – Maximum duration of time in units of 20 ms that the mobile station is allowed to stop transmitting on a Reverse Supplemental Code Channel or Reverse Supplemental Channel within the reverse assignment duration.

REV_DURATION$_S$ – A stored variable in the mobile station that contains the duration (in units of 80 ms) of the Reverse Supplemental Code Channel transmission that will begin at time REV_START_TIME$_S$.

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

REV_FCH_RC$_S$ – Reverse Fundamental Channel Radio Configuration.

REV_FRAME_40_MAX_RATE$_S$ – The maximum data rate for the mobile station's transmission at 40 ms frame length on the Reverse Supplemental Channel.

REV_FRAME_80_MAX_RATE$_S$ – The maximum data rate for the mobile station's transmission at 80 ms frame length on the Reverse Supplemental Channel.

REV_LINKED_HDM_SEQ$_S$ – Storage variable containing the most recent reverse sequence number of the *General Handoff Direction Message* to which a *Supplemental Channel Assignment Message* reverse assignment was linked.

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

REV_RC$_S$ – Reverse Channel Radio Configuration.

REV_SCH_DTX_DURATION$_S$ – Maximum duration of time in units of 20 ms that the mobile station is allowed to stop transmitting on a Reverse Supplemental Channel within the reverse assignment duration.

REV_SCH_DURATION$_S$ – A stored variable in the mobile station which contains the duration of the Reverse Supplemental Channel transmission which will begin at time REV_SCH_START_TIME$_S$.

REV_SCH_FRAME_LENGTH$_S$ – The Reverse Supplemental Channel frame length.

REV_SCH_START_TIME$_S$ – A stored variable in the mobile station which contains the System Time, in units of time specified by START_TIME_UNIT$_S$, (modulo 32) at which the mobile station shall start (or resume) processing Reverse Supplemental Channels.

REV_START_TIME$_S$ – A stored variable in the mobile station that contains the next 80 ms frame boundary (modulo 64) on which the mobile station is assigned to start Reverse Supplemental Code Channel transmission.

RN_HASH_KEY$_S$ – Name of an internal variable having the same value as the mobile station's ESN. This variable is used by procedures defined in [3].

ROAM_INDI$_S$ – Enhanced roaming indicator used for mobile station roaming condition display.

RS – Inter-probe sequence backoff. The delay in slots generated (pseudorandomly) by the mobile station following an unsuccessful access probe sequence or prior to the first access probe in a response attempt.

RT – Inter-probe backoff. The delay in slots generated (pseudorandomly) by the mobile station following an unacknowledged access probe.

SCC$_S$ – SAT color code for analog channel assignment and CDMA-to-analog handoff.

SCAM_FOR_DURATION_MODE$_S$ – Indicator for a specific or an indefinite Forward Supplemental Code Channel assignment duration.

SCAM_FOR_ORDER$_S$ – The stop or start command set by a *Supplemental Channel Assignment Message* that is linked to a *General Handoff Direction Message.*

SCAM_REV_DURATION_MODE$_S$ – Indicator for a specific or an indefinite Reverse Supplemental Code Channel assignment duration.

SYNC_ID$_S$ – Service Configuration Synchronization Identifier. This is a 16-bit CRC computed over the entire Service Configuration information record and Non-negotiable Service Configuration information record and used for determining whether these two information records should be included in *the Service Connect Message* sent by the base station to the mobile station. The mobile station generates this parameter based on the Service Configuration information record and Non-negotiable Service Configuration information record stored at the mobile station (if stored), and sends it to the base station in the *Origination Message* or the *Page Response Message*. The base station computes this parameter based on these two information records targeted to be sent to the mobile station. If the computed value matches the one sent by the mobile station, then base station does not send these two information records over the air and expects the mobile station to start using the stored ones.

SCRM_SEQ_NUM$_S$ – Storage variable containing the most recently transmitted *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.

SF_NOM_PWR_EXT$_S$ –Extended nominal transmit power offset indicator for the Serving Frequency, stored during hard handoff.

SF_P_REV$_S$ – Protocol revision level supported by the base station on the Serving Frequency.

SF_P_REV_IN_USE$_S$ – Protocol revision level currently used by the mobile station on the Serving Frequency.

SF_PRIVATE_LCM$_S$ – Private long code mask indicator for the Serving Frequency, stored during hard handoff.

SF_SERV_NEG$_S$ – Service negotiation indicator for the Serving Frequency, stored during hard handoff.

SF_SERVICE_CONFIG$_S$ – Service configuration (service configuration record and non-negotiable service configuration record) for the Serving Frequency.

SF_SOFT_SLOPE$_S$ – Slope of the handoff add/drop criterion for the Serving Frequency, stored during hard handoff.

SF_SRCH_WIN_A$_S$ – Search window size for the Active Set and Candidate Set used on the Serving Frequency, stored during hard handoff.

SF_SRCH_WIN_N$_S$ – Search window size for the Neighbor Set used on the Serving Frequency, stored during hard handoff.

SF_SRCH_WIN_R$_S$ – Search window size for the Remaining Set used on the Serving Frequency, stored during hard handoff.

SF_T_ADD$_S$ – Pilot detection threshold used on the Serving Frequency, stored during hard handoff.

SF_T_COMP$_S$ – Active Set versus Candidate Set comparison threshold used on the Serving Frequency, stored during hard handoff.

SF_T_DROP$_S$ – Pilot drop threshold used on the Serving Frequency, stored during hard handoff.

SF_T_TDROP$_S$ – Pilot drop timer value used on the Serving Frequency, stored during hard handoff.

SF_TOTAL_EC_THRESH$_S$ – Threshold for total E_C of pilots in the Serving Frequency Active Set used in the Candidate Frequency periodic search procedures.

SF_TOTAL_EC_IO_THRESH$_S$ – Threshold for total E_C/I_O of pilots in the Serving Frequency Active Set used in the Candidate Frequency periodic search procedures.

SID$_S$ – System identifier.

SID_NID_LIST$_S$ – Registration SID, NID list. The SID, NID pairs in which the mobile station has registered.

SLOT_CYCLE_INDEX$_S$ – Slot cycle index. Equal to the smaller of SLOT_CYCLE_INDEX$_p$ and the received maximum slot cycle index.

SLOT_NUM – Paging Channel or Forward Common Control Channel slot number.

SOFT_SLOPE$_S$ – The slope in the inequality criterion for adding a pilot to the Active Set, or dropping a pilot from the Active Set.

SO_REQ$_S$ – Service option request number. The number of the service option requested by the mobile station during service option negotiation.

SR1_BRAT_NON_TD$_S$ – Spreading Rate 1 Broadcast data rate with no transmit diversity.

SR1_BRAT_TD$_S$ – Spreading Rate 1 Broadcast data rate with transmit diversity.

SR1_CRAT_NON_TD$_S$ – Spreading Rate 1 coding rate with no transmit diversity.

SR1_CRAT_TD$_S$ – Spreading Rate 1 coding rate with transmit diversity.

SR1_TD_MODE$_S$ – Spreading Rate 1 transmit diversity mode in support of OTD or STS.

SR1_TD_LEVEL$_S$ – Spreading Rate 1 transmit diversity power level.

SR3_BRAT$_S$ – Data rate of the Broadcast Control Channel on SR3 frequencies.

SR3_PRIMARY_PILOT$_S$ – Frequency offset of the primary SR3 pilot.

SR3_PILOT_POWER1$_S$ – 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$_S$ – The power level of the primary pilot with respect to the pilot on the higher frequency of the two remaining SR3 frequencies.

SRCH_OFFSET_INCL$_S$ – Neighbor pilot search window offset included indicator.

SRCH_OFFSET_NGHBR$_S$ – Neighbor pilot search window offset.

SRCH_WIN_A$_S$ – Search window size for the Active Set and Candidate Set.

SRCH_WIN_NGHBR$_S$ – Neighbor Pilot Channel search window size.

SRCH_WIN_NGHBR_INCL$_S$ – Neighbor Pilot Channel search window size included indicator.

SRCH_WIN_N$_S$ – Search window size for the Neighbor Set.

SRCH_WIN_R$_S$ – Search window size for the Remaining Set.

START_TIME_UNIT$_S$ – A stored variable in the mobile station which contains the time unit used for determining FOR_SCH_START_TIME and REV_SCH_START_TIME on Supplemental Channels.

SYS_PAR_MSG_SEQ$_S$ – *System Parameters Message* sequence number.

SYS_TIME$_S$ – Current value of CDMA system time as received in the *Sync Channel Message*.

TA – Acknowledgment response timeout.

T_ADD$_S$ – Pilot detection threshold. The stored value is a positive value in units of 0.5 dB.

T_COMP$_S$ – Active Set versus Candidate Set comparison threshold. The stored value is a positive value in units of 0.5 dB.

T_DROP$_S$ – Pilot drop threshold. The stored value is a positive value in units of 0.5 dB.

TAG$_S$ – Transaction identifier. This is a 4-bit parameter maintained by the mobile station which is used to uniquely identify a new call origination (via an *Enhanced Origination Message*) by the mobile station. When the mobile station is to send an *Enhanced Origination Message*, the mobile station increments the stored value of TAG and includes it in the message.

TAG_OUTSTANDING_LIST – List of outstanding TAG values. This corresponds to those values of TAG sent in the *Enhanced Origination Message* which have neither been accepted by the base station (by assigning the requested call) nor rejected by the base station.

TEMP_SUB$_S$ – User Zone temporary subscription flag.

TF_CDMABAND$_S$ – Target Frequency CDMA band class. The CDMA band class specified in the *Extended Handoff Direction Message* or the *General Handoff Direction Message*.

TF_CDMACH$_S$ – Target Frequency CDMA Channel number. The CDMA Channel number specified in the *Extended Handoff Direction Message* or the *General Handoff Direction Message*.

TF_RESET_FPC$_S$ – Flag to initialize the Forward Traffic Channel power control counters on the Target Frequency.

TF_RESET_L2$_S$ – Flag to reset acknowledgment procedures on the Target Frequency.

TF_T_ADD$_S$ – Pilot detection threshold to be used on the Target Frequency. The stored value is a positive value in units of 0.5 dB.

TF_WAIT_TIME$_S$ – Maximum time that the mobile station may wait to receive a good frame when acquiring the CDMA Candidate Frequency.

TMSI_ZONE$_S$ – TMSI zone number of the base station.

TMSI_ZONE_LEN$_S$ – The number of octets in TMSI zone.

T_MULCHAN$_S$ – A storage variable in the mobile station that contains the Reverse Supplemental Code Channel neighbor pilot strength measurement offset. The stored value is a positive value in units of 0.5 dB.

TOTAL_PUF_PROBES$_S$ – Maximum number of PUF probes transmitted in a PUF attempt.

TOTAL_ZONES$_S$ – Number of registration zones to be retained in ZONE_LIST$_S$.

TOT_FRAMES$_S$ – Total frames received. The total number of received frames, counted for Forward Traffic Channel power control.

T_TDROP$_S$ – Pilot drop timer value.

USE_FOR_HDM_SEQ$_S$ – Storage variable containing a flag indicating a pending Supplemental Channel Assignment Message forward assignment that is linked to a *General Handoff Direction Message*.

USE_REV_HDM_SEQ$_S$ – Storage variable containing a flag indicating a pending Supplemental Channel Assignment Message reverse assignment that is linked to a *General Handoff Direction Message*.

USE_T_ADD_ABORT$_S$ – A storage variable in the mobile station that contains the Reverse Supplement Code Channel assignment T_ADD abort indicator.

USE_TMSI$_S$ – Base station's preference of the use of TMSI.

USER_ZONE_ID$_S$ – *User Zone Identification Message* sent indicator.

USER_ZONE_ID_MSG_SEQ$_S$ – *User Zone Identification Message* sequence number.

UZ_EXIT_IN_USE$_S$ – The User Zone Exit parameter that the mobile station received from the *User Zone Identification Message* broadcast by the last base station of the old user zone.

UZ_EXIT_RCVD$_S$ – The User Zone Exit parameter that the mobile station just received from the *User Zone Identification Message* broadcast by the currently serving base station.

UZID$_S$ – User Zone identifier.

UZ_REC – Record containing information about a User Zone broadcast by the base station (see also UZ_REC_LIST).

UZ_REC_LIST – Broadcast User Zone record list. A descriptive structure used to manage the base station's information records about broadcast User Zones (see also UZ_REC).

UZ_REV$_S$ – User Zone update revision number.

VMAC$_S$ – Analog voice mobile station attenuation code for analog channel assignment or CDMA-to-analog handoff.

ZONE_LIST$_S$ – Registration zone list. List of zones in which the mobile station has registered.

ZONE_TIMER$_S$ – Zone timer length.

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.

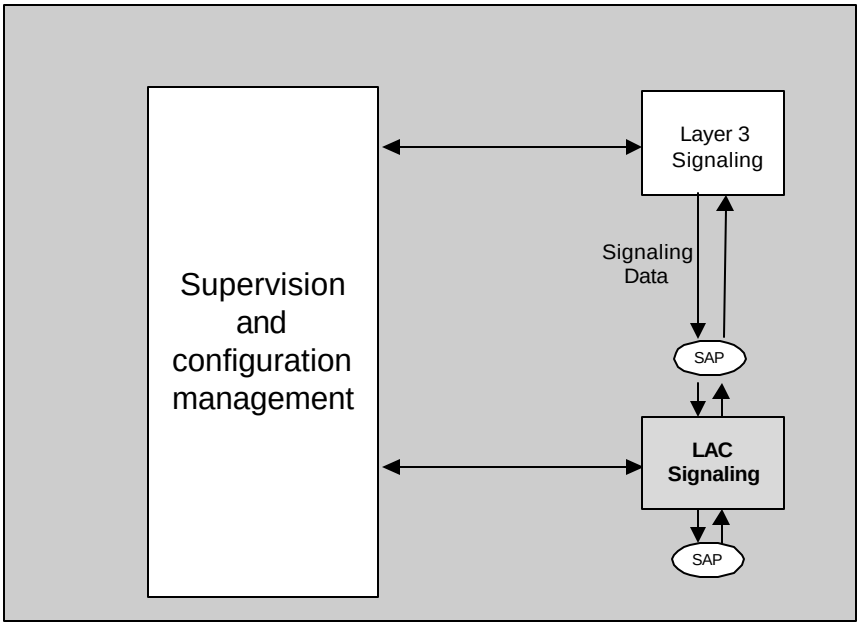


Figure 1.3.1-1. cdma2000 Signaling – General Architecture

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.

Name: **L2-Data.Confirm**

Type: Confirm

Direction: Layer 2 to Layer 3

Parameters: MCSB

Action: Reception of the specified (in the MCSB) transmitted PDU was acknowledged at Layer 2 by the addressee.

Name: **L2-Data.Indication**

Type: Indication

Direction: Layer 2 to Layer 3

Parameters: PDU, MCSB

Action: The received PDU is handed to Layer 3.

Name: **L2-Condition.Notification**

Type: Indication

Direction: Layer 2 to Layer 3

Parameters: MCSB

Action: Layer 3 is notified of a relevant event (e.g. abnormal condition) detected at Layer 2. Details are indicated via the MCSB.

Name: **L2-Supervision.Request**

Type: Request

Direction: Layer 3 to Layer 2

Parameters: MCSB

Action: Layer 2 executes a control command as directed by Layer 3. This could be, for example, an order to abandon retransmission of a message or an order for local reset for the message sequence number, acknowledgment sequence number and duplicate detection.

1.3.3 Reserved

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).

REQUIREMENTS FOR MOBILE STATION CDMA OPERATION

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

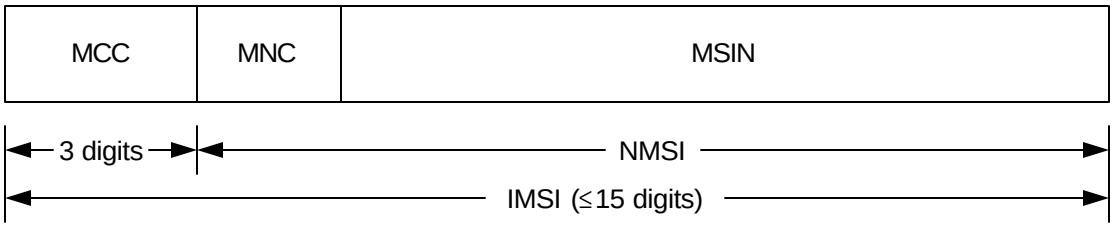
2.1 Reserved

2.2 Reserved

2.3 Security and Identification

2.3.1 Mobile Station Identification Number

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



MCC Mobile Country Code
MNC Mobile Network Code
MSIN Mobile Station Identifier Number
NMSI National Mobile Station Identity
IMSI International Mobil Station Identity

Figure 2.3.1-1. IMSI Structure

An IMSI that is 15 digits in length is called a class 0 IMSI (the NMSI is 12 digits in length); an IMSI that is less than 15 digits in length is called a class 1 IMSI (the NMSI is less than 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 $IMSI\_T\_S1_p$.

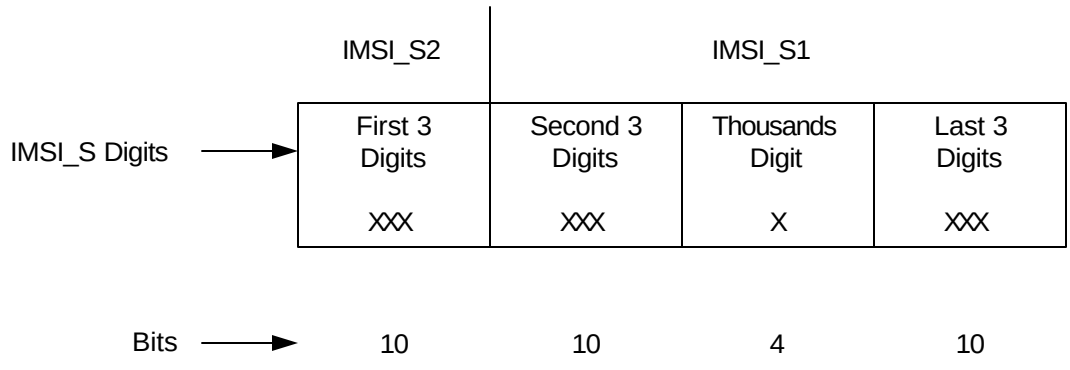


Figure 2.3.1-2. IMSI_S Binary Mapping

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 $IMSI\_M\_11\_12_p$ and the 7-bit $IMSI\_T\_11\_12_p$.

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_M_p and the 10-bit MCC_T_p.

If the mobile station has a class 1 IMSI_T, or IMSI_M, it shall have memory to store $IMSI\_T\_ADDR\_NUM_p$ and $IMSI\_M\_ADDR\_NUM_p$. $IMSI\_T\_ADDR\_NUM_p$ is equal to the number of digits in the NMSI[2] minus four. $IMSI\_M\_ADDR\_NUM_p$ 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 $IMSI\_M\_S2_p$ and $IMSI\_T\_S2_p$, 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. 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 6 789. $IMSI\_T\_S2_p$ 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; D 3 = 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 Band Class 1	0XXXXXXX 1XXXXXXX
Dual Mode	6	CDMA Only Dual Mode	X0XXXXXX X1XXXXXX
Slotted Class	5	Non-Slotted Slotted	XX0XXXXX XX1XXXXX
IS-54 Power Class	4	Always 0	XXX0XXXX
25 MHz Bandwidth	3	Always 1	XXXX1XXX
Transmission	2	Continuous Discontinuous	XXXXX0XX XXXXX1XX
Power Class for Band Class 0 Analog Operation	1 - 0	Class I Class II Class III Reserved	XXXXXX00 XXXXXX01 XXXXXX10 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.

The mobile station shall have memory to store the distance-based registration variables $BASE\_LAT\_REG_{s-p}$, $BASE\_LONG\_REG_{s-p}$, and $REG\_DIST\_REG_{s-p}$ (see 2.6.5.1.4 and 2.6.5.5). 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 $REG\_DIST\_REG_{s-p}$ shall be set to zero upon power-on.

2.3.5 Access Overload Class

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

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

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:

ESN = (E_{31}, E_{30}, E_{29}, E_{28}, E_{27}, E_{26}, E_{25}, . . . E_2, E_1, E_0)

Permuted ESN = (E_0, E_{31}, E_{22}, E_{13}, E_4, E_{26}, E_{17}, E_8, E_{30}, E_{21}, E_{12}, E_3, E_{25}, E_{16}, E_7, E_{29}, E_{20}, E_{11}, E_2, E_{24}, E_{15}, E_6, E_{28}, E_{19}, E_{10}, E_1, E_{23}, E_{14}, E_5, E_{27}, E_{18}, E_9).

2.3.7 Reserved

2.3.8 Home System and Network Identification

In addition to the $HOME\_SID_p$ parameter that the mobile station stores for 800 MHz analog operation, the mobile station shall provide memory to store at least one home (SID_p, NID_p) pair. The mobile station shall also provide memory to store the 1-bit parameters $MOB\_TERM\_HOME_p$, $MOB\_TERM\_FOR\_SID_p$, and $MOB\_TERM\_FOR\_NID_p$ (see 2.6.5.3).

2.3.9 Local Control Option

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

2.3.10 Preferred Operation Selection

2.3.10.1 Preferred System

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

2.3.10.2 Preferred CDMA or Analog

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

2.3.11 Discontinuous Reception

The mobile station shall provide memory to store the preferred slot cycle index, $SLOT\_CYCLE\_INDEX_p$ (see 2.6.2.1.1.3.2).

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

2.3.12.1 Authentication

Authentication is the process by which information is exchanged between a mobile station and base station for the purpose of confirming the identity of the mobile station. A successful outcome of the authentication process occurs only when it can be demonstrated 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.

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

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

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

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

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

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

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

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

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

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

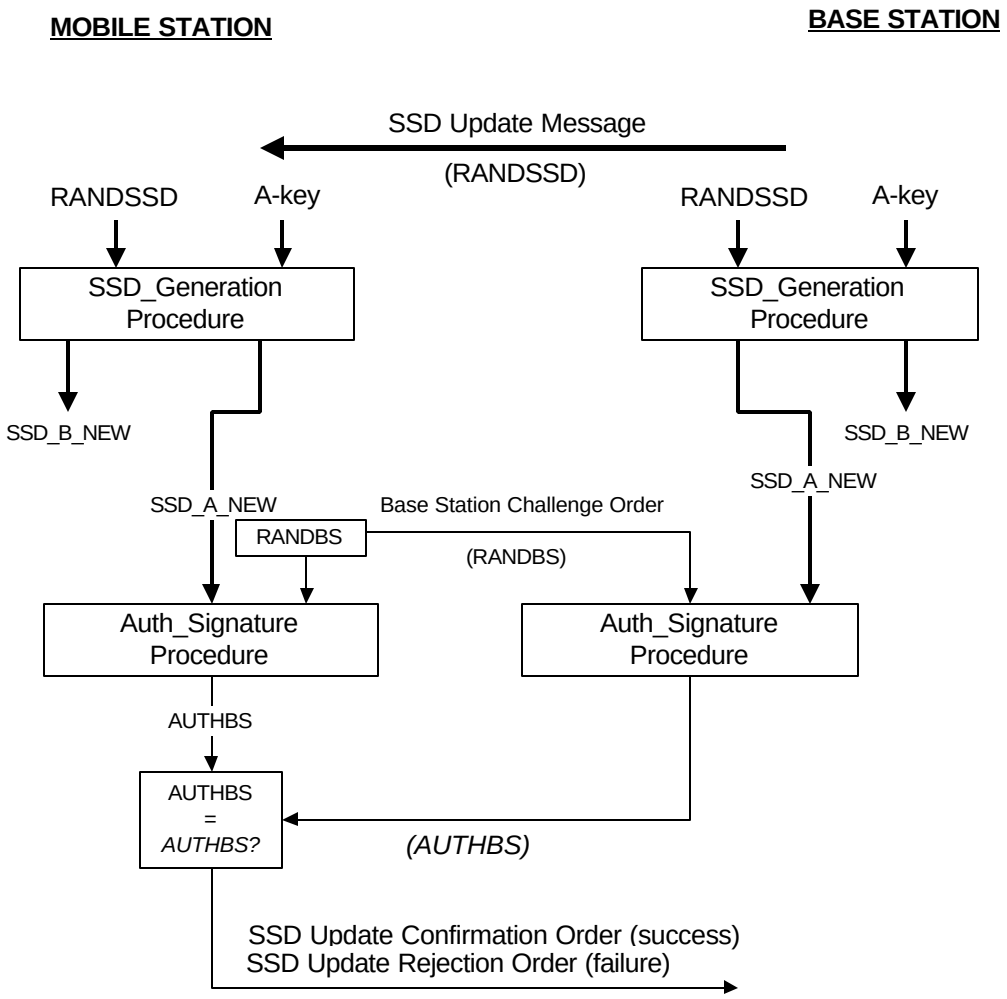


Figure 2.3.12.1.5-1. SSD Update Message Flow

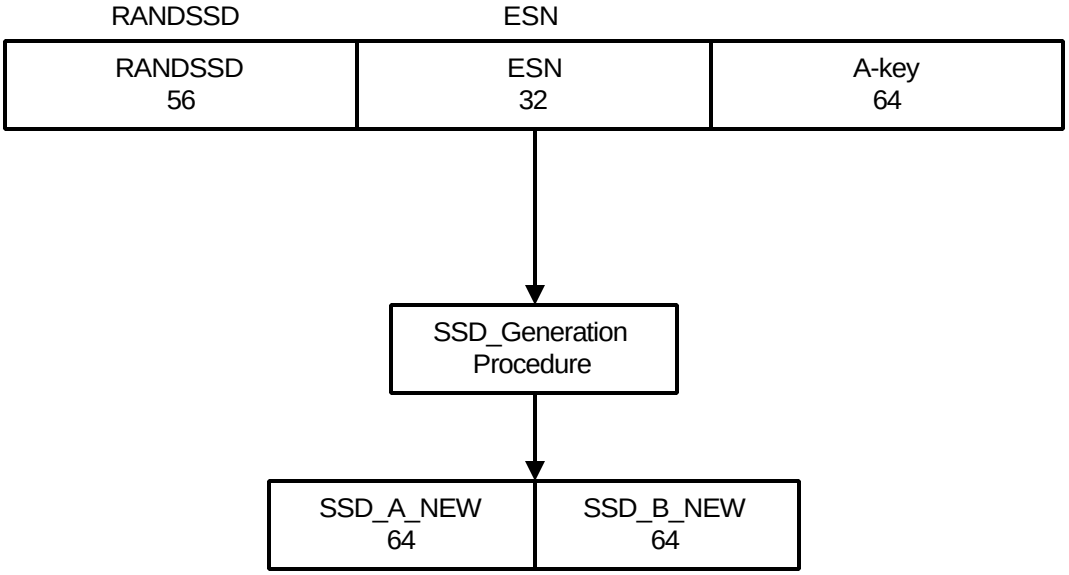


Figure 2.3.12.1.5-2. Computation of Shared Secret Data (SSD)

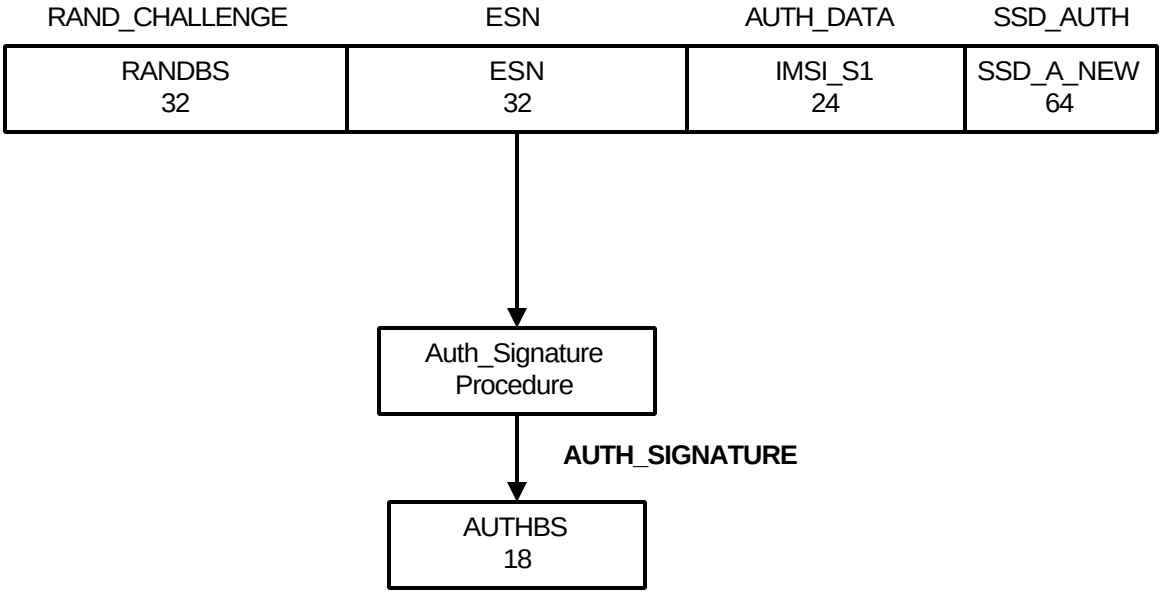


Figure 2.3.12.1.5-3. Computation of AUTHBS

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 DIGITi 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 DIGITi 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

– SYNC[1] = MSG_TYPE = ‘00000001’

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

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

If the CHARi 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’

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

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

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

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 ‘1’.
- The SYNC parameter shall be set as follows:
  – SYNC[0] = ES_COUNT
  – SYNC[1] = MSG_TYPE = ‘00011110’

2.3.12.2.2 Encrypted Messages on the r-dsch

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 DIGITi 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 DIGITi 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 CHARi fields after the first two shall be encrypted; otherwise, all CHARi fields shall be encrypted.

   If the CHARi 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 [$ENC\_SEQ_s \le ENC\_SEQ_r < (ENC\_SEQ_s + 128)$]:

$$EXT\_ENC\_SEQ_s = (EXT\_ENC\_SEQ_s + (ENC\_SEQ_r - ENC\_SEQ_s) \bmod 256) \bmod 2^{32}$$

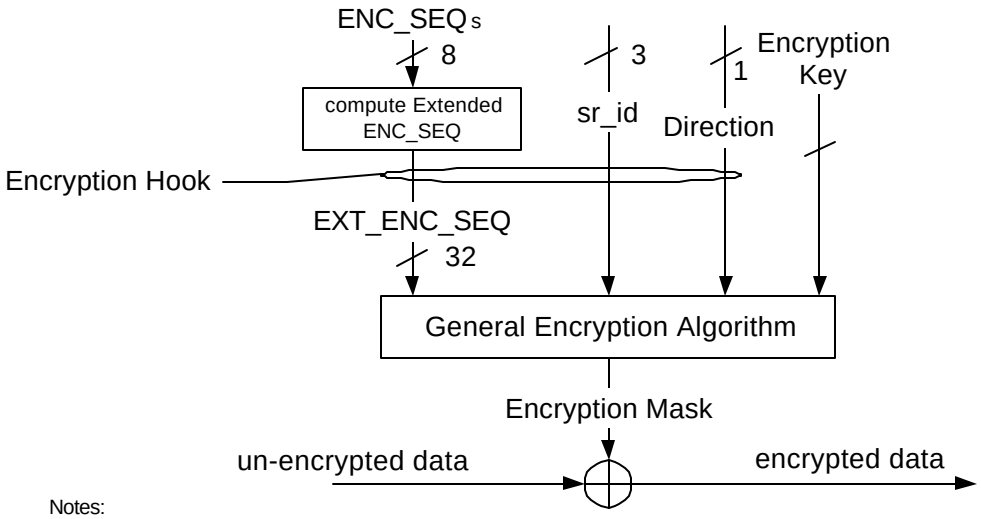
Else:

$$EXT\_ENC\_SEQ_s = (EXT\_ENC\_SEQ_s - (ENC\_SEQ_s - ENC\_SEQ_r) \bmod 256) \bmod 2^{32}.$$

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.



Notes:
System time is used instead of cryptosync (EXT_ENC_SEQ) for Voice services
RLP generates the cryptosync value when RLP is used for a service option

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.

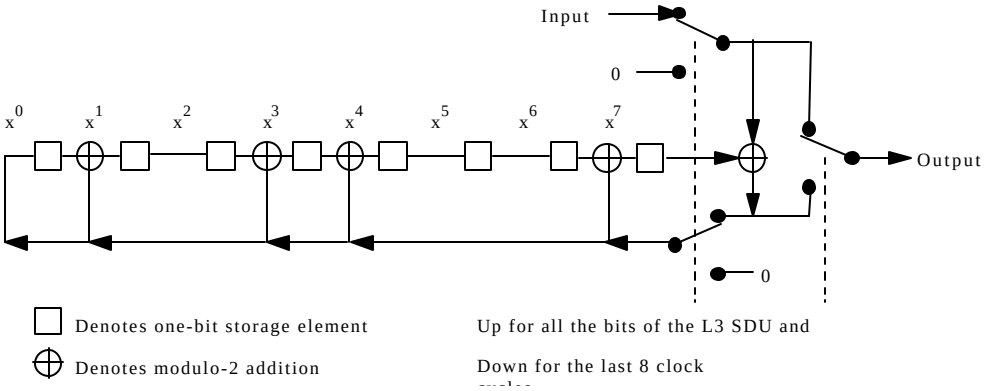


Figure 2.3.12.4.4-1. 8-Bit Layer 3 SDU CRC Field Calculation

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.

MSB		LSB
SSD_A (64 bits)	$RAND_S$ (32 bits)	ENC_SEQ_H (24 bits)

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).

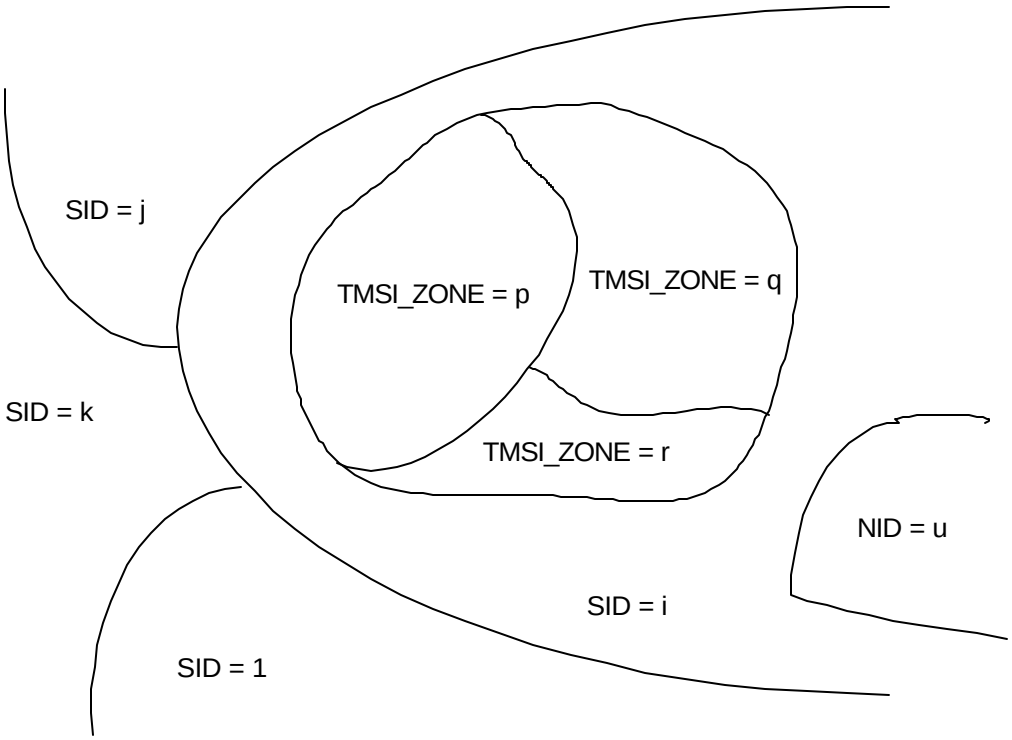


Figure 2.3.15-1. TMSI Zone Example

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 *Sync Channel Message*

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

2.5 Reserved

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).

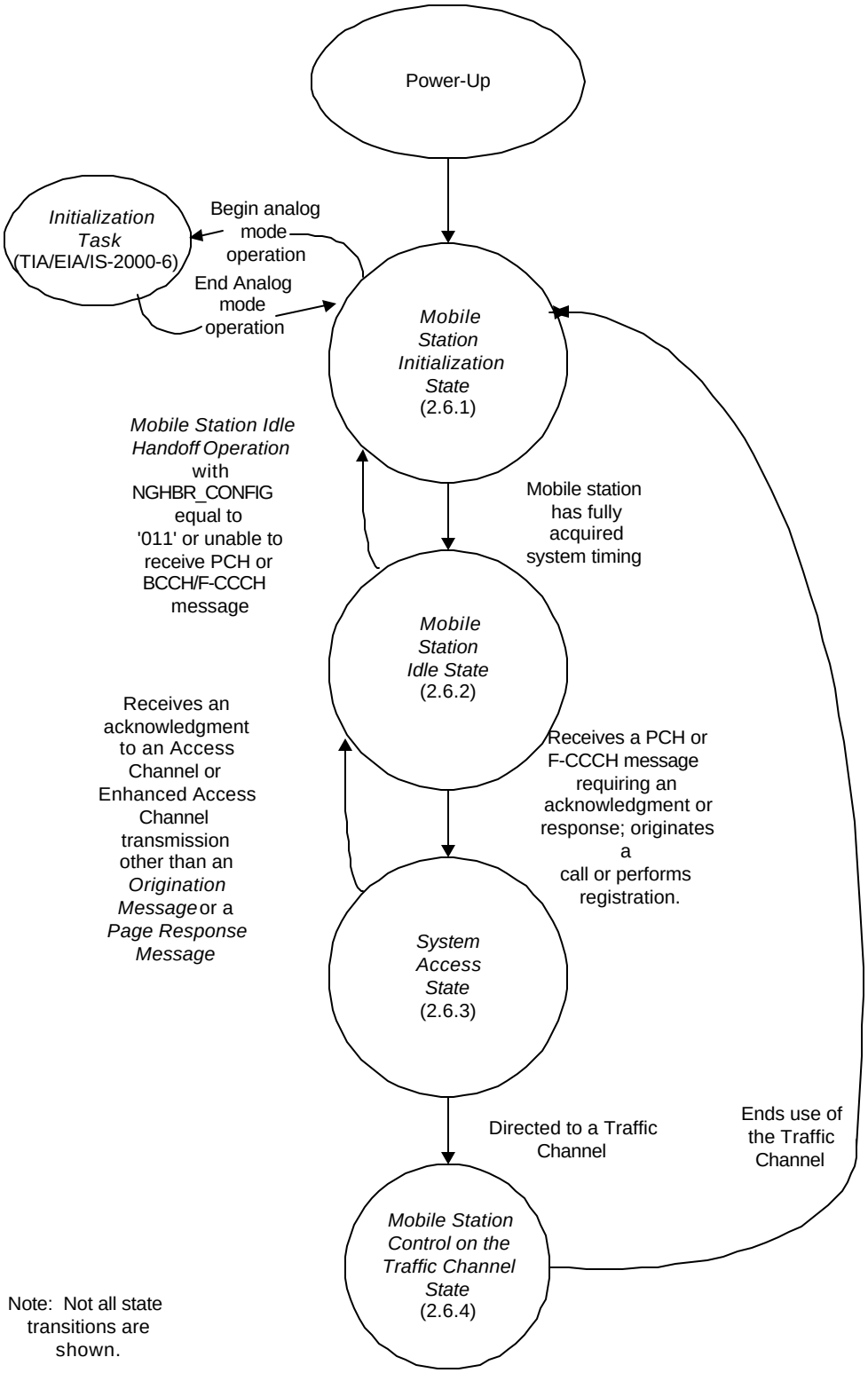


Figure 2.6-1. Mobile Station Layer 3 Processing States

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.

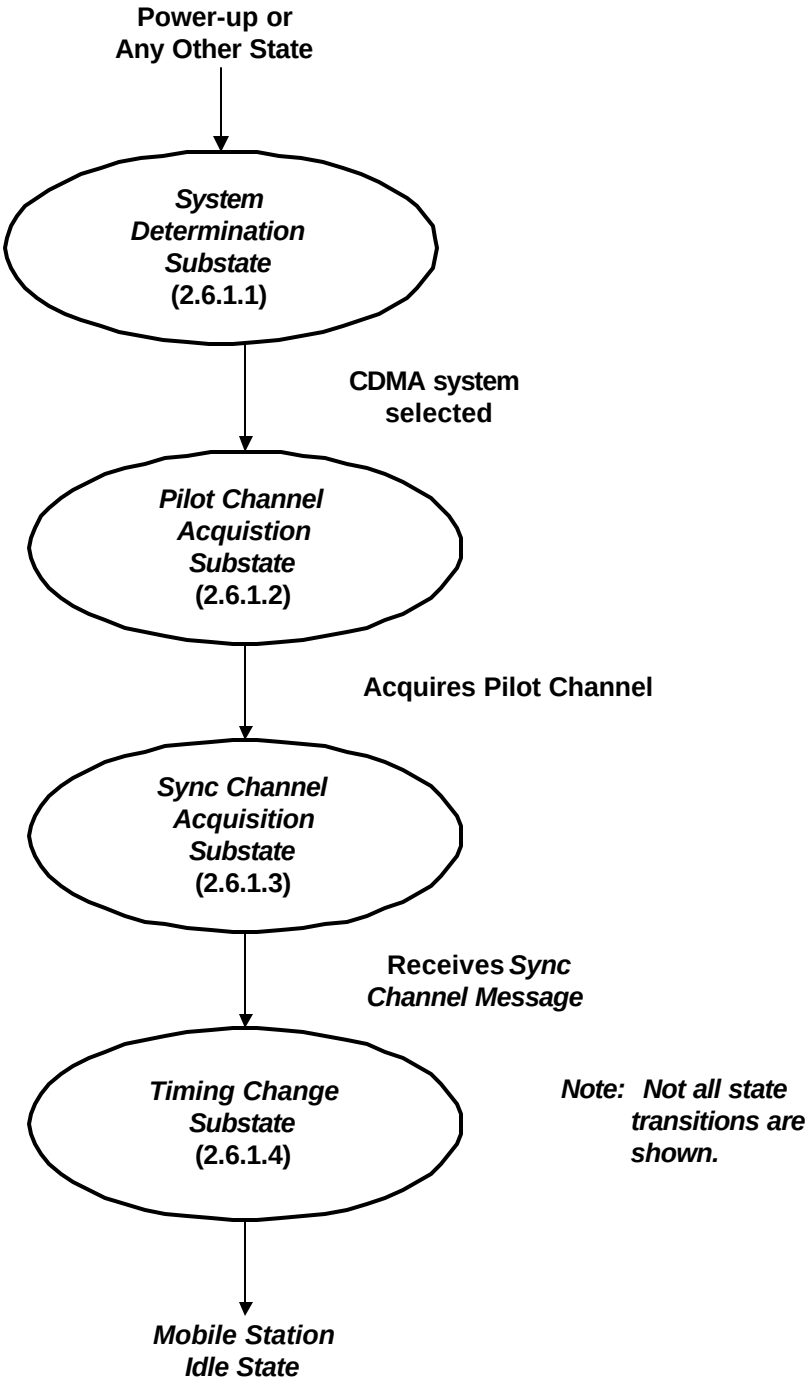


Figure 2.6.1-1. Mobile Station Initialization State

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

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 redirection indication, the mobile station shall set $REDIRECTION_S$ to enabled. The mobile station shall delete all entries from the $ZONE\_LIST_S$ and $SID\_NID\_LIST_S$. The mobile station shall select a system in accordance with the current redirection criteria (see 2.6.1.1.2) 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 registration rejected indication, the mobile station shall perform the following:

- If $REDIRECTION_S$ is equal to enabled, 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 '0011'.
  - 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 wrong system 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 '0100'.

- 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 wrong network 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 '0101'.
- 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).

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:

- If the BAND_CLASS field is equal to '00000' and the mobile station supports CDMA mode operation in Band Class 0, the mobile station shall make at most *n* sequential system selections, where *n* is equal to the value of the NUM_CHANS field, as follows:
  - For the ith system selection, where *i* ranges from 1 to *n*, the mobile station shall set $CDMACH_S$ to the value of the ith occurrence of the CDMA_CHAN field and shall set $CDMABAND_S$ to 0.
- If the BAND_CLASS field is equal to '00001' and the mobile station supports CDMA mode operation in Band Class 1, the mobile station shall make at most *n* sequential system selections, where *n* is equal to the value of the NUM_CHANS field, as follows:
  - For the ith system selection, where *i* ranges from 1 to *n*, the mobile station shall set $CDMACH_S$ to the value of the ith occurrence of the CDMA_CHAN field and shall set $CDMABAND_S$ to 1.

2.6.1.1.3 System Selection Using System Reselection Criteria

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

- If there are pilots in the Neighbor List on a different Frequency Assignment than that of the mobile station, the mobile station may select the CDMA system consisting of these neighbor pilots. 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 and shall set $CDMACH_S$ to the CDMA Channel number (see 2.1.1.1 of [2]) for the selected system.
- If $NUM\_ANALOG\_NGHBR_S$ is not equal to '000', the mobile station may select an analog system as specified by ANALOG_NGHBR_LIST. 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.

2.6.1.1.4 Acquiring the Selected System

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

- If the selected system is an analog system, the mobile station shall enter the Initialization Task (see 2.6.1 of [6]).
- If the selected system is a CDMA system, the mobile station shall enter the *Pilot 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 ($MIN\_P\_REV_r$), 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 $PRAT_r$, the $SR1\_BRAT\_NON\_TD_r$, the $SR1\_BRAT\_TD_r$, or the $SR3\_BRAT_r$ 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 ($MIN\_P\_REV_r$), the mobile station shall store the following information from the message:

- Protocol revision level ($P\_REV_s = P\_REV_r$)

- Minimum protocol revision level ($MIN\_P\_REV_s = MIN\_P\_REV_r$)
- System identification ($SID_s = SID_r$)
- Network identification ($NID_s = NID_r$)
- Pilot PN sequence offset index ($PILOT\_PN_s = PILOT\_PN_r$)
- Long code state ($LC\_STATE_s = LC\_STATE_r$)
- System Time ($SYS\_TIME_s = SYS\_TIME_r$)
- Paging Channel data rate ($PRAT_s = PRAT_r$)
- 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)
- SR1 BCCH support indicator ($SR1\_BCCH\_SUPPORTED_s = SR1\_BCCH\_SUPPORTED_r$)
- SR3 support indicator ($SR3\_INCL_s = SR3\_INCL_r$)

The mobile station shall ignore any fields at the end of the *Sync Channel 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.

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

- Number of leap seconds that have occurred since the start of System Time ($LP\_SEC_s = LP\_SEC_r$)
- Offset of local time from System Time ($LTM\_OFF_s = LTM\_OFF_r$)
- Daylight savings time indicator ($DAYLT_s = DAYLT_r$)

If $REDIRECTION_s$ and $NDSS\_ORIG_s$ are equal to disabled, the mobile station may enter the *System Determination Substate* with a reselection indication (see 2.6.1.1).

If $REDIRECTION_s$ is equal to enabled, the EXPECTED_SID field of $REDIRECT\_REC_s$ is not equal to 0, and SID_r is not equal to EXPECTED_SID, the mobile station shall enter the *System Determination Substate* with a wrong system indication (see 2.6.1.1). If $REDIRECTION_s$ is equal to enabled, the EXPECTED_NID field of $REDIRECT\_REC_s$ is not equal to 65535, and NID_r is not equal to EXPECTED_NID, the mobile station shall enter the *System Determination Substate* with a wrong network indication.

If $P\_REV\_IN\_USE_s$ is less than 6, the mobile station shall set $POTENTIAL\_CDMACH_s$ to $CDMA\_FREQ_r$.

If $P\_REV\_IN\_USE_s$ is equal to six, and 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 $POTENTIAL\_CDMACH_s$ equal to $EXT\_CDMA\_FREQ_r$; otherwise, the mobile station

shall set $POTENTIAL\_CDMACH_s$ equal to $CDMA\_FREQ_r$.

If $P\_REV\_IN\_USE_s$ greater than six, the mobile station shall perform the following:

- If the mobile station supports Spreading Rate 3 on the common channels and $SR3\_INCL_s$ is equal to '1', the mobile station shall set:
  - $BRAT_s = SR3\_BRAT_r$;
  - $BCCH\_CODE\_RATE_s = 1/3$;
  - $BCCH_s = SR3\_BCCH\_CODE\_CHAN_r$;
  - $SR3\_PRIMARY\_PILOT_s = SR3\_PRIMARY\_PILOT_r$;
  - $SR3\_PILOT\_POWER1_s = SR3\_PILOT\_POWER1_r$;
  - $SR3\_PILOT\_POWER2_s = SR3\_PILOT\_POWER2_r$;
  - If $SR3\_CENTER\_FREQ\_INCL_r$ is equal to '1', $POTENTIAL\_CDMACH_s = SR3\_CENTER\_FREQ_r$; otherwise, $POTENTIAL\_CDMACH_s = EXT\_CDMA\_FREQ_r$.
- If the mobile station does not support Spreading Rate 3 on the common channel or if $SR3\_INCL_s$ is equal to '0', the mobile station shall perform the following:
  - If $SR1\_BCCH\_SUPPORTED_s$ is equal to '1', the mobile station shall perform the following:
    - If $SR1\_TD\_INCL_r$ is equal to '1' and the mobile station supports the Transmit Diversity mode specified by $SR1\_TD\_MODE_r$, the mobile station shall set:
      - $SR1\_TD\_MODE_s = SR1\_TD\_MODE_r$
      - $SR1\_TD\_POWER\_LEVEL_s = SR1\_TD\_POWER\_LEVEL_r$
      - $BRAT_s = SR1\_BRAT\_TD_r$
      - $SR1\_BRAT\_TD_s = SR1\_BRAT\_TD_r$
      - $BCCH\_CODE\_RATE_s = SR1\_CRAT\_TD_r$,
      - $SR1\_CRAT\_TD_s = SR1\_CRAT\_TD_r$,
      - $BCCH_s = BCCH\_CODE\_CHAN\_TD_r$,
      - $BCCH\_CODE\_CHAN\_TD_s = BCCH\_CODE\_CHAN\_TD_r$,
      - $POTENTIAL\_CDMACH_s = SR1\_CDMA\_FREQ\_TD_r$
    - If $SR1\_TD\_INCL_r$ is equal to '0', or if $SR1\_TD\_INCL_r$ is equal to '1' and the mobile station does not support the Transmit Diversity mode specified by $SR1\_TD\_MODE_r$, the mobile station shall set:
      - $BRAT_s = SR1\_BRAT\_NON\_TD_r$

- 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);

- Set $IMSI\_11\_12_S$ and MCC_S to NULL;
- Perform registration initialization as specified in 2.6.5.5.1.3; and
- If the bits of $TMSI\_CODE_{S-p}$ are not all equal to '1' and if SYS_TIME_S exceeds $TMSI\_EXP\_TIME_{S-p} \times 2^{12}$, the mobile station shall set all the bits of $TMSI\_CODE_{S-p}$ to '1'.

If $SR1\_BCCH\_SUPPORTED_S$ is equal to '0' and $SR3\_INCL_S$ is equal to '0', the mobile station shall:

- Set $PAGECH_S$ to the Primary Paging Channel (see 3.1.3.4 of [2]);
- Set $PAGE\_CHAN_S$ to '1';
- Set the stored message sequence numbers $CONFIG\_MSG\_SEQ_S$, $SYS\_PAR\_MSG\_SEQ_S$, $ACC\_MSG\_SEQ_S$, $NGHBR\_LST\_MSG\_SEQ_S$, $GEN\_NGHBR\_LST\_MSG\_SEQ_S$, $EXT\_NGHBR\_LST\_MSG\_SEQ_S$, $CHAN\_LST\_MSG\_SEQ_S$, $EXT\_SYS\_PAR\_MSG\_SEQ_S$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, $EXT\_CHAN\_LST\_MSG\_SEQ_S$, $USER\_ZONE\_ID\_MSG\_SEQ_S$ and $PRI\_NGHBR\_LST\_MSG\_SEQ_S$ variables to NULL (see 2.6.2.2);
- Set $IMSI\_11\_12_S$ and MCC_S to NULL;
- Perform registration initialization as specified in 2.6.5.5.1.3; and
- If the bits of $TMSI\_CODE_{S-p}$ are not all equal to '1' and if SYS_TIME_S exceeds $TMSI\_EXP\_TIME_{S-p} \times 2^{12}$, the mobile station shall set all the bits of $TMSI\_CODE_{S-p}$ to '1'.

The mobile station shall enter the *Mobile Station Idle State*.

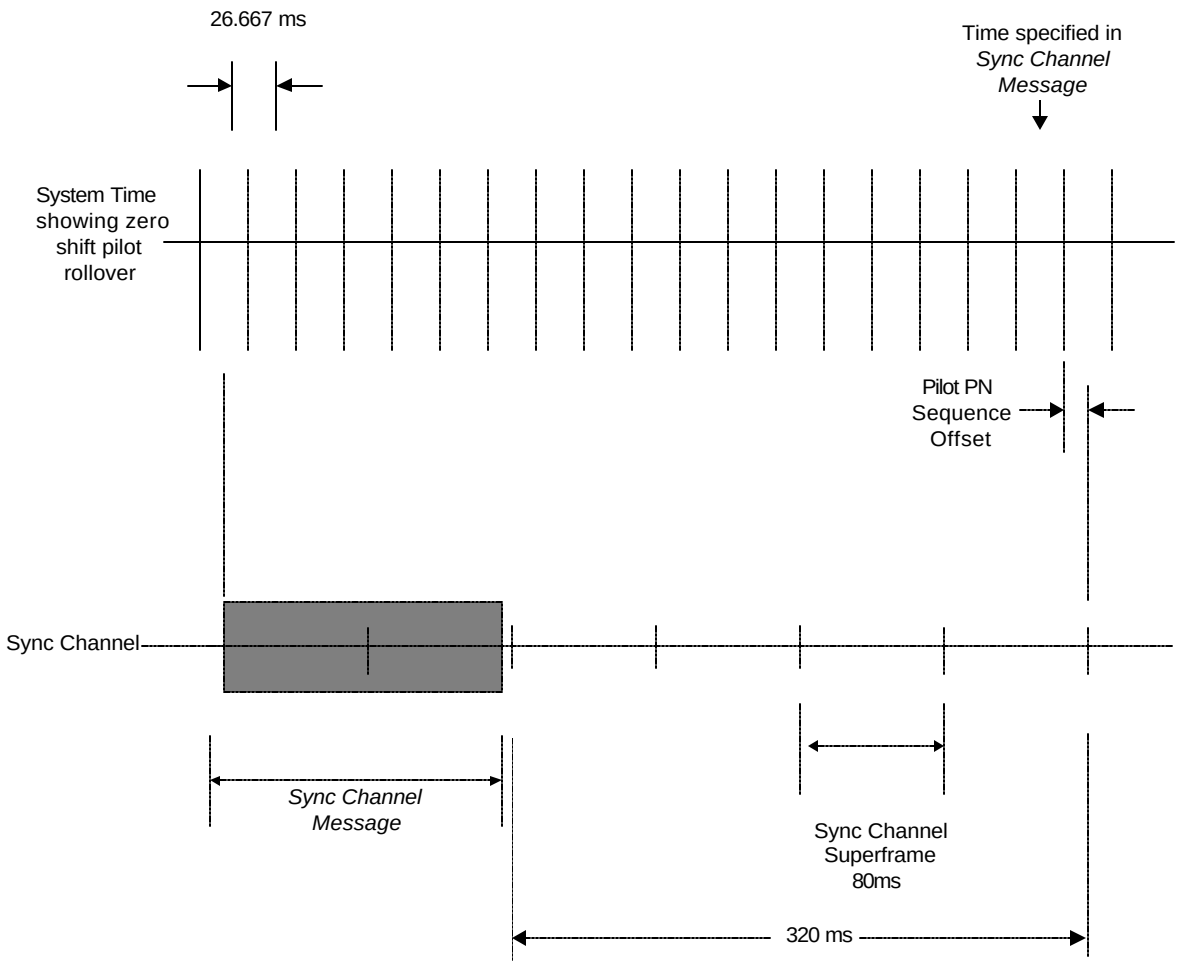


Figure 2.6.1.4-1. Mobile Station Internal Timing

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.

- The mobile station shall perform idle handoff procedures as specified in 2.6.2.1.4.
- The mobile station shall perform system reselection procedures as specified in 2.6.2.1.6.
- The mobile station shall perform the *Response to Overhead Information Operation* as specified in 2.6.2.2 whenever the mobile station receives a system overhead message *(ANSI-41 System Parameters Message, Enhanced Access Parameters Message, Extended CDMA Channel List Message, MC-RR Parameters Message, Universal Neighbor List Message, ANSI-41 RAND Message, System Parameters Message, CDMA Channel List Message, Extended System Parameters Message, Neighbor List Message, Extended Neighbor List Message, General Neighbor List Message, Global Service Redirection Message, Extended Global Service Redirection Message, User Zone Identification Message, Private Neighbor List Message,* or *Access Parameters Message).*
- The mobile station shall perform the *Mobile Station Page Match Operation* as specified in 2.6.2.3 whenever it receives a mobile station-directed page.
- The mobile station shall perform the *Mobile Station Order and Message Processing Operation* as specified in 2.6.2.4 whenever a message or order directed to the mobile station is received other than a mobile station-directed page.
- The mobile station shall set $NDSS\_ORIG_S$ to disabled if directed by the user to cancel the call origination.
- The mobile station shall perform the *Mobile Station Origination Operation* as specified in 2.6.2.5 if directed by the user to initiate a call, or if $NDSS\_ORIG_S$ is equal to enabled.
- The mobile station shall not send any subsequent *Origination Message* containing the same packet data service option until the system time stored in $RETRY\_DELAY_S[001]$. At the system time stored in $RETRY\_DELAY_S[001]$, the mobile station shall reset $RETRY\_DELAY_S[001]$ to 0.
- The mobile station shall perform the *Mobile Station PACA Cancel Operation* as specified in 2.6.2.8, if $PACA_S$ is equal to enabled and any one of the following conditions is met:
  - PACA_CANCEL is equal to ‘1’; or
  - The mobile station is directed by the user to cancel the PACA call.
- If the PACA state timer expires, the mobile station shall perform the following:
  - The mobile station should 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.
  - Otherwise, the mobile station shall perform the *Mobile Station PACA Cancel Operation* as specified in 2.6.2.8.

- If the mobile station supports *Data Burst Message* transmission, it shall perform the *Mobile Station Message Transmission Operation* as specified in 2.6.2.6 if directed by the user to transmit a message.
- If the mobile station supports the *Device Information Message* on the r-csch, $AUTO\_MSG\_SUPPORTED_S$ is equal to '1', and the mobile station has detected a change in hook status, the mobile station shall perform the following:
  - If the autonomous message timer has expired, the mobile station shall perform the *Mobile Station Message Transmission Operation* as specified in 2.6.2.6.
  - If the autonomous message timer has not expired, the mobile station shall set the autonomous message timer equal to $AUTO\_MSG\_INTERVAL_S$ and shall restart the timer.
- The mobile station shall perform the *Mobile Station Power-Down Operation* as specified in 2.6.2.7 if directed by the user to power down.
- 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.

2.6.2.1 Idle Procedures

2.6.2.1.1 Forward Channel Monitoring Procedures

2.6.2.1.1.1 General Overview

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

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

2.6.2.1.1.1.1 General Overview for Individually Addressed Messages

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

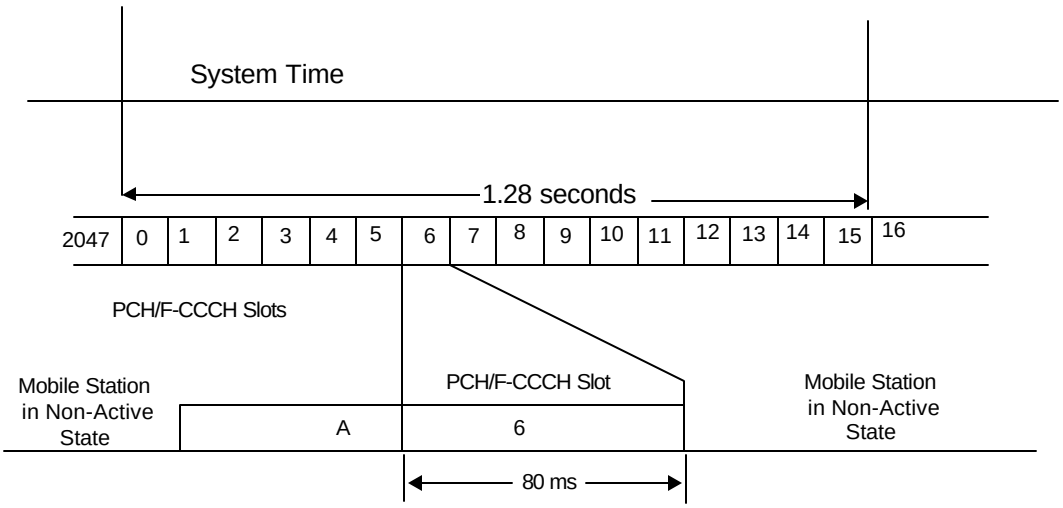
SLOT_NUM is the Paging Channel or the Forward Common Control Channel slot number, modulo the maximum length slot cycle (2048 slots). That is, the value of SLOT_NUM is

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

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

2.6.2.1.1.1.1.1 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.

2.6.2.1.1.1.1.2 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.

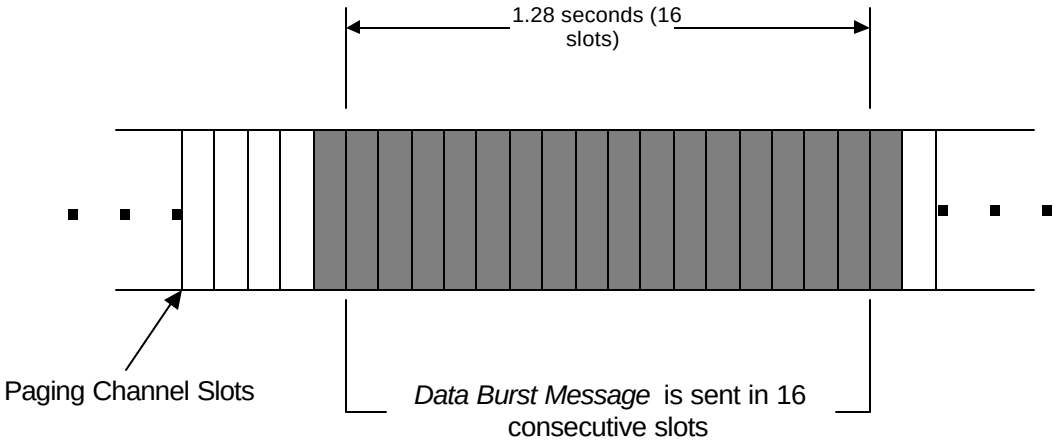


Figure 2.6.2.1.1.1.2.1-1. Multi-Slot Broadcast Message Transmission Example

2.6.2.1.1.1.2.2 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 2.6.2.1.1.1.2.2-1 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.

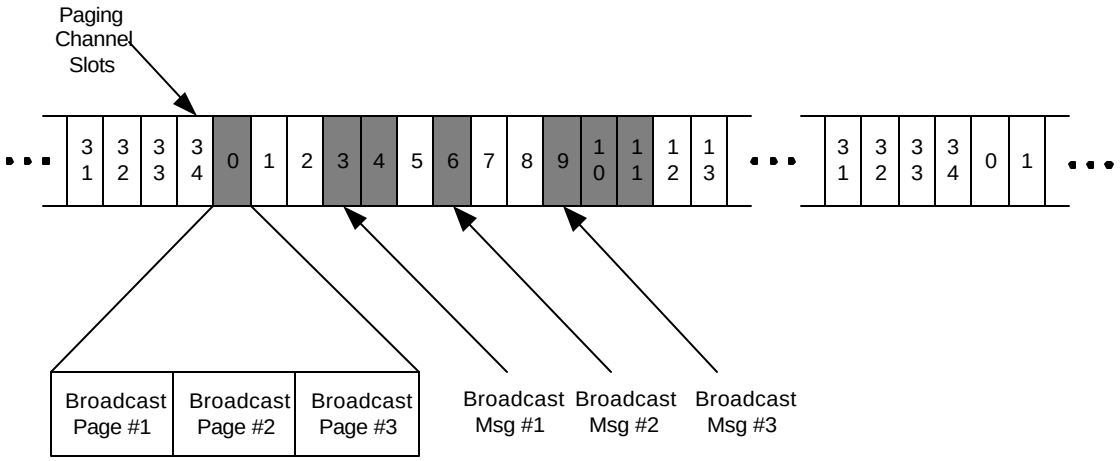


Figure 2.6.2.1.1.1.2.2-1. Periodic Broadcast Paging Example

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.

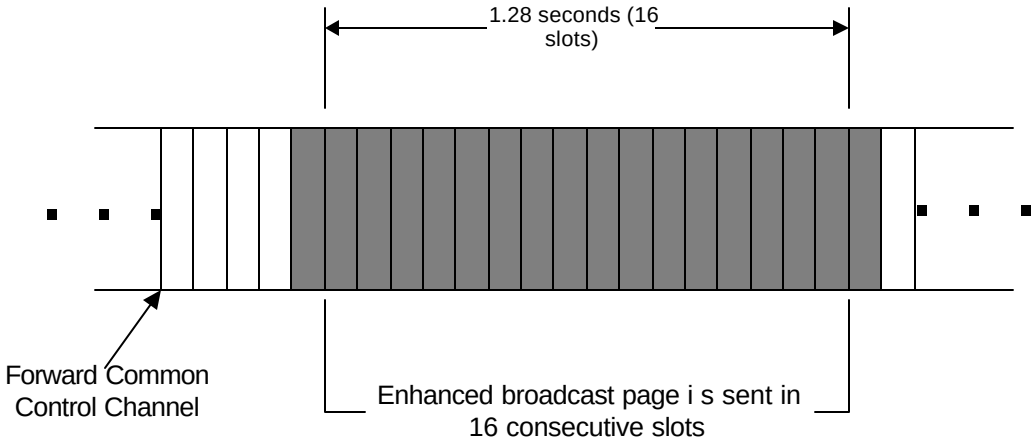


Figure 2.6.2.1.1.1.3.1-1. Multi-Slot Enhanced Broadcast Paging Example

2.6.2.1.1.1.3.2 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:

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

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

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

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

- $SLOTTED_S$ is equal to NO, or
- $PACA_S$ is equal to enabled.

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

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).

2.6.2.1.1.3.1 Monitoring Assigned Slots

If the mobile station does not support Quick Paging Channel operation or if $QPCH\_SUPPORTED_S$ = '0', the mobile station shall monitor the Paging Channel or the Forward Common Control Channel in each of its assigned slots.

If the mobile station supports Quick Paging Channel operation and if $QPCH\_SUPPORTED_S$ = '1', for each of its assigned slots, the mobile station shall perform the following:

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

If the mobile station supports Quick Paging Channel operation, the mobile station is configured to receive broadcast messages, $BCAST\_INDEX_S$ is not equal to '000', and $QPCH\_BI\_SUPPORTED_S$ equals '1', then for each of its assigned broadcast slots on the Forward Common Control Channel, the mobile station shall perform the following:

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

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

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

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

- Layer 3 receives an address mismatch indication from Layer 2; or
- The mobile station has a class 0 IMSI assigned, all the bits of $TMSI\_CODE_{S-p}$ are equal to '1', and the mobile station receives a *General Page Message* with CLASS_0_DONE set to '1'; or
- The mobile station has a class 1 IMSI assigned, all the bits of $TMSI\_CODE_{S-p}$ are equal to '1', and the mobile station receives a *General Page Message* with CLASS_1_DONE set to '1'; or
- The mobile station has a class 0 IMSI assigned, the bits of $TMSI\_CODE_{S-p}$ are not all equal to '1', and the mobile station receives a *General Page Message* with CLASS_0_DONE set to '1' and TMSI_DONE set to '1'; or
- The mobile station has a class 1 IMSI assigned, the bits of $TMSI\_CODE_{S-p}$ are not all equal to '1', and the mobile station receives a *General Page Message* with CLASS_1_DONE set to '1' and TMSI_DONE set to '1'; or

- The mobile station has a class 0 IMSI assigned, the bits of $TMSI\_CODE_{s-p}$ are not all equal to '1', and the mobile station receives a *General Page Message* with CLASS_0_DONE set to '1', ORDERED_TMSIS set to '1' and a record with TMSI_CODE value greater than $TMSI\_CODE_{s-p}$; or
- The mobile station has a class 1 IMSI assigned, the bits of $TMSI\_CODE_{s-p}$ are not all equal to '1', and the mobile station receives a *General Page Message* with CLASS_1_DONE set to '1', ORDERED_TMSIS set to '1' and a record with TMSI_CODE value greater than $TMSI\_CODE_{s-p}$; or
- The mobile station monitors the assigned slot and the slot following the assigned slot, and the mobile station receives at least one valid message (see 2.2.2.3.2 of [4]).

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

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

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

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

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

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

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.

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:

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

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:

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

where i = $BCAST\_INDEX_S$ 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:

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

where i = $MAX\_SLOT\_CYCLE\_INDEX_S$ 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:

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

where i = $BCAST\_INDEX_S$ 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,...). 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.

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

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 Quick Paging Channel broadcast slots or the Forward Common Control Channel broadcast slots (see 2.6.2.1.2) beginning with the first slot of each broadcast paging cycle.

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

- The mobile station shall monitor the Broadcast Control Channel slot which begins 40 ms × (1 + TIME_OFFSET) later than the beginning of the slot in which the message containing the enhanced broadcast page began or the Broadcast Control Channel slot which begins 40 ms × (1 + REPEAT_TIME_OFFSET) later than the Broadcast Control Channel slot in which the first transmission began.

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

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

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

A mobile station configured to receive broadcast messages shall support reception of broadcast messages transmitted using Multi-Slot Enhanced Broadcast Paging (see 2.6.2.1.1.1.3.1).

A mobile station configured to receive broadcast messages shall support reception of broadcast messages transmitted using Periodic Enhanced Broadcast Paging (see 2.6.2.1.1.1.3.2).

2.6.2.1.1.4 Common Channel Supervision

The mobile station shall monitor the Paging Channel, the Forward Common Control Channel, or the Broadcast Control Channel as specified in 2.6.2.1.1. The mobile station 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).

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

If the mobile station is operating in the slotted mode, is configured to receive the broadcast messages, supports the Quick Paging Channel, $BCAST\_INDEX_S$ is not equal to '000', $QPCH\_SUPPORTED_S$ is equal to '1', and $QPCH\_BI\_SUPPORTED_S$ is equal to '1', the mobile station monitors broadcast indicators on the Quick Paging Channel as follows:

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

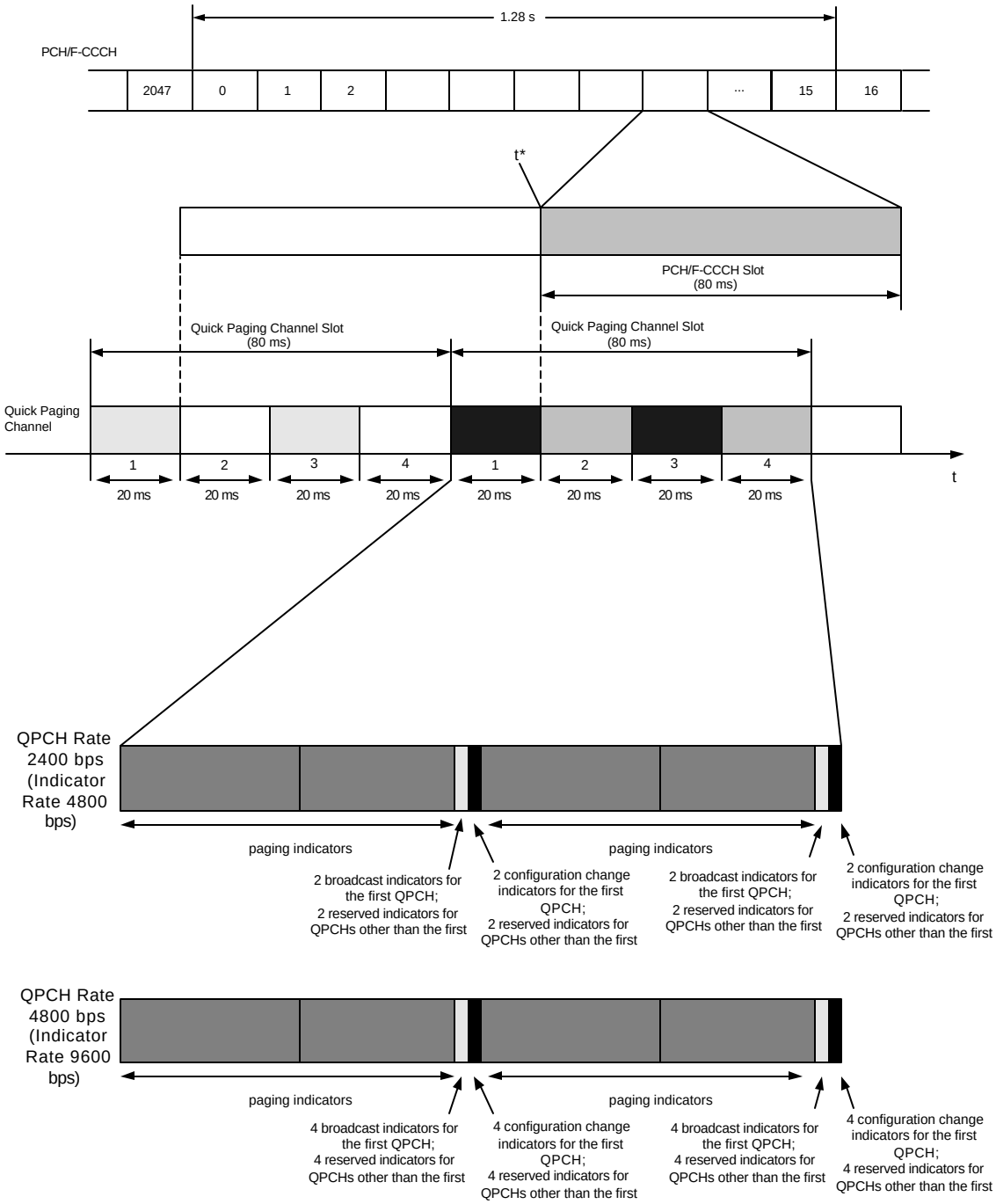


Figure 2.6.2.1.2.1-1. Quick Paging Channel Timeline

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 respective 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.

slotted mode should monitor one or more configuration change indicators on the first Quick Paging Channel for the new base station if all of the following conditions hold:

- The mobile station supports the Quick Paging Channel;
- The mobile station has knowledge that the new base station supports the Quick Paging Channel;
- The mobile station has knowledge that the new base station supports configuration change indicators,
- The mobile station is not monitoring the Paging Channel or the Forward Common Control Channel; and
- No more than T_{31m} seconds have elapsed since the mobile station last received a valid message on the new Paging Channel or the new Forward Common Control Channel.

Before monitoring a configuration change indicator, the mobile station shall perform the following:

- The mobile station shall set $ASSIGNED\_QPAGECH_S$ equal to $QPAGECH_S$, and
- The mobile station shall set $QPAGECH_S$ equal to 1.

Before monitoring a paging indicator subsequent to monitoring a configuration change indicator, the mobile station shall set $QPAGECH_S$ equal to $ASSIGNED\_QPAGECH_S$.

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 configuration change indicators shall be 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 configuration change indicators shall be the last two bits in a Quick Paging Channel slot.

If the Quick Paging Channel data rate is 4800 bps (indicator rate is 9600 bps), the bit positions of the mobile station's first four configuration change indicators shall be 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 configuration change indicators shall be the last four bits in a Quick Paging Channel slot.

If the mobile station monitors a configuration change indicator and determines that it is set to "OFF", the mobile station can enter or remain in the slotted mode after an idle handoff (see 2.6.2.1.4.2).

If a mobile station is operating in the slotted mode and is configured to receive broadcast messages, it should monitor the broadcast indicators in the mobile station's assigned Quick Paging Channel broadcast slot if all of the following conditions hold:

- The mobile station supports the Quick Paging Channel;
- $BCAST\_INDEX_S$ is not equal to '000'
- $QPCH\_BI\_SUPPORTED_S$ = '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 $B = 2^{1+i} \times 16$, $1 \le i \le 7$ 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 $SRCH\_WIN\_NGHBR_S$ field of the NGHBR_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 $SRCH\_OFFSET\_NGHBR_S$ (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 NGHBR_REC for the corresponding pilot to schedule its neighbor search. If ADD_PILOT_REC_INCL field of the NGHBR_REC for the corresponding pilot is equal to '1', the mobile station shall use the information included in the NGHBR_PILOT_REC field for searching the neighbor.

  If the mobile station supports hopping pilot beacons and the TIMING_INCL field of the NGHBR_REC for the corresponding pilot is equal to '1', then the mobile station shall use the information included in the NGHBR_TX_OFFSET, NGHBR_TX_DURATION, and NGHBR_TX_PERIOD fields of the NGHBR_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 $SRCH\_WIN\_PRI\_NGHBR_S$ field of the PRI_NGHBR_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;

- The mobile station has knowledge that the new base station supports configuration change indicators;
- The mobile station determines that the Quick Paging Channel configuration change indicator for the new Quick Paging Channel is set to “OFF” (see 2.6.2.1.2.1); and
- No more than T_{31m} seconds have elapsed since the mobile station last received a valid message on the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel.

Otherwise, the mobile station shall operate in non-slotted mode until the mobile station has received at least one valid configuration message or mobile station-addressed page on the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel. Following the reception of this message the mobile station may resume slotted mode operation in accordance with 2.6.2.1.1.3. After performing an idle handoff, the mobile station shall discard all unprocessed messages received on the old Paging Channel or Forward Common Control Channel/Broadcast Control Channel.

If the new base station is listed in NGHBR_REC_LIST for the old base station (see 2.6.2.2.3, 2.6.2.2.7, and 2.6.2.1.4.1), the mobile station shall use the corresponding 3-bit NGHBR_CONFIG field to determine the actions required to transition to the new base station. If the new base station is not listed in NGHBR_REC_LIST for the old base station, the mobile station shall perform the handoff operation using the same procedure as for a pilot in NGHBR_REC_LIST with the NGHBR_CONFIG field set to ‘011’.

If the NGHBR_CONFIG field is ‘000’, the mobile station shall perform the following:

- The mobile station shall set $ACC\_MSG\_SEQ_S$ and CURR_ACC_MSG_SEQ to NULL (see 2.6.2.2) and shall set $PILOT\_PN_S$ to the pilot offset index of the base station transmitting the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel.
- If the mobile station has not stored configuration parameters for the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel or if the stored information is not current, the mobile station shall perform the following:
  - If the mobile station has monitored the Paging Channel before the idle handoff, 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.

- If the mobile station has monitored the Forward Common Control Channel/Broadcast Control Channel before the idle handoff, 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 Paging Channel or the Forward Common Control Channel/Broadcast Control Channel is current), the mobile station shall set CONFIG_MSG_SEQ$_S$ to the stored information for the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel and the mobile station shall set NGHBR_REC_LIST to the stored information for the new Paging Channel or 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$_S$ 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. The mobile station shall begin monitoring the Paging Channel or the Forward Common Control Channel/Broadcast Control Channel of the new base station, using the same code channel.
- 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 '001', the mobile station shall perform the following:

- The mobile station shall set ACC_MSG_SEQ$_S$ and CURR_ACC_MSG_SEQ to NULL and shall set PILOT_PN$_S$ to the pilot offset index of the base station transmitting the new Paging Channel.
- If the stored information for any of the Paging Channel of the new base station is current, the mobile station shall perform the following:
  - 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$_S$, where PAGE_CHAN$_S$ is the value stored for the Paging Channel whose stored information is current. The mobile station shall store the new Paging Channel number as PAGECH$_S$. The mobile station shall perform the following:

+ 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.

+ 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 mobile station has monitored the Forward Common Control Channel/Broadcast Control Channel before the idle handoff, the mobile station shall set Paging Channel data rate, $PRAT_S$ = '00'.

- 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 $CDMACH_S$ 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. The mobile station shall 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.

- If the mobile station has monitored the Forward Common Control Channel/Broadcast Control Channel before the idle handoff, the mobile station shall set Paging Channel data rate, $PRAT_S$ = '00'.

- 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 $CDMACH_S$ 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. The mobile station shall begin monitoring the Primary Paging 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 '010', the mobile station shall perform the following:

- The mobile station shall set $ACC\_MSG\_SEQ_S$ and CURR_ACC_MSG_SEQ to NULL and shall set $PILOT\_PN_S$ to the pilot offset index of the base station transmitting the new Paging Channel or Forward Common Control Channel/Broadcast Control Channel.
- If the mobile station has monitored the Paging Channel before the idle handoff, the mobile station shall perform the following:
  - If the stored information for any of the Paging Channel of the new base station is current, the mobile station shall perform the following:
    - 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 $PAGE\_CHAN_S$, where $PAGE\_CHAN_S$ is the value stored for the Paging Channel whose stored information is current. The mobile station shall store the new Paging Channel number as $PAGECH_S$. The mobile station shall perform the following:
      - 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.

- o 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.

- 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:

- The mobile station shall set $ACC\_MSG\_SEQ_S$ and CURR_ACC_MSG_SEQ to NULL (see 2.6.2.2) and shall set $PILOT\_PN_S$ to the pilot offset index of the base station transmitting the new Forward Common Control Channel/Broadcast Control Channel.

- 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, the mobile station shall perform the following:

  - 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.

  - After performing the idle handoff to the new base station, the mobile station shall monitor the new Broadcast Control Channel and update the configuration parameters before attempting to monitor the new Forward Common Control Channel.

- Otherwise (if the stored information for the new Forward Common Control Channel/Broadcast Control Channel is current), the mobile station shall set $CONFIG\_MSG\_SEQ_S$ to the stored information for the new Forward Common Control Channel/Broadcast Control Channel and 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 $CDMACH_S$ 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. The mobile station shall begin monitoring the Forward Common Control Channel/Broadcast Control Channel of the new base station, using the same code channel.

- 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.

2.6.2.1.5 Broadcast Control Channel Monitoring

2.6.2.1.5.1 General Overview

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:

- $\text{RESELECT\_INCLUDED}_S$ is equal to '1';
- The following inequality is satisfied:

  $20 \times \log_{10} (E_C/I_O) > \text{EC\_IO\_THRESH}_S$

  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:

- *ANSI-41 System Parameters Message*
- *MC-RR Parameters Message*
- *Enhanced Access Parameters Message*
- *Universal Neighbor List Message*
- *User Zone Identification Message*
- *Private Neighbor List Message*
- *Extended Global Service Redirection Message*
- *Extended CDMA Channel List Message*
- *ANSI-41 RAND Message*

The overhead messages on the Paging Channel are:

- *System Parameters Message*
- *Access 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*

The *Response to Overhead Information Operation* is performed whenever the mobile station receives an overhead message. The mobile station updates internally stored information from the received message's data fields.

Configuration parameters and access parameters are received in the configuration messages and the *Access Parameters Message* or the *Enhanced Access Parameters Message*.

The configuration messages on the Broadcast Control Channel are:

- *ANSI-41 System Parameters Message*
- *MC-RR Parameters Message*
- *Universal Neighbor List Message*
- *User Zone Identification Message*
- *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 ($POWER\_DOWN\_REG_s = POWER\_DOWN\_REG_r$)

- Parameter-change registration indicator ($PARAMETER\_REG_s = PARAMETER\_REG_r$)
- Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_s = SRCH\_WIN\_A_r$)
- Search window size for the Neighbor Set ($SRCH\_WIN\_N_s = SRCH\_WIN\_N_r$)
- Search window size for the Remaining Set ($SRCH\_WIN\_R_s = SRCH\_WIN\_R_r$)
- Maximum age for retention of Neighbor Set members ($NGHBR\_MAX\_AGE_s = NGHBR\_MAX\_AGE_r$)
- Power control reporting threshold ($PWR\_REP\_THRESH_s = PWR\_REP\_THRESH_r$)
- Power control reporting frame count ($PWR\_REP\_FRAMES_s = PWR\_REP\_FRAMES_r$)
- Threshold report mode indicator ($PWR\_THRESH\_ENABLE_s = PWR\_THRESH\_ENABLE_r$)
- Periodic report mode indicator ($PWR\_PERIOD\_ENABLE_s = PWR\_PERIOD\_ENABLE_r$).
- Power report delay ($PWR\_REP\_DELAY_s = PWR\_REP\_DELAY_r$)
- Pilot detection threshold ($T\_ADD_s = T\_ADD_r$)
- Pilot drop threshold ($T\_DROP_s = T\_DROP_r$)
- Active Set versus Candidate Set comparison threshold ($T\_COMP_s = T\_COMP_r$)
- Drop timer value ($T\_TDROP_s = T\_TDROP_r$)
- *Extended System Parameters Message* sent ($EXT\_SYS\_PARAMETER_s = EXT\_SYS\_PARAMETER_r$)
- *Global Service Redirection Message* sent ($GLOBAL\_REDIRECT_s = GLOBAL\_REDIRECT_r$)
- *Extended Global Service Redirection Message* sent ($EXT\_GLOBAL\_REDIRECT_s = EXT\_GLOBAL\_REDIRECT_r$)
- *Extended Neighbor List Message* sent ($EXT\_NGHBR\_LST_s = EXT\_NGHBR\_LST_r$)
- *General Neighbor List Message* sent ($GEN\_NGHBR\_LST_s = GEN\_NGHBR\_LST_r$)
- *User Zone Identification Message* sent ($USER\_ZONE\_ID_s = USER\_ZONE\_ID_r$)
- *Private Neighbor List Message* sent ($PRI\_NGHBR\_LST_s = PRI\_NGHBR\_LST_r$)
- *Extended CDMA Channel List Message* sent ($EXT\_CHAN\_LIST_s = EXT\_CHAN\_LIST_r$)

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 ($SID_s = SID_r$)
- Network identification ($NID_s = NID_r$)
- Registration zone ($REG\_ZONE_s = REG\_ZONE_r$)
- Number of registration zones to be retained ($TOTAL\_ZONES_s = TOTAL\_ZONES_r$)
- Zone timer length ($ZONE\_TIMER_s = ZONE\_TIMER_r$)
- Multiple SID storage indicator ($MULT\_SIDS_s = MULT\_SIDS_r$)
- Multiple NID storage indicator ($MULT\_NIDS_s = MULT\_NIDS_r$)
- Registration period ($REG\_PRD_s = REG\_PRD_r$)
- Base station latitude ($BASE\_LAT_s = BASE\_LAT_r$)
- Base station longitude ($BASE\_LONG_s = BASE\_LONG_r$)
- Registration distance ($REG\_DIST_s = REG\_DIST_r$)

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 $CONFIG\_MSG\_SEQ_s$.

If $GEN\_NGHBR\_LST_S$ is equal to '0', then the mobile station shall perform the following:

- Set $GEN\_NGHBR\_LST\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.
- Set the SRCH_WIN_NGHBR field of NGHBR_REC to $SRCH\_WIN\_N_S$ for all entries.
- Set the SRCH_OFFSET_NGHBR field of NGHBR_REC to '000' for all entries.
- Set the TIMING_INCL field of NGHBR_REC to '0' for all entries.
- Set $NUM\_ANALOG\_NGHBR_S$ to '000' and ANALOG_NGHBR_LIST to NULL.
- If $EXT\_NGHBR\_LST_S$ is equal to '0':
  - Set the SEARCH_PRIORITY field of the NGHBR_REC to '10' (high) for all entries.
  - Set the NGHBR_BAND field of the NGHBR_REC to $CDMABAND_S$ for all entries.
  - Set the NGHBR_FREQ field of the NGHBR_REC to $CDMACH_S$ for all entries.

If $GEN\_NGHBR\_LST_S$ is equal to '1', $GEN\_NGHBR\_LST\_MSG\_SEQ_S$ is equal to $CONFIG\_MSG\_SEQ_S$, and SETTING_SEARCH_WIN is equal to '1', the mobile station shall perform the following:

- Set the SRCH_WIN_NGHBR field of each NGHBR_REC to $SEARCH\_WIN\_N_S$ for all $NGHBR\_SET\_SIZE_S$ entries.
- Set SETTING_SEARCH_WIN to '0'.

If $USER\_ZONE\_ID_S$ is equal to '0', then the mobile station shall perform the following:

- Set $USER\_ZONE\_ID\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.
- Set the UZID field of the UZ_REC to '0000000000000000' for all entries.
- Set the UZ_REV field of the UZ_REC to '0000' for all entries.
- Set the TEMP_SUB field of the UZ_REC to '0' for all entries.

If $USER\_ZONE\_ID_S$ is equal to '1' and the mobile station does not support Tiered Services, then the mobile station shall set $USER\_ZONE\_ID\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.

If $PRI\_NGHBR\_LIST_S$ is equal to '0', then the mobile station shall set $PRI\_NGHBR\_LIST\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.

If $PRI\_NGHBR\_LIST_S$ is equal to '1' and the mobile station does not support Tiered Services, then the mobile station shall set $PRI\_NGHBR\_LIST\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.

The mobile station shall ignore any fields at the end of the *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.

2.6.2.2.1.2 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 $RETRY\_DELAY_S$[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 ($ACC\_MSG\_SEQ_s = ACC\_MSG\_SEQ_r$)
- Number of Access Channels ($ACC\_CHAN_s = ACC\_CHAN_r$)
- Nominal transmit power offset ($NOM\_PWR_s = NOM\_PWR_r$)
- Initial power offset for access ($INIT\_PWR_s = INIT\_PWR_r$)
- Power increment ($PWR\_STEP_s = PWR\_STEP_r$)
- Number of access probes ($NUM\_STEP_s = NUM\_STEP_r$)
- Maximum Access Channel message capsule size ($MAX\_CAP\_SZ_s = MAX\_CAP\_SZ_r$)
- Access Channel preamble length ($PAM\_SZ_s = PAM\_SZ_r$)
- Persistence modifier for Access Channel attempts for registrations which are not responses to the *Registration Request Order* ($REG\_PSIST_s = REG\_PSIST_r$)
- Persistence modifier for Access Channel attempts for message transmissions ($MSG\_PSIST_s = MSG\_PSIST_r$)
- 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 ($PROBE\_PN\_RAN_s = PROBE\_PN\_RAN_r$)
- Acknowledgment timeout ($ACH\_ACC\_TMO_s = ACC\_TMO_r$)

- Access Channel probe backoff range ($PROBE\_BKOFF_s = PROBE\_BKOFF_r$)
- Access Channel probe sequence backoff range ($BKOFF_s = BKOFF_r$)
- Maximum number of probe sequences for an Access Channel request ($MAX\_REQ\_SEQ_s = MAX\_REQ\_SEQ_r$)
- Maximum number of probe sequences for an Access Channel response ($MAX\_RSP\_SEQ_s = MAX\_RSP\_SEQ_r$)
- If $CDMABAND_s$ is equal to '0', the mobile station shall set extended nominal transmit power $NOM\_PWR\_EXT_s$ to '0'; otherwise, the mobile station shall store extended nominal transmit power ($NOM\_PWR\_EXT_s = NOM\_PWR\_EXT_r$).
- IC threshold ($IC\_THRESH_s = -7$)

The mobile station shall also store the following parameters if the mobile station is not in the *Origination Attempt Substate* or *Page Response Substate:*

- Authentication mode (if $AUTH_r$ is equal to '00' or '01', then $AUTH_s = AUTH_r$; otherwise $AUTH_s$ = '01')
- Random challenge value ($RAND_s = RAND_r$)

The mobile station shall ignore any fields at the end of the *Access Parameters 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.

The mobile station shall store the persistence parameter number according to the following rule: If the mobile station's access overload class is in the range 0-9, set $PSIST_s$ equal to $PSIST(0\text{-}9)_r$; otherwise set $PSIST_s$ equal to $PSIST(n)_r$, where n is equal to the mobile station access overload class.

The mobile station shall set CURR_ACC_MSG_SEQ equal to $ACC\_MSG\_SEQ_s$.

2.6.2.2.3 Neighbor List Message

Whenever a valid *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 $NGHBR\_LST\_MSG\_SEQ_s$. If the comparison results in a match, the mobile station shall 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 PILOT_INC field is not within the valid range specified in 3.7.2.3.2.3, then the mobile station shall ignore the *Neighbor List Message* that contains it.

The mobile station shall store the following parameters:

- Configuration message sequence number ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$, $NGHBR\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$)

- Pilot PN sequence offset increment ($PILOT\_INC_S = PILOT\_INC_r$)

The mobile station shall set $NGHBR\_SET\_SIZE_S$ to the number of neighboring base stations contained in the *Neighbor List Message*.

For each of the neighboring base stations contained in the *Neighbor List Message*, the mobile station shall do the following:

- If the ith occurrence of $NGHBR\_CONFIG_r$ is equal to '000', '001', or '010', set the NGHBR_CONFIG field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_CONFIG_r$; otherwise, set the NGHBR_CONFIG field of NGHBR_REC [i] to '011'.
- Set the NGHBR_PN field of NGHBR_REC [i] to the ith occurrence of $NGHBR\_PN_r$.

If $GEN\_NGHBR\_LST\_MSG\_SEQ_S$ is not equal to $CONFIG\_MSG\_SEQ_S$, the mobile station shall perform the following:

- Set the SEARCH_PRIORITY field of the NGHBR_REC to '10' (high) for all $NGHBR\_SET\_SIZE_S$ entries.
- Set the NGHBR_BAND field of NGHBR_REC to $CDMABAND_S$ for all $NGHBR\_SET\_SIZE_S$ entries.
- Set the NGHBR_FREQ field of NGHBR_REC to $CDMACH_S$ for all $NGHBR\_SET\_SIZE_S$ entries.
- 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 $NUM\_ANALOG\_NGHBR_S$ 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:

- $EXT\_SYS\_PARAMETER_S$ is equal to '0',
- $NGHBR\_SET\_ENTRY\_INFO_S$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_S$ 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:

- $EXT\_SYS\_PARAMETER_S$ is equal to '0',
- $NGHBR\_SET\_ACCESS\_INFO_S$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_S$ 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 *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:

- 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 IMSI_M_$S2_p$)
- IMSI_O_11_12_s to IMSI_M_11_12_p
- MCC_O_s to MCC_M_p
- IMSI_O_ADDR_NUM_s to IMSI_M_ADDR_NUM_p

- If IMSI_O is set to the IMSI_T, the mobile station shall set:
  - 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 IMSI_T_$S2_p$).
  - IMSI_O_11_12_s to IMSI_T_11_12_p
  - MCC_O_s to MCC_T_p
  - IMSI_O_ADDR_NUM_s to IMSI_T_ADDR_NUM_p
- Protocol revision level (P_REV_s = P_REV_r) if included in the message; otherwise, P_REV_s = '00000011' for Band Class 0 and P_REV_s = '00000001' for Band Class 1.
- Minimum protocol revision level ($MIN\_P\_REV_s$ = $MIN\_P\_REV_r$) if included in the message; otherwise, $MIN\_P\_REV_s$ = '00000010' for Band Class 0 and $MIN\_P\_REV_s$ = '00000001' for Band Class 1.
- 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)
- Slope of the handoff add/drop criterion ($SOFT\_SLOPE_s$ = $SOFT\_SLOPE_r$) if included in the message; otherwise, $SOFT\_SLOPE_s$ = '000000'.
- Intercept of the handoff add criterion ($ADD\_INTERCEPT_s$ = $ADD\_INTERCEPT_r$)
- Intercept of the handoff drop criterion ($DROP\_INTERCEPT_s$ = $DROP\_INTERCEPT_r$)
- Delete foreign TMSI ($DELETE\_FOR\_TMSI_s$ = $DELETE\_FOR\_TMSI_r$)
- Use TMSI (USE_TMSI_s = USE_TMSI_r)
- TMSI zone length ($TMSI\_ZONE\_LEN_s$ = $TMSI\_ZONE\_LEN_r$)
- TMSI zone number ($TMSI\_ZONE_s$ = $TMSI\_ZONE_r$)
- Maximum number of alternative service options ($MAX\_NUM\_ALT\_SO_s$ = $MAX\_NUM\_ALT\_SO_r$) if included in the message; otherwise, $MAX\_NUM\_ALT\_SO_s$ = '000'.
- System reselection indicator ($RESELECT\_INCLUDED_s$ = $RESELECT\_INCLUDED_r$) if included in the message; otherwise, $RESELECT\_INCLUDED_s$ = '0'.
- Pilot reporting indicator ($PILOT\_REPORT_s$ = $PILOT\_REPORT_r$)

- Neighbor Set access entry handoff information indicator ($NGHBR\_SET\_ENTRY\_INFO_s$ = $NGHBR\_SET\_ENTRY\_INFO_r$) if included in the message; otherwise, $NGHBR\_SET\_ENTRY\_INFO_s$ = '0'.
- Neighbor Set access handoff information indicator ($NGHBR\_SET\_ACCESS\_INFO_s$ = $NGHBR\_SET\_ACCESS\_INFO_r$) if included in the message; otherwise, $NGHBR\_SET\_ACCESS\_INFO_s$ = '0'.
- Short Data Burst supported indicator ($SDB\_SUPPORTED_s$ = $SDB\_SUPPORTED_r$)
- Nominal reverse traffic channel output power offset relative to Reverse Pilot Channel power ($RLGAIN\_TRAFFIC\_PILOT_s$ = $RLGAIN\_TRAFFIC\_PILOT_r$)
- Broadcast GPS Assist Indicator ($BROADCAST\_GPS\_ASST_s$ = $BROADCAST\_GPS\_ASST_r$)
- Reverse Power Control Delay ($REV\_PWR\_CNTL\_DELAY_s$ = $REV\_PWR\_CNTL\_DELAY_r$) if included
- Permission for the mobile station to request QoS settings in the *Origination Message* (MOB_QOS_s = MOB_QOS_r)

If $P\_REV\_IN\_USE_s$ has been changed, the mobile station shall set $ACC\_MSG\_SEQ_s$, CURR_ACC_MSG_SEQ, $SYS\_PAR\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, and $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.

If NGHBR_SET_ENTRY_INFO is equal to '1', the mobile station shall store the access entry handoff in order and message processing operation indicator ($ACC\_ENT\_HO\_ORDER_s$ = $ACC\_ENT\_HO\_ORDER_r$).

If the mobile station supports packet data service options and the PACKET_ZONE_ID field is included in the message, the mobile station shall store the packet data services zone identifier ($PACKET\_ZONE\_ID_s$ = $PACKET\_ZONE\_ID_r$); otherwise, the mobile station shall set $PACKET\_ZONE\_ID_s$ to '00000000'.

If $RESELECT\_INCLUDED_s$ is equal to '1', the mobile station shall store:

- Pilot power threshold (EC_THRESH_s = EC_THRESH_r)
- Pilot E_c/I_o threshold ($EC\_IO\_THRESH_s$ = $EC\_IO\_THRESH_r$)

If $NGHBR\_SET\_ACCESS\_INFO_s$ is equal to '1', the mobile station shall store:

- Access handoff permitted indicator ($ACCESS\_HO_s$ = $ACCESS\_HO_r$)
- Access probe handoff permitted indicator ($ACCESS\_PROBE\_HO_s$ = $ACCESS\_PROBE\_HO_r$)
- If $ACCESS\_PROBE\_HO_s$ is equal to '1', access handoff list update permitted indicator ($ACC\_HO\_LIST\_UPD_s$ = $ACC\_HO\_LIST\_UPD_r$)

- Maximum number of times that the mobile station is permitted to perform an access probe handoff ($MAX\_NUM\_PROBE\_HO_s = MAX\_NUM\_PROBE\_HO_r$)
- Access handoff permitted for message response indicator ($ACCESS\_HO\_MSG\_RSP_s = ACCESS\_HO\_MSG\_RSP_r$)
- Access probe handoff permitted for other messages indicator ($ACC\_PROBE\_HO\_OTHER\_MSG_s = ACC\_PROBE\_HO\_OTHER\_MSG_r$)

If $NGHBR\_SET\_ENTRY\_INFO_s$ or $NGHBR\_SET\_ACCESS\_INFO_s$ is equal to '1', the mobile station shall store the size of the Neighbor Set ($NGHBR\_SET\_SIZE_s = NGHBR\_SET\_SIZE_r$).

If $NGHBR\_SET\_ENTRY\_INFO_s$ 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 $NGHBR\_SET\_ENTRY\_INFO_s$ 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 $NGHBR\_SET\_ACCESS\_INFO_s$ 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 $NGHBR\_SET\_ACCESS\_INFO_s$ 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 set all bits of $TMSI\_CODE_{s-p}$ to '1' if all of the following conditions are met:

- The bits of $TMSI\_CODE_{s-p}$ are not all equal to '1',
- $DELETE\_FOR\_TMSI_s$ is equal to '1', and
- $ASSIGNING\_TMSI\_ZONE\_LEN_{s-p}$ is not equal to $TMSI\_ZONE\_LEN_s$, or the least significant $ASSIGNING\_TMSI\_ZONE\_LEN_{s-p}$ octets of $ASSIGNING\_TMSI\_ZONE_{s-p}$ are not equal to $TMSI\_ZONE_s$.

If the mobile station supports the Quick Paging Channel operation:

- The mobile station shall set $QPCH\_SUPPORTED_s$ to $QPCH\_SUPPORTED_r$.
- If $QPCH\_SUPPORTED_r$ = '1':
  - The mobile station shall set $QPCH\_RATE_s$ to $QPCH\_RATE_r$.
  - If the number of Quick Paging Channels specified in the received message (NUM_QPCH_r) is different from NUM_QPCH_s, the mobile station shall use the hash algorithm specified in 2.6.7.1 to select a new Quick Paging Channel

number in the range 1 to NUM_QPCH_r. The mobile station shall store the new Quick Paging Channel number as $QPAGECH_s$ and as $ASSIGNED\_QPAGECH_s$. The mobile station shall then set NUM_QPCH_s to NUM_QPCH_r.

- The mobile station shall set $QPCH\_POWER\_LEVEL\_PAGE_s$ to $QPCH\_POWER\_LEVEL\_PAGE_r$.
- The mobile station shall set $QPCH\_CCI\_SUPPORTED_s$ to $QPCH\_CCI\_SUPPORTED_r$.
- If $QPCH\_CCI\_SUPPORTED_r$ = '1', the mobile station shall set $QPCH\_POWER\_LEVEL\_CONFIG_s$ to $QPCH\_POWER\_LEVEL\_CONFIG_r$.

If the mobile station supports the *Device Information Message* on the r-csch, the mobile station shall store:

- Autonomous message supported indicator ($AUTO\_MSG\_SUPPORTED_s$ = $AUTO\_MSG\_SUPPORTED_r$)

If $AUTO\_MSG\_SUPPORTED_r$ 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 ($AUTO\_MSG\_INTERVAL_s$ = $AUTO\_MSG\_INTERVAL_r$)

2.6.2.2.6 Global Service Redirection Message

Whenever a *Global Service Redirection Message* is received on the Paging Channel, the configuration message sequence number, $CONFIG\_MSG\_SEQ_r$, shall be compared to that stored in $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$. If the comparison results in a match or if $SYS\_PAR\_MSG\_SEQ_s$ is not current, the mobile station may ignore the message; otherwise, the mobile station shall store the following parameters:

- Configuration message sequence number ($CONFIG\_MSG\_SEQ_s$ = $CONFIG\_MSG\_SEQ_r$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ = $CONFIG\_MSG\_SEQ_r$)
- If the $P\_REV\_IN\_USE_s$ is equal to or greater than 6, the mobile station shall ignore this message, if any of the following conditions is true:
  - $EXT\_GLOBAL\_REDIRECT_s$ = '1'
  - $EXCL\_P\_REV\_MS_r$ = '1'

If the subfield corresponding to the access overload class, $ACCOLC_p$, of the mobile station is set equal to '1' in the $REDIRECT\_ACCOLC_r$ field of the received message, 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):

- Return if fail indicator ($RETURN\_IF\_FAIL_s$ = $RETURN\_IF\_FAIL_r$)

- If $DELETE\_TMSI_r$ is equal to '1', the mobile station shall set all the bits of $TMSI\_CODE_{s-p}$ to '1'
- Redirection record ($REDIRECT\_REC_s$ = redirection record from received message)
- If $RECORD\_TYPE_r$ = '00000001', the mobile station shall:
  - Set $CDMA\_MODE_s$ to '1'
  - Set $DIGITAL\_REG_{s-p}$ to '00000000'
  - Max delay upon redirection ($MAX\_REDIRECT\_DELAY_s$ = $MAX\_REDIRECT\_DELAY_r$)

2.6.2.2.7 Extended Neighbor List Message

Whenever a valid *Extended 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 $EXT\_NGHBR\_LST\_MSG\_SEQ_s$. 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.

If the PILOT_INC field is not within the valid range specified in 3.7.2.3.2.14, then the mobile station shall ignore the *Extended Neighbor List Message* that contains it.

The mobile station shall store the following parameters:

- Configuration message sequence number
  ($CONFIG\_MSG\_SEQ_s$ = $CONFIG\_MSG\_SEQ_r$,
  $EXT\_NGHBR\_LST\_MSG\_SEQ_s$ = $CONFIG\_MSG\_SEQ_r$,
  $NGHBR\_LST\_MSG\_SEQ_s$ = $CONFIG\_MSG\_SEQ_r$)
- Pilot PN sequence offset increment ($PILOT\_INC_s$ = $PILOT\_INC_r$)

The mobile station shall set $NGHBR\_SET\_SIZE_s$ to the number of neighboring base stations contained in the *Extended Neighbor List Message*.

For each of the neighboring base stations contained in the *Extended Neighbor List Message*, if $FREQ\_INCL_r$ equals '0', or if $FREQ\_INCL_r$ equals '1' and $NGHBR\_BAND_r$ is supported, the mobile station shall do the following:

- If the ith occurrence of $NGHBR\_CONFIG_r$ is equal to '000', '001', or '010', set the NGHBR_CONFIG field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_CONFIG_r$; otherwise, set the NGHBR_CONFIG field of NGHBR_REC [i] to '011'.
- Set the NGHBR_PN field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_PN_r$.
- Set the SEARCH_PRIORITY field of NGHBR_REC[i] to the ith occurrence of $SEARCH\_PRIORITY_r$.

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 NGHBR_REC[i] to the ith occurrence of $NGHBR\_BAND_r$.
- Set the NGHBR_FREQ field of NGHBR_REC[i] to the ith 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 NGHBR_REC[i] to $CDMABAND_s$.
- Set the NGHBR_FREQ field of NGHBR_REC[i] to $CDMACH_s$.

If $GEN\_NGHBR\_LST\_MSG\_SEQ_s$ 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 $NUM\_ANALOG\_NGHBR_s$ 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:

- $EXT\_SYS\_PARAMETER_s$ is equal to '0',
- $NGHBR\_SET\_ENTRY\_INFO_s$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_s$ 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:

- $EXT\_SYS\_PARAMETER_s$ is equal to '0',
- $NGHBR\_SET\_ACCESS\_INFO_s$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_s$ 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 $GEN\_NGHBR\_LST\_MSG\_SEQ_s$. If the comparison results in a mismatch, then the mobile station shall process the remaining fields in the message as 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 ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$).
- Pilot PN sequence offset increment ($PILOT\_INC_s = PILOT\_INC_r$).

If $NGHBR\_CONFIG\_PN\_INCL_r$ 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 ($EXT\_NGHBR\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$, $NGHBR\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$).

The mobile station shall set $NGHBR\_SET\_SIZE_s$ 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 $NGHBR\_BAND_r$ is supported, the mobile station shall do the following:

- If $NGHBR\_CONFIG\_PN\_INCL_r$ is equal to '1', set the NGHBR_CONFIG and NGHBR_PN fields as follows:
  - If the ith occurrence of $NGHBR\_CONFIG_r$ is equal to '000', '001', or '010', set the NGHBR_CONFIG field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_CONFIG_r$; otherwise, set the NGHBR_CONFIG field of NGHBR_REC[i] to '011'.
  - Set the NGHBR_PN field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_PN_r$.
- If $NGHBR\_SRCH\_MODE_r$ = '00' or '10' and $EXT\_NGHBR\_LST\_MSG\_SEQ_s$ is not equal to $CONFIG\_MSG\_SEQ_r$, set SEARCH_PRIORITY field of each NGHBR_REC to '10' (high) for all $NGHBR\_SET\_SIZE_s$ entries.
- If $NGHBR\_SRCH\_MODE_r$ = '01' or '11', set the SEARCH_PRIORITY field of NGHBR_REC[i] to the ith occurrence of $SEARCH\_PRIORITY_r$.

- If $NGHBR\_SRCH\_MODE_r$ = ‘00’ or ‘01’, set the SRCH_WIN_NGHBR field of each NGHBR_REC to $SEARCH\_WIN_s$ for all $NGHBR\_SET\_SIZE_s$ entries if $SYS\_PAR\_MSG\_SEQ_s$ is equal to $CONFIG\_MSG\_SEQ_s$; otherwise, set SETTING_SEARCH_WIN to ‘1’.
- If $NGHBR\_SRCH\_MODE_r$ = ‘00’ or ‘01’, set the SRCH_OFFSET_NGHBR field of each NGHBR_REC to ‘000’.
- If $NGHBR\_SRCH\_MODE_r$ = ‘10’ or ‘11’:
  - set the SRCH_WIN_NGHBR field of NGHBR_REC[i] to the ith occurrence of $SRCH\_WIN\_NGHBR_r$
  - if $SRCH\_OFFSET\_INCL_r$ equals to ‘1’, set the SRCH_OFFSET_NGHBR field of NGHBR_REC[i] to the ith occurrence of $SRCH\_OFFSET\_NGHBR_r$, and
  - if $SRCH\_OFFSET\_INCL_r$ equals to ‘0’, set the SRCH_OFFSET_NGHBR field of each NGHBR_REC to ‘000’.
- If USE_TIMING_r is equal to ‘1’, set the TIMING_INCL field of NGHBR_REC[i] to the ith occurrence of $TIMING\_INCL_r$; otherwise, set the TIMING_INCL field of NGHBR_REC to ‘0’ for all entries.

For each of the neighboring base stations contained in the *General Neighbor List Message*, if $FREQ\_FIELDS\_INCL_r$ equals ‘1’, $FREQ\_INCL_r$ equals ‘1’, and $NGHBR\_BAND_r$ is supported, the mobile station shall also perform the following:

- Set the NGHBR_BAND field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_BAND_r$.
- Set the NGHBR_FREQ field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_FREQ_r$.

For each of the neighboring base stations contained in the *General Neighbor List Message*, if USE_TIMING_r is equal to ‘1’ and $TIMING\_INCL_r$ equals ‘1’, the mobile station shall also perform the following:

- Set the NGHBR_TX_OFFSET field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_OFFSET_r$.
- If $GLOBAL\_TIMING\_INCL_r$ is equal to ‘1’, then the mobile station shall:
  - Set the NGHBR_TX_DURATION field of NGHBR_REC to $GLOBAL\_TX\_DURATION_r$ for all entries.
  - Set the NGHBR_TX_PERIOD field of NGHBR_REC to $GLOBAL\_TX\_PERIOD_r$ for all entries.
- If $GLOBAL\_TIMING\_INCL_r$ is equal to ‘0’, then the mobile station shall:

– Set the NGHBR_TX_DURATION field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_DURATION_r$.

– Set the NGHBR_TX_PERIOD field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_PERIOD_r$.

For each of the neighboring base stations contained in the *General Neighbor List Message*, if $FREQ\_FIELDS\_INCL_r$ equals '1' and $FREQ\_INCL_r$ equals '0', or if $FREQ\_FIELDS\_INCL_r$ equals '0' and $EXT\_NGHBR\_LST\_MSG\_SEQ_s$ is not equal to $CONFIG\_MSG\_SEQ_r$, the mobile station shall also do the following:

- Set the NGHBR_BAND field of NGHBR_REC[i] to $CDMABAND_s$.
- Set the NGHBR_FREQ field of NGHBR_REC[i] to $CDMACH_s$.

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:

- $EXT\_SYS\_PARAMETER_s$ is equal to '0'
- $NGHBR\_SET\_ENTRY\_INFO_s$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_s$ 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:

- $EXT\_SYS\_PARAMETER_s$ is equal to '0'
- $NGHBR\_SET\_ACCESS\_INFO_s$ is equal to '0', or
- $EXT\_SYS\_PAR\_MSG\_SEQ_s$ 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 *General Neighbor List Message*. If the *General 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 *General Neighbor List Message*, up to the limits of the mobile station's Neighbor Set storage capacity.

The mobile station shall set $NUM\_ANALOG\_NGHBR_s$ to $NUM\_ANALOG\_NGHBR_r$, the number of neighboring analog systems contained in the *General Neighbor List Message*. For each of the neighboring analog systems contained in the *General Neighbor List Message*, the mobile station shall perform the following:

- Set the BAND_CLASS field of ANALOG_NGHBR_LIST[i] to the ith occurrence of $BAND\_CLASS_r$.
- Set the SYS_A_B field of ANALOG_NGHBR_LIST[i] to the ith occurrence of $SYS\_A\_B_r$.

For each of the neighboring base stations contained in the *General Neighbor List Message*, the mobile station shall set the ADD_PILOT_REC_INCL field of NGHBR_REC[i] to the ith

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$_r$.

– 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 $ADD\_INFO\_INCL1_r$ is equal to '1', set the AUX_PILOT_QOF1 field of NGHBR_PILOT_REC to $QOF1_r$ and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to $QOF2_r$ and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_PILOT_REC to $AUX\_PILOT\_WALSH_r$ with the Walsh Code length specified by $WALSH\_LENGTH_r$.

2.6.2.2.9 User Zone Identification Message

Whenever a *User Zone Identification 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 $USER\_ZONE\_ID\_MSG\_SEQ_s$. 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 ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$, $USER\_ZONE\_ID\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$)
- $UZ\_EXIT\_RCVD_s = UZ\_EXIT_r$

The mobile station shall set NUM_UZID_s to the number of User Zones contained in the *User Zone Identification Message*.

For each User Zone contained in the *User Zone Identification Message*, the mobile station shall do the following:

- Set the UZID field of UZ_REC(i) to the ith occurrence of $UZID_r$.
- Set the UZ_REV field of the UZ_REC(i) to the ith occurrence of UZ_REV_r.
- 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 ith occurrence SID_r.
- Set the NID field of PRI_NGHBR_REC(i) to the ith occurrence NID_r.
- Set the PRI_NGHBR_PN field of PRI_NGHBR_REC(i) to the ith 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 ith occurrence of $BAND\_CLASS_r$.
  - Set the NGHBR_FREQ field of PRI_NGHBR_REC(i) to the ith 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 ith occurrence of $UZID\_INCL_r$.

- For each User Zone supported by the ith private system, the mobile station shall do the following:
  - Set the PS_UZID(j) field of PRI_NGHBR_REC(i) to the jth occurrence of $UZID_r$.
  - Set the PS_UZ_REV(j) field of PRI_NGHBR_REC(i) to the jth occurrence of UZ_REV_r.
  - Set the PS_TEMP_SUB(j) field of PRI_NGHBR_REC(i) to the jth 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 $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$. 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
  ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$,
  $GLOB\_SERV\_REDIR\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$)

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 ($REDIRECT\_P\_MIN_r \le MOB\_P\_REV_p \le REDIRECT\_P\_MAX_r$)).

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:

- Set $CDMA\_MODE_s$ to '1'
- Set $DIGITAL\_REG_{s-p}$ to '00000000'
- Max delay upon redirection ($MAX\_REDIRECT\_DELAY_s = MAX\_REDIRECT\_DELAY_r$)

2.6.2.2.12 Extended CDMA Channel List Message Overview

The mobile station may receive the *Extended CDMA Channel List Message* from the Paging Channel or from the Primary Broadcast Control Channel. The mobile station shall follow requirements defined in 2.6.2.2.12.1 or 2.6.2.2.12.2 to process the *Extended CDMA Channel List Message*.

2.6.2.2.12.1 Extended CDMA Channel List Message on Paging Channel

Whenever an *Extended CDMA Channel List Message* is received on the Paging Channel, the mobile station shall compare the configuration message sequence number, $CONFIG\_MSG\_SEQ_r$, to that stored in $EXT\_CHAN\_LST\_MSG\_SEQ_s$. 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
  ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$,
  $EXT\_CHAN\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$,
  $CHAN\_LST\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$).

The mobile station shall determine the CDMA Channel (Frequency Assignment) for its Paging Channel as follows:

- If $RC\_QPCH\_SEL\_INCL_r$ is equal to '1' and the mobile station is capable of RC greater than 2 or capable of supporting Quick Paging Channel, the mobile station shall eliminate those channels with $RC\_QPCH\_HASH\_IND_r$ equal to '0' from the CDMA channel list and use the hash algorithm specified in 2.6.7.1 and the number of channels whose $RC\_QPCH\_HASH\_IND_r$ is equal to '1' in the *Extended CDMA Channel List Message* to determine the CDMA Channel (Frequency Assignment) for its Paging Channel or Broadcast Control Channel.
- If $RC\_QPCH\_SEL\_INCL_r$ is equal to '0', the mobile station shall use the hash algorithm specified in 2.6.7.1 and the number of channels in the *Extended 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.
- Set $CONFIG\_MSG\_SEQ_S$, $SYS\_PAR\_MSG\_SEQ_S$, $NGHBR\_LST\_MSG\_SEQ_S$, $CHAN\_LST\_MSG\_SEQ_S$, $EXT\_CHAN\_LST\_MSG\_SEQ_S$, $EXT\_NGHBR\_LST\_MSG\_SEQ_S$, $GEN\_NGHBR\_LST\_MSG\_SEQ_S$, $EXT\_SYS\_PAR\_MSG\_SEQ_S$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, $USER\_ZONE\_IDMSG\_SEQ_S$, $PRI\_NGHBR\_LST\_MSG\_SEQ_S$, and $ACC\_MSG\_SEQ_S$ to NULL.
- Tune to the new CDMA Channel.

2.6.2.2.12.2 Extended CDMA Channel List Message on Broadcast Control Channel

Whenever the *Extended CDMA Channel List Message* is received on the Primary Broadcast Control Channel, the mobile station shall compare the configuration message sequence number, $CONFIG\_MSG\_SEQ_r$, to that stored in $CONFIG\_MSG\_SEQ_S$. 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 process the remaining fields in the message as follows:

The mobile station shall store the following parameters:

- Configuration message sequence number ($CONFIG\_MSG\_SEQ_S = CONFIG\_MSG\_SEQ_r$, $EXT\_CHAN\_LST\_MSG\_SEQ_S = CONFIG\_MSG\_SEQ_r$).

To determine the CDMA Channel (Frequency Assignment) for its Broadcast Control Channel, the mobile station shall first select a subset of CDMA channels from the *Extended CDMA Channel List Message* that will be used for channel hashing. The attributes for channel selection are support for Quick Paging Channel and transmit diversity. The preferred order of channel selection is specified by $CHAN\_SEL\_PREF_S$ in the *MC-RR Parameters Message*.

The mobile station shall first select the entire CDMA channel list for channel hashing.

If support for the Quick Paging Channel is preferred for CDMA channel selection over transmit diversity ($CHAN\_SEL\_PREF_S = 0$], the mobile station shall perform the following:

- If the mobile station supports Quick Paging Channel, the mobile station shall select those CDMA channels for further channel selection with the following rules:
  - If $RC\_QPCH\_SEL\_INCL_r$ is equal to '1', the mobile station shall select those CDMA channels with $RC\_QPCH\_HASH\_IND_r$ set to '1'.
  - If $RC\_QPCH\_SEL\_INCL_r$ is equal to '0', the mobile station shall select all CDMA channels in the *Extended CDMA Channel List Message* for further channel selection processing.

- If $TD\_SEL\_INCL_r$ is equal to '1' and the mobile station is capable of supporting the transmit diversity mode specified by TD_MODE_r, the mobile station shall select those channels with $TD\_HASH\_IND_r$ set to '1' from the previously selected channel subset of the CDMA channel list.
- If $TD\_SEL\_INCL_r$ is equal to '1' and the mobile station's transmit diversity support is different than the transmit diversity mode specified by TD_MODE_r, the mobile station shall select those channels with $TD\_HASH\_IND_r$ set to '0' from the previously selected channel subset of the CDMA channel list.

• If the mobile station does not support Quick Paging Channel, the mobile station shall determine the CDMA Channel [frequency assignment] for its Broadcast Control Channel as specified below:

- If $TD\_SEL\_INCL_r$ is equal to '1' and the mobile station is capable of supporting transmit diversity mode specified by TD_MODE_r, the mobile station shall select from the CDMA channel list those CDMA channels that have $TD\_HASH\_IND_r$ set to '1'.
- If $TD\_SEL\_INCL_r$ is equal to '1' and the mobile station's transmit diversity support is different than that specified by TD_MODE_r, the mobile station shall select from the CDMA channel list those channels with $TD\_HASH\_IND_r$ set to '0'.

If support for transmit diversity is preferred for CDMA channel selection over support for the QPCH (i.e., $CHAN\_SEL\_PREF_s$ = 1], the mobile station shall perform the following:

• If $TD\_SEL\_INCL_r$ is equal to '1' and the mobile station is capable of supporting the transmit diversity mode specified by TD_MODE_r, the mobile station shall select those CDMA channels that have $TD\_HASH\_IND_r$ set to '1' from the CDMA channel list. The mobile station shall continue channel selection from the previous selected subset of the CDMA channel list in the message as follows:

- If $RC\_QPCH\_SEL\_INCL_r$ is equal to '1' and the mobile station is capable of supporting QPCH, the mobile station shall select those CDMA channels with $RC\_QPCH\_HASH\_IND_r$ set to '1'.
- Otherwise, the mobile station shall use the entire previously selected channel subset for CDMA channel hashing.

After the channel subset is selected, the mobile station shall use the hash algorithm specified in 2.6.7.1 with the number of channels in the selected channel subset of the CDMA channel list to determine the CDMA Channel (Frequency Assignment) for its Broadcast Control Channel.

If the CDMA Frequency Assignment has changed (the computed CDMA Channel is different from $CDMACH_s$), the mobile station shall perform the following:

- Set $CDMACH_s$ to the new CDMA Channel.
- Set $CONFIG\_MSG\_SEQ_s$, $A41\_SYS\_PAR\_MSG\_SEQ_s$, $MC\_RR\_PAR\_MSG\_SEQ_s$, $UNI\_NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, and $PRI\_NGHBR\_LST\_MSG\_SEQ_s$ and $ACC\_MSG\_SEQ_s$ to NULL
- If the assigned CDMA channel supports transmit diversity, the mobile station shall set the following fields corresponding to the assigned CDMA channel:
  - $SR1\_TD\_POWER\_LEVEL_s = TD\_POWER\_LEVEL_r$.
  - $SR1\_TD\_MODE_s = TD\_MODE_r$.
  - $BRAT_s = SR1\_BRAT\_TD_s$.
  - $BCCH\_CODE\_RATE_s = SR1\_CRAT\_TD_s$.
  - $BCCH_s = BCCH\_ CODE\_CHAN\_TD_s$.
- Otherwise, the mobile station shall set the following fields corresponding to the assigned CDMA channel:
  - $BRAT_s = SR1\_BRAT\_NON\_TD_s$,
  - $BCCH\_CODE\_RATE_s = SR1\_CRAT\_NON\_TD_s$,
  - $BCCH_s = BCCH\_CODE\_CHAN\_NON\_TD_s$,
- Tune to the new CDMA Channel

2.6.2.2.13 ANSI-41 System Parameters Message

Whenever an *ANSI-41 System Parameters Message* is received, the configuration message sequence number, $CONFIG\_MSG\_SEQ_r$, shall be compared to that stored in $A41\_SYS\_PAR\_MSG\_SEQ_s$. 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 2.6.2.2.13.1, 2.6.2.2.13.2, 2.6.2.2.13.3, and 2.6.2.2.13.4.

If REG_PRD is not within the valid range specified in 3.7.2.3.2.1, then the mobile station shall ignore the *ANSI-41 System Parameters Message* that contains it.

2.6.2.2.13.1 Stored Parameters

The mobile station shall store the following parameters:

- Configuration message sequence number ($CONFIG\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$, $A41\_SYS\_PAR\_MSG\_SEQ_s = CONFIG\_MSG\_SEQ_r$)
- 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 ($POWER\_DOWN\_REG_s = POWER\_DOWN\_REG_r$)
- Parameter-change registration indicator ($PARAMETER\_REG_s = PARAMETER\_REG_r$)
- Preferred Enhanced Access Channel MSID type ($PREF\_MSID\_TYPE_s = PREF\_MSID\_TYPE_r$)
- 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 $A41\_SYS\_PAR\_MSG\_SEQ_s$ and $EXT\_CHAN\_LST\_MSG\_SEQ_s$ to NULL.
- If $OTHER\_INFO\_INCL_r$ is set to '1', the mobile station shall store:
  - Base station identification ($BASE\_ID_s = BASE\_ID_r$)
  - 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 ($IMSI\_11\_12_s = IMSI\_11\_12_r$).
  - Broadcast GPS assist indicator ($BROADCAST\_GPS\_ASST_s = BROADCAST\_GPS\_ASST_r$)
  - Signaling encryption supported indicator ($SIG\_ENCRYPT\_SUP_s = SIG\_ENCRYPT\_SUP_r$)
  - Store encryption key indicator ($STORE\_KEY_s = STORE\_KEY_r$)
- If IMSI_O is set to the IMSI_M, the mobile station shall set:

  - $IMSI\_O\_S_s$ to $IMSI\_M\_S_p$ (i.e., $IMSI\_O\_S1_s$ to $IMSI\_M\_S1_p$ and $IMSI\_O\_S2_s$ to $IMSI\_M\_S2_p$)
  - $IMSI\_O\_11\_12_s$ to $IMSI\_M\_11\_12_p$
  - MCC_O_s to MCC_M_p
  - $IMSI\_O\_ADDR\_NUM_s$ to $IMSI\_M\_ADDR\_NUM_p$
- If IMSI_O is set to the IMSI_T, the mobile station shall set:
  - $IMSI\_O\_S_s$ to $IMSI\_T\_S_p$ (i.e., $IMSI\_O\_S1_s$ to $IMSI\_T\_S1_p$ and $IMSI\_O\_S2_s$ to $IMSI\_T\_S2_p$).
  - $IMSI\_O\_11\_12_s$ to $IMSI\_T\_11\_12_p$
  - MCC_O_s to MCC_T_p
  - $IMSI\_O\_ADDR\_NUM_s$ to $IMSI\_T\_ADDR\_NUM_p$
- Delete foreign TMSI ($DELETE\_FOR\_TMSI_s$ = $DELETE\_FOR\_TMSI_r$)
- Use TMSI (USE_TMSI_s = USE_TMSI_r)
- TMSI zone length ($TMSI\_ZONE\_LEN_s$ = $TMSI\_ZONE\_LEN_r$)
- TMSI zone number ($TMSI\_ZONE_s$ = $TMSI\_ZONE_r$)
- Maximum number of alternative service options ($MAX\_NUM\_ALT\_SO_s$ = $MAX\_NUM\_ALT\_SO_r$) if included in the message; otherwise, $MAX\_NUM\_ALT\_SO_s$ = '000'.
- The mobile station shall set all bits of $TMSI\_CODE_{s-p}$ to '1' if all of the following conditions are met:
  - The bits of $TMSI\_CODE_{s-p}$ are not all equal to '1',
  - $DELETE\_FOR\_TMSI_s$ is equal to '1', and
  - $ASSIGNING\_TMSI\_ZONE\_LEN_{s-p}$ is not equal to $TMSI\_ZONE\_LEN_s$, or the least significant $ASSIGNING\_TMSI\_ZONE\_LEN_{s-p}$ octets of $ASSIGNING\_TMSI\_ZONE_{s-p}$ are not equal to $TMSI\_ZONE_s$.

If the mobile station supports packet data service, the mobile station shall store the packet data services zone identifier ($PACKET\_ZONE\_ID_s$ = $PACKET\_ZONE\_ID_r$); otherwise, the mobile station shall set $PACKET\_ZONE\_ID_s$ to '00000000'.

If the mobile station supports the *Device Information Message* on the r-csch, the mobile station shall store:

- Autonomous message supported indicator ($AUTO\_MSG\_SUPPORTED_s$= $AUTO\_MSG\_SUPPORTED_r$)

If $AUTO\_MSG\_SUPPORTED_r$ 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 ($AUTO\_MSG\_INTERVAL_s = AUTO\_MSG\_INTERVAL_r$)

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 ($SID_s = SID_r$)
- Network identification ($NID_s = NID_r$)
- Registration zone ($REG\_ZONE_s = REG\_ZONE_r$)
- Number of registration zones to be retained ($TOTAL\_ZONES_s = TOTAL\_ZONES_r$)
- Zone timer length ($ZONE\_TIMER_s = ZONE\_TIMER_r$)
- Multiple SID storage indicator ($MULT\_SIDS_s = MULT\_SIDS_r$)
- Multiple NID storage indicator ($MULT\_NIDS_s = MULT\_NIDS_r$)
- Registration period ($REG\_PRD_s = REG\_PRD_r$)
- If DIST_REG_INCL is equal to '1', the mobile station shall store:
  - Registration distance ($REG\_DIST_s = REG\_DIST_r$)
- If DIST_REG_INCL is equal to '0', then the mobile station shall set REG_DIST equal to '00000000000'.

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_REVs = P_REVr)
- Protocol revision level currently in use (P_REV_IN_USEs = the lesser value of P_REVs and MOB_P_REVp of the current band class)

- Minimum protocol revision level (MIN_P_REVs = MIN_P_REVr) if included in the message; otherwise, MIN_P_REVs = '00000010' for Band Class 0 and MIN_P_REVs = '00000001' for Band Class 1.
- Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_s$ = $SRCH\_WIN\_A_r$)
- Search window size for the Remaining Set ($SRCH\_WIN\_R_s$ = $SRCH\_WIN\_R_r$)
- Pilot detection threshold (T_ADD_s = T_ADD_r)
- Pilot drop threshold (T_DROP_s = T_DROP_r)
- Active Set versus Candidate Set comparison threshold (T_COMP_s = T_COMP_r)
- Drop timer value (T_TDROP_s = T_TDROP_r)
- Maximum age for retention of Neighbor Set members ($NGHBR\_MAX\_AGE_s$ = $NGHBR\_MAX\_AGE_r$)
- Slope of the handoff add/drop criterion ($SOFT\_SLOPE_s$ = $SOFT\_SLOPE_r$) if included in the message; otherwise, $SOFT\_SLOPE_s$ = '000000'.
- Intercept of the handoff add criterion ($ADD\_INTERCEPT_s$ = $ADD\_INTERCEPT_r$)
- Intercept of the handoff drop criterion ($DROP\_INTERCEPT_s$ = $DROP\_INTERCEPT_r$)
- If $ENC\_SUPPORTED_r$ is equal to '1', the mobile station shall store:
  - Signaling encryption supported indicator ($SIG\_ENCRYPT\_SUP_s$ = $SIG\_ENCRYPT\_SUP_r$)
  - User information encryption supported indicator ($UI\_ENCRYPT\_SUP_s$ = $UI\_ENCRYPT\_SUP_r$)
  - Store encryption key indicator ($STORE\_KEY_s$ = $STORE\_KEY_r$)

If $P\_REV\_IN\_USE_s$ has been changed, the mobile station shall set $ACC\_MSG\_SEQ_s$, CURR_ACC_MSG_SEQ, $A41\_SYS\_PAR\_MSG\_SEQ_s$, $UNI\_NGHBR\_LST\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.

If $CCH\_INFO\_INCL_r$ is equal to '1', the mobile station shall store:

- 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 ($IMSI\_11\_12_s = IMSI\_11\_12_r$).

- *Extended Global Service Redirection Message* sent ($EXT\_GLOBAL\_REDIRECT_s = EXT\_GLOBAL\_REDIRECT_r$) if included; otherwise, $EXT\_GLOBAL\_REDIRECT_s$ = '0'
- *User Zone Identification Message* sent ($USER\_ZONE\_ID_s = USER\_ZONE\_ID_r$) if included; otherwise, $USER\_ZONE\_ID_s$ = '0'
- *Private Neighbor List Message* sent ($PRI\_NGHBR\_LST_s = PRI\_NGHBR\_LST_r$) if included; otherwise, $PRI\_NGHBR\_LST_s$ = '0'
- *ANSI-41 RAND Message* sent ($SENDING\_RAND_s = SENDING\_RAND_r$) if included; otherwise, $SENDING\_RAND_s$ = '0'
- Maximum slot cycle index ($MAX\_SLOT\_CYCLE\_INDEX_s = MAX\_SLOT\_CYCLE\_INDEX_r$)
- Power control reporting threshold ($PWR\_REP\_THRESH_s = PWR\_REP\_THRESH_r$)
- Power control reporting frame count ($PWR\_REP\_FRAMES_s = PWR\_REP\_FRAMES_r$)
- Threshold report mode indicator ($PWR\_THRESH\_ENABLE_s = PWR\_THRESH\_ENABLE_r$)
- Periodic report mode indicator ($PWR\_PERIOD\_ENABLE_s = PWR\_PERIOD\_ENABLE_r$).
- Power report delay ($PWR\_REP\_DELAY_s = PWR\_REP\_DELAY_r$)
- System reselection indicator ($RESELECT\_INCLUDED_s = RESELECT\_INCLUDED_r$).
- Base station latitude ($BASE\_LAT_s = BASE\_LAT_r$)
- Base station longitude ($BASE\_LONG_s = BASE\_LONG_r$)
- Pilot reporting indicator ($PILOT\_REPORT_s = PILOT\_REPORT_r$)
- Short Data Burst supported indicator ($SDB\_SUPPORTED_s = SDB\_SUPPORTED_r$)
- Broadcast GPS Assist Indicator ($BROADCAST\_GPS\_ASST_s = BROADCAST\_GPS\_ASST_r$)
- Nominal reverse traffic channel output power offset relative to Reverse Pilot Channel power ($RLGAIN\_TRAFFIC\_PILOT_s = RLGAIN\_TRAFFIC\_PILOT_r$)
- Data rate for the Forward Common Control Channels ($FCCCH\_RATE_s = FCCCH\_RATE_r$)
- Code rate for the Forward Common Control Channels ($FCCCH\_CODE\_RATE_s = FCCCH\_CODE\_RATE_r$)

- For i = 0 to NUM_FCCCH_S - 1, store the channel code index for each Forward Common Control Channel ($FCCCH\_CODE\_CHAN_S[i] = FCCCH\_CODE\_CHAN_r$
- Broadcast index ($BCAST\_INDEX_S = BCAST\_INDEX_r$)
- If $NUM\_BCCH\_BCAST_r$ is greater than '000', i occurrences of the following fields, where i ranges from 1 to $NUM\_BCCH\_BCAST_r$:
  - BCCH walsh code index ($BCCH\_CODE\_CHAN[i]_S = BCCH\_CODE\_CHAN[i]_r$)
  - BCCH data rate ($BRAT[i]_S = BRAT[i]_r$)
  - BCCH code rate ($BCCH\_CODE\_RATE[i]_S = BCCH\_CODE\_RATE[i]_r$)
- Sync ID supported indicator ($USE\_SYNC\_ID_S = USE\_SYNC\_ID_r$)
- Access entry handoff in order and message processing operation indicator ($ACC\_ENT\_HO\_ORDER_S = ACC\_ENT\_HO\_ORDER_r$).
- If REV_PWR_CNTL_DELAY_INCL is equal to '1', reverse power control delay ($REV\_PWR\_CNTL\_DELAY_S = REV\_PWR\_CNTL\_DELAY_r$)
- Permission indicator for the mobile station to request QoS settings in the *Origination Message* ($MOB\_QOS_S = MOB\_QOS_r$)
- If $RESELECT\_INCLUDED_S$ is equal to '1', the mobile station shall store:
  - Pilot power threshold ($EC\_THRESH_S = EC\_THRESH_r$)
  - Pilot E_c/I_o threshold ($EC\_IO\_THRESH_S = EC\_IO\_THRESH_r$)
- Access handoff permitted indicator ($ACCESS\_HO_S = ACCESS\_HO_r$)
- Access probe handoff permitted indicator ($ACCESS\_PROBE\_HO_S = ACCESS\_PROBE\_HO_r$)
- If $ACCESS\_PROBE\_HO_S$ is equal to '1', access handoff list update permitted indicator ($ACC\_HO\_LIST\_UPD_S = ACC\_HO\_LIST\_UPD_r$)
- Maximum number of times that the mobile station is permitted to perform an access probe handoff ($MAX\_NUM\_PROBE\_HO_S = MAX\_NUM\_PROBE\_HO_r$)
- Access handoff permitted for message response indicator ($ACCESS\_HO\_MSG\_RSP_S = ACCESS\_HO\_MSG\_RSP_r$)
- Access probe handoff permitted for other messages indicator ($ACC\_PROBE\_HO\_OTHER\_MSG_S = ACC\_PROBE\_HO\_OTHER\_MSG_r$)
- If $USER\_ZONE\_ID_S$ is equal to '0', then the mobile station shall perform the following:
  - Set $USER\_ZONE\_ID\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.

- Set the UZID field of the UZ_REC to '0000000000000000' for all entries.
- Set the UZ_REV field of the UZ_REC to '0000' for all entries.
- Set the TEMP_SUB field of the UZ_REC to '0' for all entries.

- If $USER\_ZONE\_ID_S$ is equal to '1' and the mobile station does not support Tiered Services, then the mobile station shall set $USER\_ZONE\_ID\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.
- If $PRI\_NGHBR\_LIST_S$ is equal to '0', then the mobile station shall set $PRI\_NGHBR\_LIST\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.
- If $PRI\_NGHBR\_LIST_S$ is equal to '1' and the mobile station does not support Tiered Services, then the mobile station shall set $PRI\_NGHBR\_LIST\_MSG\_SEQ_S$ to $CONFIG\_MSG\_SEQ_S$.
- If $SENDING\_RAND_S$ is equal to '1' and the mobile station is not in the *Origination Attempt Substate* or *Page Response Substate*, then the mobile station shall set $AUTH_S$ to '01'. Otherwise, the mobile station shall set $AUTH_S$ to '00'.

If $CCH\_INFO\_INCL_r$ is equal to '1' and the mobile station supports the Quick Paging Channel operation:

- The mobile station shall set $QPCH\_SUPPORTED_S$ to $QPCH\_SUPPORTED_r$.
- If $QPCH\_SUPPORTED_r$ = '1':
  - The mobile station shall set $QPCH\_RATE_S$ to $QPCH\_RATE_r$.
  - If the mobile station is monitoring the Broadcast Control Channel in Spreading Rate 1 and the number of Quick Paging Channels specified in the received message (NUM_QPCH_r) is different from NUM_QPCH_S, the mobile station shall use the hash algorithm specified in 2.6.7.1 to select a new Quick Paging Channel number in the range 1 to NUM_QPCH_r. The mobile station shall store the new Quick Paging Channel number as $QPAGECH_S$ and as $ASSIGNED\_QPAGECH_S$. The mobile station shall then set NUM_QPCH_S to NUM_QPCH_r.
  - If the mobile station is monitoring the Broadcast Control Channel in Spreading Rate 3 and the number of Quick Paging Channels specified in the received message (NUM_QPCH_r) is different from NUM_QPCH_S, the mobile station shall perform the following:

    The mobile station shall use the hash algorithm specified in 2.6.7.1 to select a new Quick Paging Channel number in the range 1 to NUM_QPCH_r.

    The mobile station shall store the new Quick Paging Channel number as $QPAGECH_S$ and as $ASSIGNED\_QPAGECH_S$.

For i = 0 to NUM_QPCH_s - 1, store the channel code index for each Quick Paging Channel ($QPCH\_CODE\_CHAN_s[i] = QPCH\_CODE\_CHAN_r$.

- The mobile station shall set $QPCH\_POWER\_LEVEL\_PAGE_s$ to $QPCH\_POWER\_LEVEL\_PAGE_r$.
- The mobile station shall set $QPCH\_CCI\_SUPPORTED_s$ to $QPCH\_CCI\_SUPPORTED_r$.
- If $QPCH\_CCI\_SUPPORTED_r$ = '1', the mobile station shall set $QPCH\_POWER\_LEVEL\_CONFIG_s$ to $QPCH\_POWER\_LEVEL\_CONFIG_r$.
- The mobile station shall set $QPCH\_BI\_SUPPORTED_s$ to $QPCH\_BI\_SUPPORTED_r$.
- If $QPCH\_BI\_SUPPORTED_r$ = '1', the mobile station shall set $QPCH\_POWER\_LEVEL\_BCAST_s$ to $QPCH\_POWER\_LEVEL\_BCAST_r$.

The mobile station shall ignore any fields at the end of the *MC-RR 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.

2.6.2.2.14.2 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.

2.6.2.2.14.3 Forward Common Control Channel Assignment Change

If the number of Forward Common Control Channels specified in the *MC-RR Parameters Message* (NUM_FCCCH_r) is different from NUM_FCCCH_s, the mobile station shall use the hash algorithm specified in 2.6.7.1 to select a new Forward Common Control Channel number in the range 1 to NUM_FCCCH_r and shall store this value as $FCCCH\_ID_s$, store $FCCCH\_CODE\_RATE_r$ and $FCCCH\_CODE\_CHAN_r$ of the corresponding Forward Common Control Channel as $FCCCH\_CODE\_RATE_s$ and $FCCCH\_CODE\_CHAN_s$. The mobile station shall then set NUM_FCCCH_s to NUM_FCCCH_r.

The mobile station shall set $ACC\_MSG\_SEQ_s$ to NULL.

2.6.2.2.15 Enhanced Access Parameters Message

Whenever an *Enhanced Access Parameters Message* is received on the f-csch, 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 *Enhanced Access*

Parameters Message that contains them.

The mobile station shall store the following parameters:

- *Enhanced Access Parameters Message* sequence number ($ACC\_MSG\_SEQ_s = ACC\_MSG\_SEQ_r$)
- Persistence related parameters:
  - If PSIST_PARMS_INCL is equal to '1', store the following:
    - Persistence parameter number according to the following rule: If the mobile station's access overload class is in the range 0-9 inclusive, set $PSIST\_EACH_s$ equal to $PSIST(0\text{-}9)\_EACH_r$; otherwise set $PSIST\_EACH_s$ equal to $PSIST(n)\_EACH_r$, where n is equal to the mobile station access overload class.
    - Persistence modifier for Enhanced Access Channel attempts for registrations which are not responses to the *Registration Request Order* ($REG\_PSIST\_EACH_s = REG\_PSIST\_EACH_r$).
    - Persistence modifier for Enhanced Access Channel attempts for message transmissions ($MSG\_PSIST\_EACH_s = MSG\_PSIST\_EACH_r$).
    - Persistence modifier for emergency calls by the mobile stations in access overload classes 0 to 9($PSIST\_EMG_s = PSIST\_EMG_r$).
  - If $PSIST\_PARMS\_INCL_r$ is equal to '0', store the following:
    - Set $PSIST_s$ to '0'.
    - Persistence modifier for emergency calls by a mobile station in access overload classes 0 to 9 ($PSIST\_EMG_s$ = '0').
    - Persistence modifier for Access Channel attempts for message transmissions (MSG_PSIST_s = '0').
    - Persistence modifier for Enhanced Access Channel attempts for registrations which are not responses to the *Registration Request Order* (REG_PSIST_s = '0').
- Link Access Control related parameters:
  - Acknowledgment timeout ($EACH\_ACC\_TMO_s = ACC\_TMO_r$)
  - Time randomization for Enhanced Access Channel probes ($PROBE\_PN\_RAN_s = PROBE\_PN\_RAN_r$)
  - Maximum number of probe sequences for an Enhanced Access Channel request ($MAX\_REQ\_SEQ_s = MAX\_REQ\_SEQ_r$)
  - Maximum number of probe sequences for an Enhanced Access Channel response ($MAX\_RSP\_SEQ_s = MAX\_RSP\_SEQ_r$)

- Mode Selection Table:

  For i = 1 to NUM_MODE_SELECTION_ENTRIES + 1:

  – $MODE\_SELECTION_s[i].ACCESS\_MODE$ = ACCESS_MODE field of the ith occurrence of the record

  – $MODE\_SELECTION_s[i].MIN\_DURATION$ = ACCESS_MODE_MIN_DURATION field of the ith occurrence of the record

  – $MODE\_SELECTION_s[i].MAX\_DURATION$ = ACCESS_MODE_MAX_DURATION field of the ith occurrence of the record

- Reverse gain adjustment of the Enhanced Access Channel or Reverse Common Control Channel relative to the Reverse Pilot Channel ($RLGAIN\_COMMON\_PILOT_s = RLGAIN\_COMMON\_PILOT_r$)

- The threshold level at which the interference correction begins to be applied ($IC\_THRESH_s = IC\_THRESH_r$)

- The maximum interference correction that can be applied ($IC\_MAX_s = IC\_MAX_r$)

- Mode-specific parameters for the Enhanced Access Channel:

  For i = 1 to NUM_MODE_PARM_REC + 1:

  For j = 0 to 7:

  If the $(j+1)^{th}$ subfield of APPLICABLE_MODES is equal to ‘1’, store the following parameters:

  – Nominal transmit power offset on the Enhanced Access Channel ($MODE\_PARMS_s[j].EACH\_NOM\_PWR$ = EACH_NOM_PWR field of the ith occurrence of the record)

  – Initial power offset for access on the Enhanced Access Channel ($MODE\_PARMS_s[j].EACH\_INIT\_PWR$ = EACH_INIT_PWR field of the ith occurrence of the record)

  – Power increment on the Enhanced Access Channel ($MODE\_PARMS_s[j].EACH\_PWR\_STEP$ = EACH_PWR_STEP field of the ith occurrence of the record)

  – Number of access probes on the Enhanced Access Channel ($MODE\_PARMS_s[j].EACH\_NUM\_STEP$ = EACH_NUM_STEP field of the ith occurrence of the record)

  – Preamble enabled indicator on the Enhanced Access Channel ($MODE\_PARMS_s[j].EACH\_PREAMBLE\_ENABLED$ = EACH_PREAMBLE_ENABLED field of the ith occurrence of the record)

  – Number of preamble fractions sent on the Enhanced Access Channel if

MODE_PARMS$_S$[j].EACH_PREAMBLE_ENABLED is equal to ‘1’ (MODE_PARMS$_S$[j].EACH_PREAMBLE_NUM_FRAC = EACH_PREAMBLE_NUM_FRAC field of the ith occurrence of the record)

– Fractional preamble duration on the Enhanced Access Channel if MODE_PARMS$_S$[j].EACH_PREAMBLE_ENABLED is equal to ‘1’ (MODE_PARMS$_S$[j].EACH_PREAMBLE_FRAC_DURATION = EACH_PREAMBLE_FRAC_DURATION field of the ith occurrence of the record)

– Preamble gated-off duration on the Enhanced Access Channel if MODE_PARMS$_S$[j].EACH_PREAMBLE_ENABLED is equal to ‘1’ (MODE_PARMS$_S$[j].EACH_PREAMBLE_OFF_DURATION = EACH_PREAMBLE_OFF_DURATION field of the ith occurrence of the record)

– Additional preamble duration on the Enhanced Access Channel if MODE_PARMS$_S$[j].EACH_PREAMBLE_ENABLED is equal to ‘1’ (MODE_PARMS$_S$[j].EACH_PREAMBLE_ADD_DURATION = EACH_PREAMBLE_ADD_DURATION field of the ith occurrence of the record)

– Access threshold on the Enhanced Access Channel (MODE_PARMS$_S$[j].EACH_ACCESS_THRESH = EACH_ACCESS_THRESH field of the ith occurrence of the record)

– Enhanced Access Channel probe backoff range (MODE_PARMS$_S$[j].EACH_PROBE_BKOFF = EACH_PROBE_BKOFF field of the ith occurrence of the record)

– Enhanced Access Channel probe sequence backoff range (MODE_PARMS$_S$[j].EACH_BKOFF = EACH_BKOFF field of the ith occurrence of the record)

– Enhanced Access Channel slot (MODE_PARMS$_S$[j].EACH_SLOT = EACH_SLOT field of the ith occurrence of the record)

– Enhanced Access Channel first slot offset (MODE_PARMS$_S$[j].EACH_SLOT_OFFSET1 = EACH_ SLOT_OFFSET1 field of the ith occurrence of the record)

– Enhanced Access Channel second slot offset (MODE_PARMS$_S$[j].EACH_SLOT_OFFSET2 = EACH_SLOT_OFFSET2 field of the ith occurrence of the record)

- Additional parameters for the Basic Access Mode:

  If BA_PARMS_LEN is equal to ‘0’, set the Basic Access Mode supported indicator, BA_SUPPORTED$_S$, to ‘0’; otherwise store the following parameters:

- Basic Access Mode supported indicator ($BA\_SUPPORTED_s$ = '1')
- Number of Enhanced Access Channels ($NUM\_EACH\_BA_s = NUM\_EACH\_BA_r$)
- Rate words supported on the Enhanced Access Channels ($EACH\_BA\_RATES\_SUPPORTED_s = EACH\_BA\_RATES\_SUPPORTED_r$)

• Additional parameters for the Reservation Access Mode:

If RA_PARMS_LEN is equal to '0', set the Reservation Access Mode supported indicator, $RA\_SUPPORTED_s$, to '0'; otherwise store the following parameters:

- Reservation Access Mode supported indicator ($RA\_SUPPORTED_s$ = '1')
- Number of Enhanced Access Channels ($NUM\_EACH\_RA_s = NUM\_EACH\_RA_r$)
- Rate words supported on the Enhanced Access Channels ($EACH\_RA\_RATES\_SUPPORTED_s = EACH\_RA\_RATES\_SUPPORTED_r$)
- Number of Common Assignment Channels ($NUM\_CACH_s = NUM\_CACH_r$)
- Code rate of Common Assignment Channels ($CACH\_CODE\_RATE_s = CACH\_CODE\_RATE_r$)
- For i = 0 to NUM_CACH_s - 1, store the channel code index for each Common Assignment Channel ($CACH\_CODE\_CHAN_s[i] = CACH\_CODE\_CHAN_r$.
- Number of Reverse Common Control Channels ($NUM\_RCCCH_s = NUM\_RCCCH_r$)
- Rate words supported on the Reverse Common Control Channels ($RCCCH\_RATES\_SUPPORTED_s = RCCCH\_RATES\_SUPPORTED_r$)
- Preamble enabled indicator on the Reverse Common Control Channels ($RCCCH\_PREAMBLE\_ENABLED_s = RCCCH\_PREAMBLE\_ENABLED_r$)
- Number of preamble fractions sent on the Reverse Common Control Channel if $RCCCH\_PREAMBLE\_ENABLED_r$ is equal to '1' ($RCCCH\_PREAMBLE\_NUM\_FRAC_s = RCCCH\_PREAMBLE\_NUM\_FRAC_r$)
- Fractional preamble duration on the Reverse Common Control Channel if $RCCCH\_PREAMBLE\_ENABLED_r$ is equal to '1' ($RCCCH\_PREAMBLE\_FRAC\_DURATION_s = RCCCH\_PREAMBLE\_FRAC\_DURATION_r$)
- Preamble gated-off duration on the Reverse Common Control Channel if $RCCCH\_PREAMBLE\_ENABLED_r$ is equal to '1' ($RCCCH\_PREAMBLE\_OFF\_DURATION_s = RCCCH\_PREAMBLE\_OFF\_DURATION_r$)
- Additional preamble duration on the Reverse Common Control Channel if $RCCCH\_PREAMBLE\_ENABLED_r$ is equal to '1' ($RCCCH\_PREAMBLE\_ADD\_DURATION_s = RCCCH\_PREAMBLE\_ADD\_DURATION_r$)

- Slot duration on the Reverse Common Control Channel ($RCCCH\_SLOT_s$ = $RCCCH\_SLOT_r$)
- First slot offset of the Reverse Common Control Channel ($RCCCH\_SLOT\_OFFSET1_s$ = $RCCCH\_SLOT\_OFFSET1_r$)
- Second slot offset of the Reverse Common Control Channel ($RCCCH\_SLOT\_OFFSET2_s$ = $RCCCH\_SLOT\_OFFSET2_r$)
- Nominal transmit power offset on the Reverse Common Control Channel ($RCCCH\_NOM\_PWR_s$ = $RCCCH\_NOM\_PWR_r$)
- Initial power offset for access on the Reverse Common Control Channel ($RCCCH\_INIT\_PWR_s$ = $RCCCH\_INIT\_PWR_r$)
- Power Control delay for the Reservation Access Mode ($RA\_PC\_DELAY_s$ = $RA\_PC\_DELAY_r$)
- Maximum delay to receive the *Early Acknowledgment Channel Assignment Message* on the Common Assignment Channel ($EACAM\_CACH\_DELAY_s$ = $EACAM\_CACH\_DELAY_r$)
- Indicator for handoff supported on the Reverse Common Control Channels ($RCCCH\_HO\_SUPPORTED_s$ = $RCCCH\_HO\_SUPPORTED_r$)
- Threshold for handoff on the Reverse Common Control Channels ($RCCCH\_HO\_THRESH_s$ = $RCCCH\_HO\_THRESH_r$)
- Maximum delay to receive the *Early Acknowledgment Channel Assignment Message* and the *Power Control Channel Assignment Message* ($EACAM\_PCCAM\_DELAY_s$ = $EACAM\_PCCAM\_DELAY_r$)
- Number of Common Power Control Channels (NUM_CPCCH_s = NUM_CPCCH_r)
- Power control rate for the Common Power Control Channels ($CPCCH\_RATE_s$ = $CPCCH\_RATE_r$)
- For i = 0 to NUM_CPCCH_s - 1, store the channel code index for each Common Power Control Channel ($CPCCH\_CODE\_CHAN_s[i]$ = $CPCCH\_CODE\_CHAN_r$.
- Threshold for ignoring the power control bits in Reservation Access Mode ($RA\_DROP\_THRESH_s$ = $RA\_DROP\_THRESH_r$)
- Time after which mobile station aborts transmission if pilot E_c/I_o remains below RA_DROP_THRESH ($RA\_DROP\_THRESH\_TIME_s$ = $RA\_DROP\_THRESH\_TIME_r$)
- Power up step size on the Common Power Control Channel for the Reservation Access Mode ($RA\_CPCCH\_STEP\_UP_s$ = $RA\_CPCCH\_STEP\_UP_r$)
- 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:

- If the ith occurrence of $NGHBR\_CONFIG_r$ is equal to '000', '001', '010', or '100', set the NGHBR_CONFIG field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_CONFIG_r$; otherwise, set the NGHBR_CONFIG field of NGHBR_REC[i] to '011'.
- Set the NGHBR_PN field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_PN_r$.
- Set the BCCH_SUPPORT field of NGHBR_ REC[i] to the ith occurrence of $BCCH\_SUPPORT_r$.
- Set the ADD_PILOT_REC_INCL field of NGHBR_REC[i] to the ith 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 $AUX\_TD\_WALSH_r$ 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.
  - 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 $ADD\_INFO\_INCL1_r$ is equal to '1', set the AUX_PILOT_QOF1 field of NGHBR_PILOT_REC to $QOF1_r$ and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to $QOF2_r$ and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_PILOT_REC to $AUX\_PILOT\_WALSH_r$ with the Walsh Code length specified by $WALSH\_LENGTH_r$.

- If $NGHBR\_SRCH\_MODE_r$ = '00' or '10', set the SEARCH_PRIORITY field of each NGHBR_REC to '10' (high) for all $NGHBR\_SET\_SIZE_s$ entries.
- If $NGHBR\_SRCH\_MODE_r$ = '01' or '11', set the SEARCH_PRIORITY field of NGHBR_REC[i] to the ith occurrence of $SEARCH\_PRIORITY_r$.
- If $NGHBR\_SRCH\_MODE_r$ = '00' or '01', set the SRCH_WIN_NGHBR field of each NGHBR_REC to $SRCH\_WIN\_N_r$ for all $NGHBR\_SET\_SIZE_s$ entries.
- If $NGHBR\_SRCH\_MODE_r$ = '00' or '01', set the SRCH_OFFSET_NGHBR field of each NGHBR_REC to '000'.
- If $NGHBR\_SRCH\_MODE_r$ = '10' or '11':

  - set the SRCH_WIN_NGHBR field of NGHBR_REC[i] to the ith occurrence of $SRCH\_WIN\_NGHBR_r$
  - if $SRCH\_OFFSET\_INCL_r$ equals to '1', set the SRCH_OFFSET_NGHBR field of NGHBR_REC[i] to the ith occurrence of $SRCH\_OFFSET\_NGHBR_r$, and
  - if $SRCH\_OFFSET\_INCL_r$ equals to '0', set the SRCH_OFFSET_NGHBR field of each NGHBR_REC to '000'.
- If USE_TIMING_r is equal to '1', set the TIMING_INCL field of NGHBR_REC[i] to the ith occurrence of $TIMING\_INCL_r$; otherwise, set the TIMING_INCL field of NGHBR_REC to '0' for all entries.

For each of the neighboring base stations contained in the *Universal Neighbor List Message*, if $FREQ\_FIELDS\_INCL_r$ equals '1', $FREQ\_INCL_r$ equals '1', and $NGHBR\_BAND_r$ is supported, the mobile station shall also perform the following:

- Set the NGHBR_BAND field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_BAND_r$.
- Set the NGHBR_FREQ field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_FREQ_r$.

For each of the neighboring base stations contained in the *Universal Neighbor List Message*, if USE_TIMING_r is equal to '1' and $TIMING\_INCL_r$ equals '1', the mobile station shall also perform the following:

- Set the NGHBR_TX_OFFSET field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_OFFSET_r$.
- If $GLOBAL\_TIMING\_INCL_r$ is equal to '1', then the mobile station shall:
  - Set the NGHBR_TX_DURATION field of NGHBR_REC to $GLOBAL\_TX\_DURATION_r$ for all entries.
  - Set the NGHBR_TX_PERIOD field of NGHBR_REC to $GLOBAL\_TX\_PERIOD_r$ for all entries.
- If $GLOBAL\_TIMING\_INCL_r$ is equal to '0', then the mobile station shall:
  - Set the NGHBR_TX_DURATION field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_DURATION_r$.
  - Set the NGHBR_TX_PERIOD field of NGHBR_REC[i] to the ith occurrence of $NGHBR\_TX\_PERIOD_r$.

For each of the neighboring base stations contained in the *Universal Neighbor List Message*, if $FREQ\_FIELDS\_INCL_r$ equals '1' and $FREQ\_INCL_r$ equals '0' the mobile station shall also do the following:

- 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 $NUM\_ANALOG\_NGHBR_s$ to $NUM\_ANALOG\_NGHBR_r$, 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_NGHBR_LIST[i] to the ith occurrence of $BAND\_CLASS_r$.
- Set the SYS_A_B field of ANALOG_NGHBR_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 F-CSCH. 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.

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 if the mobile station performs an access entry handoff, the mobile station shall respond to the mobile-station-addressed page first and shall then re-originate the PACA call on the new base station.

2.6.2.4 Mobile Station Order and Message Processing Operation

During the *Mobile Station Order and Message Processing Operation*, the mobile station processes all messages except overhead messages (see 2.6.2.2) and page messages (see 2.6.2.3).

The mobile station shall set CURR_ACC_MSG_SEQ to NULL.

The mobile station shall perform address matching as described in 2.1.2.2 of [4].

If Layer 3 receives a message that requires acknowledgement, 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, unless otherwise specified for a particular message.

If Layer 3 receives a message that does not require acknowledgement, the mobile station shall transmit a response only if it is required by the message or order. If a response is required, 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, unless otherwise specified for a particular message.

If the mobile station is to enter the *Update Overhead Information Substate* of the *System Access State* with an order/message response indication 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'.
- $ACC\_ENT\_HO\_ORDER_S$ is equal to '1'.
- If the mobile station performs an access entry handoff on the Access Channel, none of $CONFIG\_MSG\_SEQ_S$, $SYS\_PAR\_MSG\_SEQ_S$, $NGHBR\_LST\_MSG\_SEQ_S$, $EXT\_NGHBR\_LST\_MSG\_SEQ_S$, $GEN\_NGHBR\_LST\_MSG\_SEQ_S$, $CHAN\_LST\_MSG\_SEQ_S$, $EXT\_CHAN\_LST\_MSG\_SEQ_S$, $USER\_ZONE\_ID\_MSG\_SEQ_S$, $PRI\_NGHBR\_LST\_MSG\_SEQ_S$, 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 $CONFIG\_MSG\_SEQ_s$, $A41\_SYS\_PAR\_MSG\_SEQ_s$, $MC\_RR\_PAR\_MSG\_SEQ_s$, $UNI\_NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, 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.

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.

- If a CDMA channel (CDMA_FREQ) is specified in the assignment, the mobile station shall set $CDMACH_s$ = $CDMA\_FREQ_r$, tune to the new Frequency Assignment, and 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.
- 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, 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 $ASSIGN\_MODE_r$ equals '101' and $FREQ\_INCL_r$ 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 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 ($PILOT\_PN_r$), and set $CONFIG\_MSG\_SEQ_s$ and $ACC\_MSG\_SEQ_s$ 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 $ASSIGN\_MODE_r$ equals '101', $FREQ\_INCL_r$ 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 $ASSIGN\_MODE_r$ equals '101', $FREQ\_INCL_r$ equals '1', and the band class is supported by the mobile station, the mobile station shall perform the following actions:

  - If the message requires 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 $CDMACH_s = CDMA\_FREQ_r$ and $CDMABAND_s = BAND\_CLASS_r$. 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 ($PILOT\_PN_r$), and set $CONFIG\_MSG\_SEQ_s$ and $ACC\_MSG\_SEQ_s$ 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 $ASSIGN\_MODE_r$ is not equal to '001' or '101', 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).

6. *Data Burst Message*

7. *Extended Channel Assignment Message:* The mobile station shall process the message as follows:

- If $ASSIGN\_MODE_r$ equals '001', $FREQ\_INCL_r$ 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 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 ($PILOT\_PN_r$), and set $CONFIG\_MSG\_SEQ_S$ and $ACC\_MSG\_SEQ_S$ 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 $ASSIGN\_MODE_r$ equals '001', $FREQ\_INCL_r$ 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 $ASSIGN\_MODE_r$ equals '001', $FREQ\_INCL_r$ 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 $CDMACH_s = CDMA\_FREQ_r$ and $CDMABAND_s = BAND\_CLASS_r$. 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 ($PILOT\_PN_r$).

- 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 $SYS\_PAR\_MSG\_SEQ_S$, $NGHBR\_LST\_MSG\_SEQ_S$, $EXT\_NGHBR\_LST\_MSG\_SEQ_S$, $GEN\_NGHBR\_LST\_MSG\_SEQ_S$, $CHAN\_LST\_MSG\_SEQ_S$, $EXT\_CHAN\_LST\_MSG\_SEQ_S$, $EXT\_SYS\_PAR\_MSG\_SEQ_S$, $USER\_ZONE\_ID\_MSG\_SEQ_S$, $PRI\_NGHBR\_LST\_MSG\_SEQ_S$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, 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 $ASSIGN\_MODE_r$ 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 $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
- If $ORDQ_r$ = '00000111', the mobile station shall perform the following
  - The mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.

- The mobile station shall set $SIG\_ENCRYPT\_MODE_s$ = $SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ as the session key.

19. *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).
20. *Registration Request Order:* The mobile station shall process the message and perform registration procedures as specified in 2.6.5.5.2.3.
21. *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.
22. *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).

23. *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 + $RETRY\_DELAY\_VALUE_s \times RETRY\_DELAY\_UNIT_s$ ms as $RETRY\_DELAY_s[RETRY\_TYPE_r]$.

24. *Slotted Mode Order*: After receiving this order, the mobile station shall set $SLOTTED_s$ to YES. The mobile station shall disable the $T_{MS\_Slotted}$ timer.

25. *SSD Update Message:* The mobile station shall process the message and shall respond with a *Base Station Challenge 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.

26. *Status Request Message:* The mobile station shall process 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*. 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. 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.

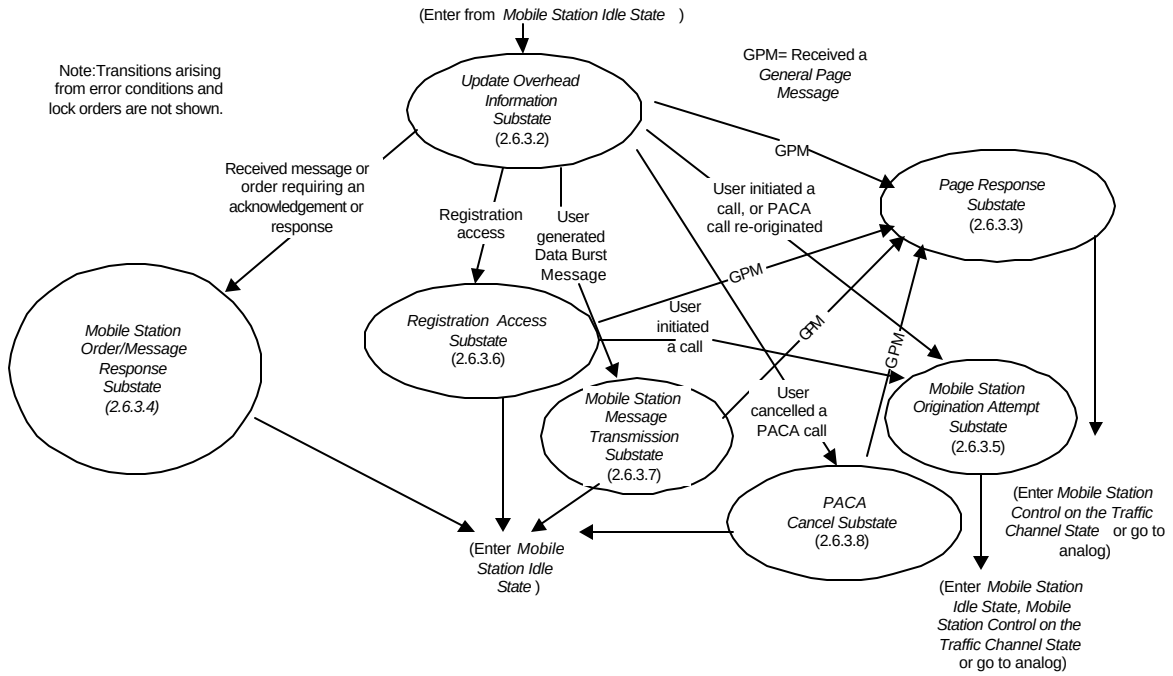


Figure 2.6.3-1. System Access State

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 Channel[6] 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 Channel[7] 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 made[8].

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*.

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[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 Channel[9] 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 attempt[10].

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 $SLOT\_CYCLE\_INDEX_s$.

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[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 me4mber 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]).

If the T_{72m} timer expires:

- The mobile station shall first finish transmitting the access probe in progress, if any.
- The mobile station shall declare a loss of the Paging Channel or the Forward Common Control Channel if:
  - $ACCESS\_HO_S$ is equal to '1' and ACCESS_HO_LIST contains more than one pilot,
  - $ACC\_HO\_LIST\_UPD_S$ is equal to '1', and Access Probe Handoff is supported by the mobile station, or
  - $ACC\_HO\_LIST\_UPD_S$ is equal to '0' and the following conditions are met:
    - ACCESS_HO_LIST contains more than one pilot, and
    - Access Probe Handoff is supported by the mobile station and is enabled by the base station.
- The mobile station shall perform an access handoff if the requirements in 2.6.3.1.3.2 are met. The mobile station may perform an access probe handoff if the requirements in 2.6.3.1.3.3 are met. If the mobile station performs an access handoff or an access probe handoff, the mobile station restarts the Paging Channel or the Forward Common Control Channel monitoring procedure for the new base station.
- If an access attempt was in progress when the timer expired and that access attempt had already been suspended and resumed previously (see below), the mobile station shall declare a loss of the Paging Channel[11] or the Forward Common Control Channel and shall disable its transmitter.
- If an access attempt was in progress when the timer expired and that access attempt had not been suspended and resumed before, the mobile station shall consider the loss of the Paging Channel or the Forward Common Control Channel as temporary, shall direct Layer 2 to suspend the access attempt (see 2.1.1.2.2 of [4]), and shall perform the following:
  - 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.

– If the mobile station receives an indication that a valid message on the Paging Channel or the Forward Common Control Channel, whether addressed to the mobile station or not, was received (see 2.1.2.3.2 of [4]) prior to the expiration of the (T_{40m}-T_{72m}) timer, the mobile station shall re-enable the transmitter, shall direct Layer 2 to resume operation from the beginning of the interrupted access probe sequence of the access sub-attempt (see 2.1.1.2.2 of [4]), and shall transmit the first probe of the new access probe sequence immediately after re-enabling the transmitter.

– If the (T_{40m}-T_{72m}) timer expires, the mobile station shall direct Layer 2 to cancel any access attempt (see 2.1.1.2.2 of [4]) and shall declare a loss of the Paging Channel or the Forward Common Control Channel.

2.6.3.2 Update Overhead Information Substate

In this substate, if the base station supports the Broadcast Control Channel for Spreading Rate 1, or if both the mobile station and base station support Spreading Rate 3 on the common channels, then the mobile station shall monitor the Broadcast Control Channel until it has received the current configuration messages; otherwise, the mobile station shall monitor the Paging Channel until it has received the current configuration messages. The mobile station compares sequence numbers to determine whether all of the configuration messages are up-to-date. To make sure it has the latest access parameters, the mobile station receives at least one message containing the ACC_MSG_SEQ field (except in case of a page response, since the initiating page contains ACC_MSG_SEQ), and waits, if necessary, for an *Access Parameters Message* or *an Enhanced Access Parameters Message*. In addition, if the mobile station is monitoring the Broadcast Control Channel and $SENDING\_RAND_S$ is equal to '1', then it shall also wait for an *ANSI-41 RAND Message*.

Upon entering the *Update Overhead Information Substate*, the mobile station shall set the *System Access State* timer to a value of T_{41m} seconds. The mobile station shall set PAGED to NO.

If the *System Access State* timer expires while in this substate, 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).

If the mobile station declares a loss of the Paging Channel or the Broadcast 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 '1', 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 enter the *Mobile Station Idle State*.

If $PACA_s$ is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the user directs the mobile station to cancel a PACA call.

If the mobile station receives any of the following messages, it shall process the message as follows:

1. *System Parameters Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.1).
2. *Access Parameters Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.2).
3. *Neighbor List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.3).
4. *CDMA Channel List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.4).
5. *Extended System Parameters Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.5).
6. *Global Service Redirection Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.6).
7. *Extended Neighbor List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.7).
8. *General Neighbor List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.8).
9. *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 $ORDQ_r$). The mobile station should notify the user of the locked condition. The mobile station shall then 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*.
10. *General Page Message* or *Universal Page Message:* If CURR_ACC_MSG_SEQ is equal to NULL, the mobile station shall set CURR_ACC_MSG_SEQ to $ACC\_MSG\_SEQ_r$. The mobile station shall compare $CONFIG\_MSG\_SEQ_s$ to $CONFIG\_MSG\_SEQ_r$. If the comparison results in a mismatch, the mobile station shall set $CONFIG\_MSG\_SEQ_s$ to $CONFIG\_MSG\_SEQ_r$. The mobile station may ignore the rest of the message. If this substate was not entered with an origination or page response indication, the mobile station may also determine whether there is a page match. If the mobile station attempts to determine whether there is a page match, it shall use the procedure as defined in 2.6.2.3. If a match is declared, the mobile station shall set PAGED to YES.

11. *User Zone Identification Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.9).
12. *Private Neighbor List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.10).
13. *Extended Global Service Redirection Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.11).
14. *Extended CDMA Channel List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.12).
15. *ANSI-41 System Parameters Message*: The mobile station shall process the parameters from the message (see 2.6.2.2.13).
16. *MC-RR Parameters Message*: The mobile station shall process the parameters from the message (see 2.6.2.2.14).
17. *Enhanced Access Parameters Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.15).
18. *ANSI-41 RAND Message*: The mobile station shall process the parameters from the message (see 2.6.2.2.16).
19. *Universal Neighbor List Message:* The mobile station shall process the parameters from the message (see 2.6.2.2.17).

If the mobile station receives a message which is not included in the above list, the mobile station shall ignore the message.

When all of the following conditions are met:

- the stored configuration parameters are current (see 2.6.2.2)
- $\text{CURR\_ACC\_MSG\_SEQ}_S$ and ACC_MSG_SEQ_S are equal and are not NULL, and
- if the mobile station is monitoring the Broadcast Control Channel and SENDING_RAND_S is equal to '1', the *ANSI-41 RAND Message* has been received,

then the mobile station shall disable the *System Access State* timer and shall do one of the following:

- If PAGED is equal to YES, the mobile station shall determine whether the message resulting in the page match was received on the current Paging Channel or Forward Common Control Channel. If the message was received on the current Paging Channel or Forward Common Control Channel, the mobile station shall enter the *Page Response Substate*; otherwise, the mobile station shall enter the *Mobile Station Idle State*.

- If this substate was entered with a page response indication and the mobile station has not performed an access entry handoff, the mobile station shall determine whether the message resulting in the page match was received on the current Paging Channel or Forward Common Control Channel. If the message was received on the current Paging Channel or Forward Common Control Channel, the mobile station shall enter the *Page Response Substate;* otherwise, the mobile station shall enter the *Mobile Station Idle State.*
- If this substate was entered with a page response indication and the mobile station has performed an access entry handoff, the mobile station shall enter the *Page Response Substate.*
- If this substate was entered with a page response retransmission indication, the mobile station shall enter the *Page Response Substate.*
- If this substate was entered with an origination indication, the mobile station shall enter the *Mobile Station Origination Attempt Substate* with an origination indication.
- If this substate was entered with a PACA response indication, the mobile station shall enter the *Mobile Station Origination Attempt Substate* with a PACA response indication.
- If this substate was entered with an order/message response indication and the mobile station has not performed an access entry handoff, the mobile station shall determine whether the message resulting in the response was received on the current Paging Channel or Forward Common Control Channel. If the message was received on the current Paging Channel or Forward Common Control Channel, the mobile station shall enter the *Mobile Station Order/Message Response Substate;* otherwise, the mobile station shall discard the response and enter the *Mobile Station Idle State.*
- If this substate was entered with an order/message response indication and the mobile station has performed an access entry handoff, the mobile station shall enter the *Mobile Station Order/Message Response Substate.*
- If this substate was entered with a registration indication, the mobile station shall enter the *Registration Access Substate.*
- If this substate was entered with a message transmission indication, the mobile station shall enter the *Mobile Station Message Transmission Substate* with a message transmission indication.
- If this substate was entered with a hook status indication, the mobile station shall enter the *Mobile Station Message Transmission Substate* with a hook status indication.
- If this substate was entered with a PACA cancel indication, the mobile station shall 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.

- The mobile station shall disable its transmitter, and
- The mobile station shall 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, the mobile station shall perform an access handoff if all of the following conditions hold:

- The mobile station declares a loss of the Paging Channel or the Forward Common Control Channel, and
- The mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2), and there are pilots other than the active pilot in the access handoff list (see 2.6.3.1.3.2).

If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel and does not perform an access handoff, the mobile station 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.
- 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,
- The mobile station shall disable its transmitter, and
- The mobile station shall enter the *Mobile Station Idle State.*

If $PACA_S$ is equal to enabled, the mobile station shall set PACA_CANCEL to ‘1’ when the user directs the mobile station to cancel a PACA call.

If the mobile station receives confirmation of delivery of the *Page Response Message* sent in this substate, 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 *System Access State* timer expires while in this substate, 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.
- 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, and shall enter the *Mobile 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'.

- The mobile station shall store the frame offset ($FRAME\_OFFSET_s$ = $FRAME\_OFFSET_r$), the message encryption mode indicator ($ENCRYPT\_MODE_s$ = $ENCRYPT\_MODE_r$), and, if $FREQ\_INCL_r$ equals '1', the Frequency Assignment ($CDMACH_s$ = $CDMA\_FREQ_r$).
- The mobile station shall set $SERV\_NEG_s$ to disabled.
- 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 initialize CODE_CHAN_LIST as described in 2.6.8.
- The mobile station shall enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

• If $ASSIGN\_MODE_r$ equals '001', the mobile station shall perform the following actions:

- If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following:
  + 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 $CDMACH_s$ to $CDMA\_FREQ_r$, tune to the new Frequency Assignment, and 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.
- 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LIST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.
- The mobile station shall 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 enter the *Update Overhead Information Substate* with a page response retransmission indication within T_{34m} seconds after receiving the *Channel Assignment Message*.
- If $RESPOND_r$ is equal to '0', the mobile station shall enter the *Mobile Station Idle State* within T_{34m} seconds after receiving the *Channel Assignment Message*.

• 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 shall 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 $USE\_ANALOG\_SYS_r$ equals '1', the mobile station shall set $SERVSYS_s$ to SYS_A if $ANALOG\_SYS_r$ is equal to '0', or shall set $SERVSYS_s$ to SYS_B if $ANALOG\_SYS_r$ is equal to '1'.
  + 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', the mobile station shall enter the analog Initialization Task with a wait-for-page indication (see 2.6.1). If $RESPOND_r$ equals '1', the mobile station shall enter the analog Initialization Task with a page response indication (see 2.6.1).

• If $ASSIGN\_MODE_r$ equals '011', 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:
  + 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 the analog channel type is ‘00’, the mobile station shall store the system identification ($SID_s = SID_r$), voice mobile station attenuation code ($VMAC_s = VMAC_r$), voice channel number ($ANALOG\_CHAN_s = ANALOG\_CHAN_r$), SAT color code ($SCC_s = SCC_r$), and message encryption mode indicator ($MEM_s = MEM_r$), shall set DTX_s to ‘00’ and shall enter the Confirm Initial Voice Channel Task (see 2.6.4.2) with a page response indication.

+ If the analog channel type is not ‘00’:

  o If the mobile station supports narrow analog mode, the mobile station shall store the system identification ($SID_s = SID_r$), voice mobile station attenuation code ($VMAC_s = VMAC_r$), voice channel number ($ANALOG\_CHAN_s = ANALOG\_CHAN_r$), message encryption mode indicator ($MEM_s = MEM_r$), analog channel type ($AN\_CHAN\_TYPE_s = AN\_CHAN\_TYPE_r$) and the digital SAT code ($DSCC_s = DSCC\_MSB_r \times 4 + SCC_r$), shall set DTX_s to ‘00’, and shall enter the Confirm Initial Narrow Analog Voice Channel Task (see 2.6.5.2A of [22]) with a page response indication.

  o If the mobile station does not support narrow analog mode, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to ‘00000110’ (capability not supported by the mobile station) and the mobile station shall remain in the *Page Response Substate* of the *System Access State.*

- If $ASSIGN\_MODE_r$ equals ‘100’, 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 combination specified in the DEFAULT_CONFIG field 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 ‘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 granted mode ($GRANTED\_MODE_s$ = $GRANTED\_MODE_r$), and default configuration ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$).

+ The mobile station shall set $SERV\_NEG_s$ to enabled.

+ The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8 and shall then enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

– If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:

+ If 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 shall remain in the *Page Response Substate*.

+ If the band class is supported by the mobile station, the mobile station shall perform the following actions:

o 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 ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$), the band class ($CDMABAND_s$ = $BAND\_CLASS_r$), and the Frequency Assignment ($CDMACH_s$ = $CDMA\_FREQ_r$).

o The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8, and shall set $SERV\_NEG_s$ to enabled.

o The mobile station shall then tune to the new Frequency Assignment and shall enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

• If $ASSIGN\_MODE_r$ equals '101', the mobile station shall perform the following actions:

– If $FREQ\_INCL_r$ 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 ($PILOT\_PN_r$).

- 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LIST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$ $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.

- The mobile station shall 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:

  - 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.

- If $RESPOND_r$ is equal to '0', the mobile station shall 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.

- If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:
  - If 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 shall remain in the *Page Response Substate*.
  - If 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LIST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, 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:
      - 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.

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'.

+ The mobile station shall then enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

– 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:

+ 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 ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$); the band class ($CDMABAND_s$ = $BAND\_CLASS_r$); the Frequency Assignment ($CDMACH_s$ = $CDMA\_FREQ_r$); and the occurrences of PILOT_PN and PWR_COMB_IND for each included member of the Active Set.

+ 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'.

+ 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 then tune to the new Frequency Assignment and shall enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

- If $ASSIGN\_MODE_r$ equals '001', the mobile station shall perform the following actions:
  - If $FREQ\_INCL_r$ 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 ($PILOT\_PN_r$). 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LIST\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$ $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.
    - The mobile station shall 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:
      - 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 $RESPOND_r$ is equal to '0', the mobile station shall perform the following:

- 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*.
- 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:

- 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 $RESPOND_r$ is equal to '0', the mobile station shall perform the following:
  - 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*.
  - 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]).

+ If $RESPOND_r$ equals '1', 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 page response indication (see 2.6.1 of [6]).
+ If $RESPOND_r$ equals '0', and $USE\_ANALOG\_SYS_r$ equals '0' the mobile station shall enter the analog Initialization Task with a wait for page indication (see 2.6.1 of [6]).
+ If $RESPOND_r$ equals '1', and $USE\_ANALOG\_SYS_r$ equals '0' the mobile station shall enter the analog Initialization Task with a page response indication (see 2.6.1 of [6]).

- If $ASSIGN\_MODE_r$ equals '011', 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, and the analog channel type is '00', the mobile station shall store the system identification (SID_s = SID_r), voice mobile station attenuation code ($VMAC_s$ = $VMAC_r$), voice channel number ($ANALOG\_CHAN_s$ = $ANALOG\_CHAN_r$), SAT color code (SCC_s = SCC_r), and message encryption mode indicator (MEM_s = MEM_r), shall set DTX_s to '00', and shall enter the Confirm Initial Voice Channel Task (see 2.6.4.2) with a page response indication. 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 the mobile station supports analog operation in the requested band class, the analog channel type is not '00':

+ If the mobile supports narrow analog mode, the mobile station shall store the system identification ($SID_s = SID_r$), voice mobile station attenuation code ($VMAC_s = VMAC_r$), voice channel number ($ANALOG\_CHAN_s = ANALOG\_CHAN_r$), message encryption mode indicator ($MEM_s = MEM_r$), analog channel type ($AN\_CHAN\_TYPE_s = AN\_CHAN\_TYPE_r$) and the digital SAT code ($DSCC_s = DSCC\_MSB_r \times 4 + SCC_r$), shall set DTX_s to '00', and shall enter the Confirm Initial Narrow Analog Voice Channel Task (see 2.6.5.2A of [22]) with a page response indication. 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 the mobile station does not support narrow analog mode, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported by the mobile station) and the mobile station shall remain in the *Page Response Substate* of the *System Access State*.

- If $ASSIGN\_MODE_r$ equals '100', 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 $GRANTED\_MODE_r$ equals '00' and the multiplex option and radio configuration specified in the $DEFAULT\_CONFIG_r$ 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 $GRANTED\_MODE_r$ equals '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) and shall remain in the *Page Response Substate* if one of the following conditions is true:
    + FOR_RC_r is not equal to the RC associated with $DEFAULT\_CONFIG_r$ as specified in Table 3.7.2.3.2.21-2.
    + REV_RC_r is not equal to the RC associated with $DEFAULT\_CONFIG_r$ as specified in Table 3.7.2.3.2.21-2.
  - If the mobile station does not support either of the Radio Configurations (FOR_RC or REV_RC), the mobile station 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 CH_IND_r = '01' and the mobile station does not support Fundamental Channel, the mobile station 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 CH_IND_r = '10' and the mobile station does not support the Dedicated Control Channel, the mobile station 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 CH_IND_r = '11' and the mobile station does not support the Dedicated Control Channel and Fundamental Channel concurrently, the mobile station 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 $FREQ\_INCL_r$ equals '1' and if the band class ($BAND\_CLASS_r$) 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 the mobile station does not send a Mobile Station Reject Order as specified above, it shall continue to perform the actions specified below.
- If $FREQ\_INCL_r$ equals '1', the mobile station shall set
  - $CDMABAND_s = BAND\_CLASS_r$
  - $CDMACH_s = CDMA\_FREQ_r$
- The mobile station shall store the bypass indicator ($BYPASS\_ALERT\_ANSWER_s = BYPASS\_ALERT\_ANSWER_r$).
- The mobile station shall store granted mode ($GRANTED\_MODE_s = GRANTED\_MODE_r$)
- The mobile station shall store the default configuration ($DEFAULT\_CONFIG_s = DEFAULT\_CONFIG_r$).
- The mobile station shall store the Forward Traffic Channel Radio Configuration ($FOR\_RC_s = FOR\_RC_r$) and the Reverse Traffic Channel Radio Configuration ($REV\_RC_s = REV\_RC_r$).
- The mobile station shall store the frame offset ($FRAME\_OFFSET_s = FRAME\_OFFSET_r$).
- The mobile station shall store the message encryption mode indicator ($ENCRYPT\_MODE_s = ENCRYPT\_MODE_r$).
- The mobile station shall store the Forward power control subchannel relative gain [$FPC\_SUBCHAN\_GAIN_s = FPC\_SUBCHAN\_GAIN_r$).

- 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'.
- If $3XFL\_1XRL\_INCL_r$ is equal to '1', the mobile station shall set $1XRL\_FREQ\_OFFSET_s$ to $1XRL\_FREQ\_OFFSET_r$.
- The mobile station shall store the channel indicator ($CH\_IND_s = CH\_IND_r$) and the mobile station shall perform the following actions:
  + If CH_IND_r equals '01', 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. Then for each included member of the Active Set, the mobile station shall store the following:
    - Set the PILOT_PN field to $PILOT\_PN_r$.
    - Set the ADD_PILOT_REC_INCL field to $ADD\_PILOT\_REC\_INCL_r$. If $ADD\_PILOT\_REC\_INCL_r$ equals '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 $NGHBR\_PILOT\_REC\_TYPE_r$ 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 NGHBR_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 $QOF\_MASK\_ID\_FCH_r$.

+ If CH_IND_r equals '01' 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 '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 $ADD\_PILOT\_REC\_INCL_r$. 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 $CODE\_CHAN\_DCCH_r$.

◊ Set the QOF_MASK_ID_DCCH field to $QOF\_MASK\_ID\_DCCH_r$.

+ If CH_IND_r equals '10' 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 $CODE\_CHAN\_FCH_r$.

+ 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:

  - Set the PILOT_PN to $PILOT\_PN_r$.
  - 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 $SR3\_PRIMARY\_PILOT_r$.

- 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 $QOF\_MASK\_ID\_FCH_r$.

- Set the CODE_CHAN_DCCH field to $CODE\_CHAN\_DCCH_r$.
- 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:
  - 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 $CODE\_CHAN\_FCH_r$.
  - 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:
  - 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 $CODE\_CHAN\_FCH_r$.
  - 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-

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*.

9. *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.

10. *Registration Accepted Order:*

    - If $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
    - If $ORDQ_r$ = '00000111', the mobile station shall perform the following:
      - The mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
      - The mobile station shall set $SIG\_ENCRYPT\_MODE_s$ = $SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ as the session key.

11. *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).

12. *Release Order:* If $NDSS\_ORIG_s$ is equal to 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 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 + $RETRY\_DELAY\_VALUE_s \times RETRY\_DELAY\_UNIT_s$ 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:

- 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).

16. *SSD Update Message:* The mobile station shall respond to the message as specified in 2.3.12.1.5.

17. *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).

18. *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.

19. *User Zone Reject Message*
20. *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.

If the mobile station performs an access probe handoff or access handoff and receives any of the following messages, it shall process the message as specified in 2.6.3.1.3:

1. *System Parameters Message*
2. *Access Parameters Message*
3. *Neighbor List Message*
4. *Extended System Parameters Message*
5. *Extended Neighbor List Message*
6. *General Neighbor List Message*
7. *Global Service Redirection Message*
8. *Extended Global Service Redirection Message*

2.6.3.4 Mobile Station Order/Message Response Substate

In this substate, the mobile station sends a message that is a response to a message received from the base station. If the base station responds to the mobile station's 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 Order/Message Response Substate*, the mobile station shall send the response message.

If this substate was entered with a service release message response with success indication, the mobile station shall send a *Service Release Response Message* to the base station. The mobile station shall set the SUCCESS_IND field to '1'.

If this substate was entered with a service release message response with failure indication, the mobile station shall send a *Service Release Response Message* to the base station. The mobile station shall set the SUCCESS_IND field to '0'.

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.
- The mobile station shall 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 send a response in this substate if required, and shall then enter the *Mobile Station Idle State*.

If $PACA_S$ is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the user directs the mobile station to cancel a PACA call.

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 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. *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 $ORDQ_r$). 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. *Registration Accepted Order:*

   - If $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s = ROAM\_INDI_r$ and should display the roaming condition.

   - If $ORDQ_r$ = '00000111', the mobile station shall perform the following:

     - The mobile station shall set $ROAM\_INDI_s = ROAM\_INDI_r$ and should display the roaming condition.

     - The mobile station shall set $SIG\_ENCRYPT\_MODE_s = SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_R]$ 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 + $RETRY\_DELAY\_VALUE_S \times RETRY\_DELAY\_UNIT_S$ 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).
- 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.

- 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.
- If $NDSS\_ORIG_S$ is equal to 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 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, the mobile station shall perform an access handoff if all of the following conditions hold:

- The mobile station declares a loss of the Paging Channel or the Forward Common Control Channel,
- The mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2) and there are pilots other than the active pilot in the access handoff list (see 2.6.3.1.3.2).

If the mobile station declares a loss of the Paging Channel or the Forward Common Control Channel and does not perform an access handoff, the mobile station 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.
- 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.
- If $NDSS\_ORIG_S$ is equal to 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 disable its transmitter and enter the *Mobile Station Idle State*.

If the mobile station receives confirmation of delivery of the *Origination 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.

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 *System Access State* timer expires while in this substate, 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.
- If $NDSS\_ORIG_S$ is equal to enabled, the mobile station shall set $NDSS\_ORIG_S$ to disabled, and should indicate to the user that the call origination is canceled.
- 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 and enter the *Mobile 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*.

If the mobile station is directed by the user to disconnect the call, the mobile station shall perform the following actions:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress.
- The mobile station shall send the *Release Order* (normal release) in assured mode requiring confirmation of delivery.
- After receiving confirmation of delivery of the *Release Order*, the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).

If the mobile station is directed by the user to power off, the mobile station shall perform the following actions:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress.
- The mobile station shall send the *Release Order* (with power-down indication) in assured mode requiring confirmation of delivery.
- After receiving confirmation of delivery of the *Release Order*, the mobile station shall perform power-down registration procedures (see 2.6.5.1.2).
- 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 $ASSIGN\_MODE_r$ 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 ($FRAME\_OFFSET_S$ = $FRAME\_OFFSET_r$), the message encryption mode indicator ($ENCRYPT\_MODE_S$ = $ENCRYPT\_MODE_r$), and, if $FREQ\_INCL_r$ equals '1', the Frequency Assignment ($CDMACH_S$ = $CDMA\_FREQ_r$).

     – 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*.

- 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.
  - If a CDMA channel (CDMA_FREQ) is specified in the assignment, the mobile station shall set $CDMACH_s$ = $CDMA\_FREQ_r$, tune to the new Frequency Assignment, and 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.
  - 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.
  - 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LIST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.
  - If the mobile station has not stored configuration parameters for the Primary Forward Common Control Channel of the new base station, or if the stored information is not current (see 2.6.2.2), the mobile station shall set $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LIST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, $A41\_SYS\_PAR\_MSG\_SEQ_s$ $MC\_RR\_PAR\_MSG\_SEQ_s$ $UNIV\_NGHBR\_LIST\_MSG\_SEQ_s$ 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.
  - The mobile station shall set $FCCCH\_CHAN_s$ to '1' and $FCCCH\_ID_s$ to the Primary Forward Common Control Channel. The mobile station shall then begin monitoring the Primary Forward Common Control Channel of the selected base station.

- If $RESPOND_r$ is equal to '1', the mobile station shall enter the *Update Overhead Information Substate* with an origination indication.

- 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 the ORDQ field set to '00000110' (capability not supported by the mobile station) and the mobile station shall remain in the *Mobile Station Origination Attempt Substate*.
  - If the mobile station supports analog operation in the requested band class and $RESPOND_r$ equals '1', the mobile station shall perform the following actions:
    - If $USE\_ANALOG\_SYS_r$ equals '0', 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.
      - The mobile station shall enter the analog Initialization Task with an origination indication (see 2.6.1).
    - If $USE\_ANALOG\_SYS_r$ equals '1', the mobile station shall perform the following actions:
      - The mobile station shall set $SERVSYS_s$ to SYS_A if $ANALOG\_SYS_r$ is equal to '0', or shall set $SERVSYS_s$ to SYS_B if $ANALOG\_SYS_r$ is equal to '1'.
      - 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 then enter the analog Initialization Task with an origination indication (see 2.6.1).

- If $ASSIGN\_MODE_r$ equals '011', 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 the ORDQ field set to '00000110' (capability not supported by the mobile station) and the mobile station shall remain in the *Mobile Station Origination Attempt Substate*.

- If the mobile station supports analog operation in the requested band class:
  - If the analog channel type is ‘00’, the mobile station shall perform the following actions:
    - The mobile station shall store the system identification (SID_s = SID_r), the voice mobile station attenuation code ($VMAC_s$ = $VMAC_r$), the voice channel number ($ANALOG\_CHAN_s$ = $ANALOG\_CHAN_r$), the SAT color code (SCC_s = SCC_r), and the message encryption mode indicator (MEM_s = MEM_r).
    - The mobile station shall set DTX_s to ‘00’.
    - 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 enter the Confirm Initial Voice Channel Task (see 2.6.4.2) with an origination indication.
  - If the analog channel type is not ‘00’, the mobile station shall perform the following actions:
    - If the mobile supports narrow analog mode, the mobile station shall perform the following actions:
      - The mobile station shall store the system identification (SID_s = SID_r), the voice mobile station attenuation code ($VMAC_s$ = $VMAC_r$), the voice channel number ($ANALOG\_CHAN_s$ = $ANALOG\_CHAN_r$), the message encryption mode indicator (MEM_s = MEM_r), the analog channel type ($AN\_CHAN\_TYPE_s$ = $AN\_CHAN\_TYPE_r$) and the digital SAT code ($DSCC_s$ = $DSCC\_MSB_r \times 4 + SCC_r$).
      - The mobile station shall set DTX_s to ‘00’.
      - If $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ to disabled, shall disable the PACA state timer, and should indicate to the user that the PACA call is proceeding.
      - The mobile station shall enter the Confirm Initial Narrow Analog Voice Channel Task (see 2.6.5.2A of [22]) with an origination indication.
    - If the mobile station does not support narrow analog mode, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to ‘00000110’ (capability not supported by the mobile station) and the mobile station shall remain in the *Mobile Station Origination Attempt Substate* of the *System Access State*.

- If $ASSIGN\_MODE_r$ equals '100', the mobile station shall perform the following actions:
  - The mobile station shall set CH_IND_s to '01'.
  - If $GRANTED\_MODE_r$ equals '00', and the multiplex option or radio configuration specified in the DEFAULT_CONFIG field 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 *Mobile Station Origination Attempt Substate*.
  - 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 granted mode ($GRANTED\_MODE_s$ = $GRANTED\_MODE_r$), and the default configuration ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$).
    - The mobile station shall set $SERV\_NEG_s$ to enabled.
    - If $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ equal 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 CODE_CHAN_LIST as described in 2.6.8.
    - The mobile station shall then enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.
  - If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:
    - If 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 *Mobile Station Origination Attempt Substate*.
    - If the band class is supported by the mobile station, 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 granted mode ($GRANTED\_MODE_s$ = $GRANTED\_MODE_r$), the default configuration ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$), the band class ($CDMABAND_s$ = $BAND\_CLASS_r$), and the Frequency Assignment ($CDMACH_s$ = $CDMA\_FREQ_r$).
- The mobile station shall set $SERV\_NEG_s$ to enabled.
- 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.
- 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 $ASSIGN\_MODE_r$ equals '101', the mobile station shall perform the following actions:

– If $FREQ\_INCL_r$ 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 ($PILOT\_PN_r$).

+ 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, and $EXT\_GLOB\_SERV\_REDIR\_MSG\_SEQ_s$ to NULL.

+ 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 $EXT\_NGHBR\_LST\_MSG\_SEQ_S$, $GEN\_NGHBR\_LST\_MSG\_SEQ_S$, $EXT\_CHAN\_LST\_MSG\_SEQ_S$, $EXT\_SYS\_PAR\_MSG\_SEQ_S$, $USER\_ZONE\_ID\_MSG\_SEQ_S$, $PRI\_NGHBR\_LST\_MSG\_SEQ_S$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_S$, $A41\_SYS\_PAR\_MSG\_SEQ_S$, $MC\_RR\_PAR\_MSG\_SEQ_S$, $UNIV\_NGBHR\_LST\_MSG\_SEQ_S$, 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.

+ The mobile station shall set $FCCCH\_CHAN_S$ to '1' and $FCCCH\_ID_S$ to the Primary Forward Common Control Channel. The mobile station shall then begin monitoring the Primary Forward Common Control Channel of the selected base station.

+ If $RESPOND_r$ is equal to '1', the mobile station shall perform the following:

  o 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*.

  o 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.

– If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:

  + If 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 *Mobile Station Origination Attempt Substate*.

  + If 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, 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 ($CDMACH_s$ = $CDMA\_FREQ_r$).
- 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:
  - 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:

- 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 $P\_REV\_IN\_USE_s$ is equal to or greater than six, 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 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 set $SERV\_NEG_s$ to enabled.
    + If $PACA_s$ is equal to enabled, the mobile station shall set $PACA_s$ equal 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 CODE_CHAN_LIST as described in 2.6.8.

    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 $REV\_FCH\_GATING\_MODE_s$ 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'.
    + The mobile station shall set $RLGAIN\_ADJ_s$ to $RLGAIN\_ADJ_r$.

+ The mobile station shall then enter the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the Traffic Channel State*.

– If $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:

+ If 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 *Mobile Station Origination Attempt Substate*.

+ If the band class is supported by the mobile station, the mobile station shall perform the following actions:

  o 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 granted mode ($GRANTED\_MODE_s$ = $GRANTED\_MODE_r$); the default configuration ($DEFAULT\_CONFIG_s$ = $DEFAULT\_CONFIG_r$); the band class ($CDMABAND_s$ = $BAND\_CLASS_r$); the Frequency Assignment ($CDMACH_s$ = $CDMA\_FREQ_r$); and the occurrences of PILOT_PN and PWR_COMB_IND for each included member of the Active Set.

  o The mobile station shall set $SERV\_NEG_s$ to enabled.

  o The mobile station shall initialize CODE_CHAN_LIST as described in 2.6.8.

  o 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.

  o The mobile station shall set $FPC\_SUBCHAN\_GAIN_s$ to $FPC\_SUBCHAN\_GAIN_r$.

  o The mobile station shall set $RLGAIN\_ADJ_s$ to $RLGAIN\_ADJ_r$.

  o The mobile station shall set $REV\_FCH\_GATING\_MODE_s$ to $REV\_FCH\_GATING\_MODE_r$.

  o 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'.

- 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 $GRANTED\_MODE_r$ equals ‘00’, and the multiplex option and radio configuration specified in the DEFAULT_CONFIG field 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 *Mobile Station Origination Attempt Substate*.

– If $GRANTED\_MODE_r$ equals ‘00’ and $DEFAULT\_CONFIG_r$ is not equal to '100', the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to ‘00001110’ (RC does not match with $DEFAULT\_CONFIG_r$) and shall remain in the *Mobile Station Origination Attempt Substate* if any of the following conditions is true:

+ $FOR\_FCH\_RC_r$ is not equal to the Radio Configuration associated with $DEFAULT\_CONFIG_r$ (see Table 3.7.2.3.2.21-2).

+ $REV\_FCH\_RC_r$ is not equal to the Radio Configuration 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 *Mobile Station Origination Attempt Substate*.

• If $ASSIGN\_MODE_r$ equals ‘001’, the mobile station shall perform the following actions:

– If $FREQ\_INCL_r$ 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 ($PILOT\_PN_r$).

+ 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, 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 $RESPOND_r$ 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 $FREQ\_INCL_r$ equals '1', the mobile station shall perform the following actions:

+ If 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 *Mobile Station Origination Attempt Substate*.

+ If the band class is supported by the mobile station, the mobile station 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 ($PILOT\_PN_r$).

- 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 $SYS\_PAR\_MSG\_SEQ_s$, $NGHBR\_LST\_MSG\_SEQ_s$, $EXT\_NGHBR\_LST\_MSG\_SEQ_s$, $GEN\_NGHBR\_LST\_MSG\_SEQ_s$, $CHAN\_LST\_MSG\_SEQ_s$, $EXT\_CHAN\_LST\_MSG\_SEQ_s$, $EXT\_SYS\_PAR\_MSG\_SEQ_s$, $USER\_ZONE\_ID\_MSG\_SEQ_s$, $PRI\_NGHBR\_LST\_MSG\_SEQ_s$, $GLOB\_SERV\_REDIR\_MSG\_SEQ_s$, 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 ($CDMACH_s = CDMA\_FREQ_r$).
- 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:
  - 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).

+ If $RESPOND_r$ equals ‘1’ and $USE\_ANALOG\_SYS_r$ equals ‘1’, the mobile station shall perform the following actions:
  - 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 an origination indication (see 2.6.1).

- If $ASSIGN\_MODE_r$ equals ‘011’, 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 the ORDQ field set to ‘00000110’ (capability not supported by the mobile station) and the mobile station shall 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 the analog channel type is ‘00’, the mobile station shall perform the following actions:
      - The mobile station shall store the system identification (SID_s = SID_r), voice mobile station attenuation code ($VMAC_s$ = $VMAC_r$), voice channel number ($ANALOG\_CHAN_s$ = $ANALOG\_CHAN_r$), SAT color code (SCC_s = SCC_r), and message encryption mode indicator (MEM_s = MEM_r).
      - The mobile station shall set DTX_s to ‘00’.
      - 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 enter the Confirm Initial Voice Channel Task (see 2.6.4.2) with an origination indication.
    + If the analog channel type is not ‘00’, the mobile station shall perform the following actions:
      - If the mobile supports narrow analog mode, the mobile station shall perform the following actions:

◊ The mobile station shall store the system identification (SID_s = SID_r), voice mobile station attenuation code ($VMAC_s$ = $VMAC_r$), voice channel number ($ANALOG\_CHAN_s$ = $ANALOG\_CHAN_r$), message encryption mode indicator (MEM_s = MEM_r), analog channel type ($AN\_CHAN\_TYPE_s$ = $AN\_CHAN\_TYPE_r$) and the digital SAT code ($DSCC_s$ = $DSCC\_MSB_r \times 4 + SCC_r$).

◊ The mobile station shall set DTX_s to '00'.

◊ 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 enter the Confirm Initial Narrow Analog Voice Channel Task (see 2.6.5.2A of [22]) with an origination indication.

o If the mobile station does not support narrow analog mode, the mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported by the mobile station) and the mobile station shall remain in the *Mobile Station Origination Attempt Substate* of the *System Access State*.

- If $ASSIGN\_MODE_r$ equals '100', 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 $GRANTED\_MODE_r$ equals '00' and the multiplex option and radio configuration specified in the $DEFAULT\_CONFIG_r$ 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 *Mobile Station Origination Attempt Substate*.
  - If $GRANTED\_MODE_r$ equals '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) and shall remain in the *Mobile Station Origination Attempt Substate* if one of the following conditions is true:
    + FOR_RC_r is not equal to the Radio Configuration associated with $DEFAULT\_CONFIG_r$ as specified in Table 3.7.2.3.2.21-2.
    + REV_RC_r is not equal to the Radio Configuration associated with $DEFAULT\_CONFIG_r$ as specified in Table 3.7.2.3.2.21-2.

- If the mobile station does not support either of the Radio Configurations (FOR_RC or REV_RC), the mobile station 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 *Mobile Station Origination Attempt Substate*.
- If CH_IND_r = '01' and the mobile station does not support the Fundamental Channel, the mobile station 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 *Mobile Station Origination Attempt Substate*.
- If CH_IND_r = '10' and the mobile station does not support the Dedicated Control Channel, the mobile station 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 *Mobile Station Origination Attempt Substate*.
- If CH_IND_r = '11' and the mobile station does not support the Dedicated Control Channel and Fundamental Channel concurrently, the mobile station 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 *Mobile Station Origination Attempt Substate*.
- If $FREQ\_INCL_r$ equals '1' and if the band class ($BAND\_CLASS_r$) 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 *Mobile Station Origination Attempt Substate*.
- If the mobile station does not send a Mobile Station Reject Order as specified above, it shall continue to perform the actions specified below.
- If $FREQ\_INCL_r$ equals '1', the mobile station shall set
  - $CDMABAND_s = BAND\_CLASS_r$
  - $CDMACH_s = CDMA\_FREQ_r$
- The mobile station shall store the bypass indicator ($BYPASS\_ALERT\_ANSWER_s = BYPASS\_ALERT\_ANSWER_r$).
- The mobile station shall store granted mode ($GRANTED\_MODE_s = GRANTED\_MODE_r$)
- The mobile station shall store the default configuration ($DEFAULT\_CONFIG_s = DEFAULT\_CONFIG_r$).
- The mobile station shall store the Forward Traffic Channel Radio Configuration ($FOR\_RC_s = FOR\_RC_r$) and the Reverse Traffic Channel Radio Configuration ($REV\_RC_s = REV\_RC_r$).

- The mobile station shall store the frame offset ($FRAME\_OFFSET_s$ = $FRAME\_OFFSET_r$).
- The mobile station shall store the message encryption mode indicator ($ENCRYPT\_MODE_s$ = $ENCRYPT\_MODE_r$).
- The mobile station shall store the Forward power control subchannel relative gain ($FPC\_SUBCHAN\_GAIN_s$ = $FPC\_SUBCHAN\_GAIN_r$).
- 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'.
- If $3XFL\_1XRL\_INCL_r$ is equal to '1', the mobile station shall set $1XRL\_FREQ\_OFFSET_s$ to $1XRL\_FREQ\_OFFSET_r$.
- The mobile station shall store the channel indicator (CH_IND_s = CH_IND_r) and the mobile station shall perform the following actions:
  - If CH_IND_r equals '01', 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. Then for each included member of the Active Set, the mobile station shall store the following:
    - Set the PILOT_PN field to $PILOT\_PN_r$.
    - Set the ADD_PILOT_REC_INCL field to $ADD\_PILOT\_REC\_INCL_r$. If $ADD\_PILOT\_REC\_INCL_r$ equals '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 $QOF\_MASK\_ID\_FCH_r$.

+ If CH_IND_r equals '01' 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 '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:

  - Set the PILOT_PN to $PILOT\_PN_r$.
  - 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 $CODE\_CHAN\_DCCH_r$.

◊ Set the QOF_MASK_ID_DCCH field to $QOF\_MASK\_ID\_DCCH_r$.

+ If CH_IND_r equals '10' and $3X\_DCCH\_INFO\_INCL_r$ equals to '1', for each included member of the Active Set, the mobile station shall store the following:

  - 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 $CODE\_CHAN\_FCH_r$.

  - 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 $CODE\_CHAN\_FCH_r$.

+ 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:

  - Set the PILOT_PN to $PILOT\_PN_r$.

  - 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 $SR3\_PRIMARY\_PILOT_r$.
- 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 CODE_CHAN_DCCH field to $CODE\_CHAN\_DCCH_r$.

o Set the QOF_MASK_ID_DCCH field to $QOF\_MASK\_ID\_DCCH_r$.

+ 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:* If $RELEASE_r$ is equal to '1', 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).

7. *Intercept Order:* The mobile station shall enter the *Mobile Station Idle State*.

8. *Local Control Order*

9. *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 $ORDQ_r$). 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*.

10. *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.

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* ($PURPOSE_r$ 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_r) 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 ($PURPOSE_r$ 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 ($PURPOSE_r$ 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* ($PURPOSE_r$ 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_r) of the call.

+ 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 shall enter the *Mobile Station Idle 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 perform the following actions:

+ The mobile station 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.

+ 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 shall enter the *Mobile Station Idle State*.

– 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 remain in the *Mobile Station Origination Attempt Substate*.

– If the purpose of the message is to cancel the PACA call ($PURPOSE_r$ is equal to '0011'), the mobile station shall perform the following actions:

+ The mobile station shall set $PACA_s$ to disabled, 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*.

12. *Registration Accepted Order:*

- If $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
- If $ORDQ_r$ = '00000111', the mobile station shall perform the following

  - The mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
  - The mobile station shall set $SIG\_ENCRYPT\_MODE_s$ = $SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ as the session key.

13. *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).

14. *Release Order:* If $NDSS\_ORIG_s$ is equal to 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 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.

15. *Reorder Order:* If $NDSS\_ORIG_s$ is equal to enabled, the mobile station shall set $NDSS\_ORIG_s$ to disabled, and should indicate to the user that the call origination has been canceled. 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 enter the *Mobile Station Idle State.*

16. *Retry Order:* This order indicates that the origination is rejected and specifies the time before which the mobile station shall not send an *Origination Message* containing the same packet data Service Option. 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 $RETRY\_DELAY_s$ 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 $RETRY\_DELAY_s[RETRY\_TYPE_r]$.
  - If $NDSS\_ORIG_s$ is equal to enabled, the mobile station shall set $NDSS\_ORIG_s$ to disabled, and should indicate to the user that the call origination has been canceled. 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 enter the *Mobile Station Idle State*.

17. *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.
18. *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 '00000000', the mobile station shall set $RETURN\_IF\_FAIL_s$ = $RETURN\_IF\_FAIL_r$, and enter the *System Determination Substate* of the *Mobile Station Initialization State* with an NDSS off indication (see 2.6.1.1); otherwise:
  - if $REDIRECT\_TYPE_r$ is '0', 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).
  - if $REDIRECT\_TYPE_r$ is '1', the mobile station shall store the redirection record received in the message as $REDIRECT\_REC_s$ and shall enable $NDSS\_ORIG_s$, and shall record the dialed digits. The mobile station shall enter the System Determination Substate of the *Mobile Station Initialization State* with a redirection indication (see 2.6.1.1).

19. *SSD Update Message:* The mobile station shall respond to the message as specified in 2.3.12.1.5.

20. *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).

21. *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.

22. *User Zone Reject Message*
23. *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.

If the mobile station performs an access probe handoff or access handoff and receives any of the following messages, it shall process the message as specified in 2.6.3.1.3:

1. *System Parameters Message*
2. *Access Parameters Message*
3. *Neighbor List Message*
4. *Extended System Parameters Message*
5. *Extended Neighbor List Message*
6. *General Neighbor List Message*
7. *Global Service Redirection Message*
8. *Extended Global Service Redirection Message*

2.6.3.6 Registration Access Substate

In this substate, the mobile station sends a *Registration Message*. If the base station responds with an authentication request, the mobile station responds in this substate.

Upon entering the *Registration Access Substate*, the mobile station shall send the *Registration Message*.

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 *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:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress.
- 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 enter the *Mobile Station Origination Attempt Substate* with an origination indication.

If $PACA_S$ is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the user directs the mobile station to cancel a PACA call.

If the mobile station receives a mobile-station-addressed page, the mobile station may determine if there is a page match (see 2.6.2.3). If a match is declared, the mobile station shall perform the following:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress.
- The mobile station shall enter the *Page Response Substate*.

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 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:* 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 2.3.12.1.4, regardless of the value of $AUTH_S$.
2. *Base Station Challenge Confirmation Order:* 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.
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 $ORDQ_r$). 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:*

- If $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
- If $ORDQ_r$ = '00000111', the mobile station shall perform the following
  - The mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
  - The mobile station shall set $SIG\_ENCRYPT\_MODE_s$ = $SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ as the session key.

10. *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).

11. *Release Order:* If $NDSS\_ORIG_s$ is equal to 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 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.

12. *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 + $RETRY\_DELAY\_VALUE_s \times RETRY\_DELAY\_UNIT_s$ ms as $RETRY\_DELAY_s[RETRY\_TYPE_r]$.

13. *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.

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 $RETURN\_IF\_FAIL_s = RETURN\_IF\_FAIL_r$.
- 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).

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 $AUTO\_MSG\_INTERVAL_S$ 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:

- 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 any message sent by the mobile station in this substate, it shall send a response in this substate if required and shall then enter the *Mobile Station Idle State*.

If $PACA_S$ is equal to enabled, the mobile station shall set PACA_CANCEL to '1' when the user directs the mobile station to cancel a PACA call.

If the mobile station receives a mobile-station-addressed page, the mobile station may determine whether there is a page match (see 2.6.2.3). If a match is declared, the mobile station shall perform the following:

- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress.
- The mobile station shall enter the *Page Response Substate*.
- If the mobile station entered this substate with a message transmission indication, the mobile station may store the *Data Burst Message* for later transmission.

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 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. *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 $ORDQ_r$). 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:*

- If $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
- If $ORDQ_r$ = '00000111', the mobile station shall perform the following
  - The mobile station shall set $ROAM\_INDI_s$ = $ROAM\_INDI_r$ and should display the roaming condition.
  - The mobile station shall set $SIG\_ENCRYPT\_MODE_s$ = $SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ 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 + $RETRY\_DELAY\_VALUE_s \times RETRY\_DELAY\_UNIT_s$ 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).
- 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. *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.

2.6.3.8 PACA Cancel Substate

In this substate, the mobile station sends a *PACA Cancel Message*. If the base station responds with an authentication request, the mobile station responds in this substate.

Upon entering the *PACA Cancel Substate*, the mobile station shall transmit the *PACA Cancel Message*.

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]).

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), it shall declare an access attempt failure and update its registration variables as specified in 2.6.5.5.3.2, disable its transmitter and enter the *Mobile Station Idle State*. If the mobile station receives confirmation of any message sent by the mobile station in this substate, it shall send a response in this substate if required and shall then enter the *Mobile Station Idle State*.

If the mobile station receives a mobile-station-addressed page, the mobile station may determine if there is a page match (see 2.6.2.3). If a match is declared, Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to abort any access attempt in progress and shall enter the *Page Response Substate*.

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 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. *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 $ORDQ_r$). 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:* 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 $ORDQ_r$ = '00000101', the mobile station shall set $ROAM\_INDI_s = ROAM\_INDI_r$ and should display the roaming condition.

   - If $ORDQ_r$ = '00000111', the mobile station shall perform the following

     - The mobile station shall set $ROAM\_INDI_s = ROAM\_INDI_r$ and should display the roaming condition.

     - The mobile station shall set $SIG\_ENCRYPT\_MODE_s = SIG\_ENCRYPT\_MODE_r$ and start encrypting the signaling messages sent on r-dsch and r-csch using the encryption algorithm specified by $SIG\_ENCRYPT\_MODE_r$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 $KEY[KEY\_SEQ_r]$ 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 + $RETRY\_DELAY\_VALUE_s \times RETRY\_DELAY\_UNIT_s$ 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).

- 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 *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).

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. *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.

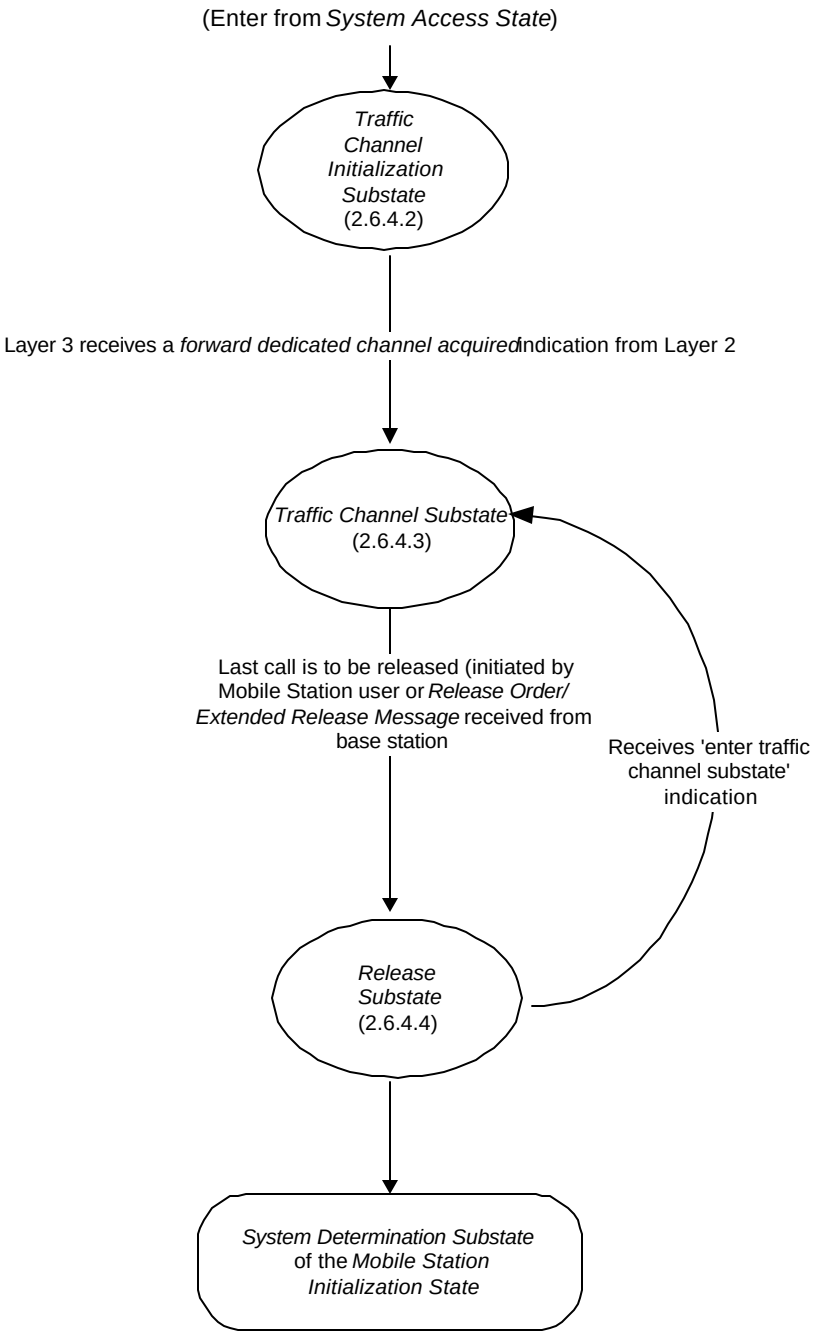

Figure 2.6.4-1. Mobile Station Control on the Traffic Channel State

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.

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[12] Periodic reporting and threshold reporting may be independently enabled or disabled by the base station.

The mobile station shall increment the counter by 1 at every 20 ms interval if a 20ms frame or at least one 5ms frame is received from the Forward Fundamental Channel or Dedicated Control Channel:

- If the received frame is from the Fundamental Channel, the mobile station shall perform the following:
  - Increment TOT_FRAMES_S by 1.
  - If the received 20ms frame is bad or one of the 5ms frames is bad, the mobile station shall increment BAD_FRAMES_S by 1.
- If the received frame is from the Forward Dedicated Control Channel, the mobile station shall perform the following:
  - Increment $DCCH\_TOT\_FRAMES_S$ by 1.
  - If the received 20ms frame is bad or one of the 5ms frames is bad, the mobile station shall increment $DCCH\_BAD\_FRAMES_S$ by 1.
- If either
  - $PWR\_THRESH\_ENABLE_S$ is equal to '1' and if one of the following conditions is true:
    + The Fundamental Channel carries the Power Control Subchannel [$FPC\_PRI\_CHAN_S$ = '0'], and BAD_FRAMES_S is equal to $PWR\_REP\_THRESH_S$ or
    + The Dedicated Control Channel carries the Power Control Subchannel [$FPC\_PRI\_CHAN_S$ = '1'], and $DCCH\_BAD\_FRAMES_S$ is equal to $PWR\_REP\_THRESH_S$.

  or
  - $PWR\_PERIOD\_ENABLE_S$ is equal to '1' and if one of the following conditions is true:
    + The Fundamental Channel carries the Power Control Subchannel [$FPC\_PRI\_CHAN_S$ = '0'], and TOT_FRAMES_S is equal to $\lfloor (2^{(PWR\_REP\_FRAMES_S/2)} \times 5) \rfloor$, or
    + The Dedicated Control Channel carries the Power Control Subchannel [$FPC\_PRI\_CHAN_S$ = '1'], and $DCCH\_TOT\_FRAMES_S$ is equal to $\lfloor (2^{(PWR\_REP\_FRAMES_S/2)} \times 5) \rfloor$,

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.

oth 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 ($FPC\_CURR\_FCH\_SETPT_S$ – $FPC\_CURR\_DCCH\_SETPT_S$).

- 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 FPC_SETPT_THRESH$_S$, the mobile station shall send the *Outer Loop Report Message* requiring acknowledgment to the base station, and the mobile station shall then set FPC_DELTA_SETPT$_S$ to (FPC_CURR_FCH_SETPT$_S$ – FPC_CURR_DCCH_SETPT$_S$).

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:

- The mobile station shall set FPC_DELTA_SCH_SETPT$_S$ to (FPC_FCH_CURR_SETPT$_S$ – FPC_SCH_CURR_SETPT$_S$) if FPC_PRI_CHAN$_S$ is equal to '0'.
- The mobile station shall set FPC_DELTA_SCH_SETPT$_S$ to (FPC_DCCH_CURR_SETPT$_S$ – FPC_SCH_CURR_SETPT$_S$) if FPC_PRI_CHAN$_S$ is equal to '1'.
- For each received frame, if FPC_PRI_CHAN$_S$ is equal to '0' and |FPC_FCH_CURR_SETPT$_S$ – 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_FCH_CURR_SETPT$_S$ – FPC_SCH_CURR_SETPT$_S$).
- For each received frame, if FPC_PRI_CHAN$_S$ is equal to '1' and |FPC_DCCH_CURR_SETPT$_S$ – 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_DCCH_CURR_SETPT$_S$ – 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:

- The mobile station shall set FPC_DELTA_SCH_SETPT$_S$ to (FPC_SCH_CURR_SETPT$_S$[FPC_SEC_CHAN$_S$] – FPC_SCH_CURR_SETPT$_S$) for the 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 ($PWR\_REP\_THRESH_s = PWR\_REP\_THRESH_r$)
- Power control reporting frame count ($PWR\_REP\_FRAMES_s = PWR\_REP\_FRAMES_r$)
- Threshold report mode indicator ($PWR\_THRESH\_ENABLE_s = PWR\_THRESH\_ENABLE_r$)
- Periodic report mode indicator ($PWR\_PERIOD\_ENABLE_s = PWR\_PERIOD\_ENABLE_r$)
- Power report delay ($PWR\_REP\_DELAY_s = PWR\_REP\_DELAY_r$)

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_r is not supported by the mobile station.
- If the mobile station does not support Supplemental Channel and FPC_MODE_r is set to the '001', '010', '101', or '110'.
- If $PWR\_CNTL\_STEP_r$ corresponds to a power control step size (see 2.1.2.3.2 of [2]) is not supported by the mobile station.

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 any of the following conditions are detected:

- $FPC\_PRI\_CHAN_r$ is set to '1' and only the Fundamental Channel is assigned.
- $FPC\_PRI\_CHAN_r$ is set to '0' and only the Dedicated Control Channel is assigned.

If none of the above conditions are true, the mobile station shall process the message as follows at the action time (see 2.6.4.1.5) specified in the message:

- The mobile station shall store the power control step size ($PWR\_CNTL\_STEP_s$ = $PWR\_CNTL\_STEP_r$).
- If FPC_INCL_r is equal to '1', the mobile station shall perform the following:
  - The mobile station shall set $FPC\_MODE\_NO\_SCH_s$ = FPC_MODE_r.
  - The mobile station shall set FPC_MODE_s = $FPC\_MODE\_NO\_SCH_s$ if there is no forward Supplemental Channel burst in progress (see 2.6.6.2.5.1.1).
  - The mobile station shall set $FPC\_PRI\_CHAN_s$ to $FPC\_PRI\_CHAN_r$
  - If FPC_OLPC_FCH_INCL is equal to '1', the mobile station shall:
    - Set $FPC\_FCH\_FER_s$ to $FPC\_FCH\_FER_r$.
    - If $FPC\_FCH\_MIN\_SETPT_r$ is not equal to '11111111', set $FPC\_FCH\_MIN\_SETPT_s$ to $FPC\_FCH\_MIN\_SETPT_r$; otherwise, set $FPC\_FCH\_MIN\_SETPT_s$ to $FPC\_FCH\_CURR\_SETPT_s$.
    - If $FPC\_FCH\_MAX\_SETPT_r$ is not equal to '11111111', set $FPC\_FCH\_MAX\_SETPT_s$ to $FPC\_FCH\_MAX\_SETPT_r$; otherwise, set $FPC\_FCH\_MAX\_SETPT_s$ to $FPC\_FCH\_CURR\_SETPT_s$.
  - If FPC_OLPC_DCCH_INCL is equal to '1', the mobile station shall:
    - Set $FPC\_DCCH\_FER_s$ to $FPC\_DCCH\_FER_r$.
    - If $FPC\_DCCH\_MIN\_SETPT_r$ is not equal to '11111111', set $FPC\_DCCH\_MIN\_SETPT_s$ to $FPC\_DCCH\_MIN\_SETPT_r$; otherwise, set $FPC\_DCCH\_MIN\_SETPT_s$ to $FPC\_DCCH\_CURR\_SETPT_s$.
    - If $FPC\_DCCH\_MAX\_SETPT_r$ is not equal to '11111111', set $FPC\_DCCH\_MAX\_SETPT_s$ to $FPC\_DCCH\_MAX\_SETPT_r$; otherwise, set $FPC\_DCCH\_MAX\_SETPT_s$ to $FPC\_DCCH\_CURR\_SETPT_s$.
  - If FPC_INCL is equal to '1' and FPC_MODE is equal to '001', '010', '101', or '110', the mobile station shall:
    - Set $FPC\_SEC\_CHAN_s$ to $FPC\_SEC\_CHAN_r$.

- If NUM_SUP_r is not equal to '00', for each Supplemental Channel included in the message, the mobile station shall:
  - Set SCH_ID_s to SCH_ID_r.
  - Set $FPC\_SCH\_FER_s[SCH\_ID_s]$ to $FPC\_SCH\_FER_r$.
  - If $FPC\_SCH\_MIN\_SETPT_r$ is not equal to '11111111', set $FPC\_SCH\_MIN\_SETPT_s[SCH\_ID_s]$ to $FPC\_SCH\_MIN\_SETPT_r$; otherwise, set $FPC\_SCH\_MIN\_SETPT_s[SCH\_ID_s]$ to $FPC\_SCH\_CURR\_SETPT_s$.
  - If $FPC\_SCH\_MAX\_SETPT_r$ is not equal to '11111111', set $FPC\_SCH\_MAX\_SETPT_s[SCH\_ID_s]$ to $FPC\_SCH\_MAX\_SETPT_r$; otherwise, set $FPC\_SCH\_MAX\_SETPT_s[SCH\_ID_s]$ to $FPC\_SCH\_CURR\_SETPT_s$.
- If FPC_THRESH_INCL is equal to '1', the mobile station shall set $FPC\_SETPT\_THRESH_s$ to $FPC\_SETPT\_THRESH_r$.
- If FPC_THRESH_SCH_INCL is equal to '1', the mobile station shall set $FPC\_SETPT\_THRESH\_SCH_s$ to $FPC\_SETPT\_THRESH\_SCH_r$

- If RPC_INCL_r is equal to '1' and the mobile station supports any Radio Configuration greater than 2, the mobile station shall perform the following:
  - If RPC_ADJ_REC_TYPE is equal to '0000', the mobile station shall update the Reverse Channel Adjustment Gain Table (see 2.1.2.3.3.2 of [2]) containing an offset relative to the Reverse Pilot Channel power for each reverse link code channel received in this message.
  - If RPC_ADJ_REC_TYPE is equal to '0001' or '0010', the mobile station shall update the Reverse Link Attribute Adjustment Gain Table (see 2.1.2.3.3.2 of [2]) containing an offset relative to the Reverse Pilot Channel power for each transmission rate, frame length, coding type received in this message.

2.6.4.1.2 Service Configuration and Negotiation

During Traffic Channel operation, the mobile station and base station communicate through the exchange of Forward and Reverse Traffic Channel frames. The mobile station and base station use a common set of attributes for building and interpreting Traffic Channel frames. This set of attributes, referred to as a service configuration, consists of both negotiable and non-negotiable parameters.

The set of negotiable service configuration parameters consists of the following:

1. *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]. 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.

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 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 the base station find a mutually acceptable service configuration, or when either the mobile station or the 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 the 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 after the mobile station receives an *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*, the *General Handoff Direction Message, or the 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:

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

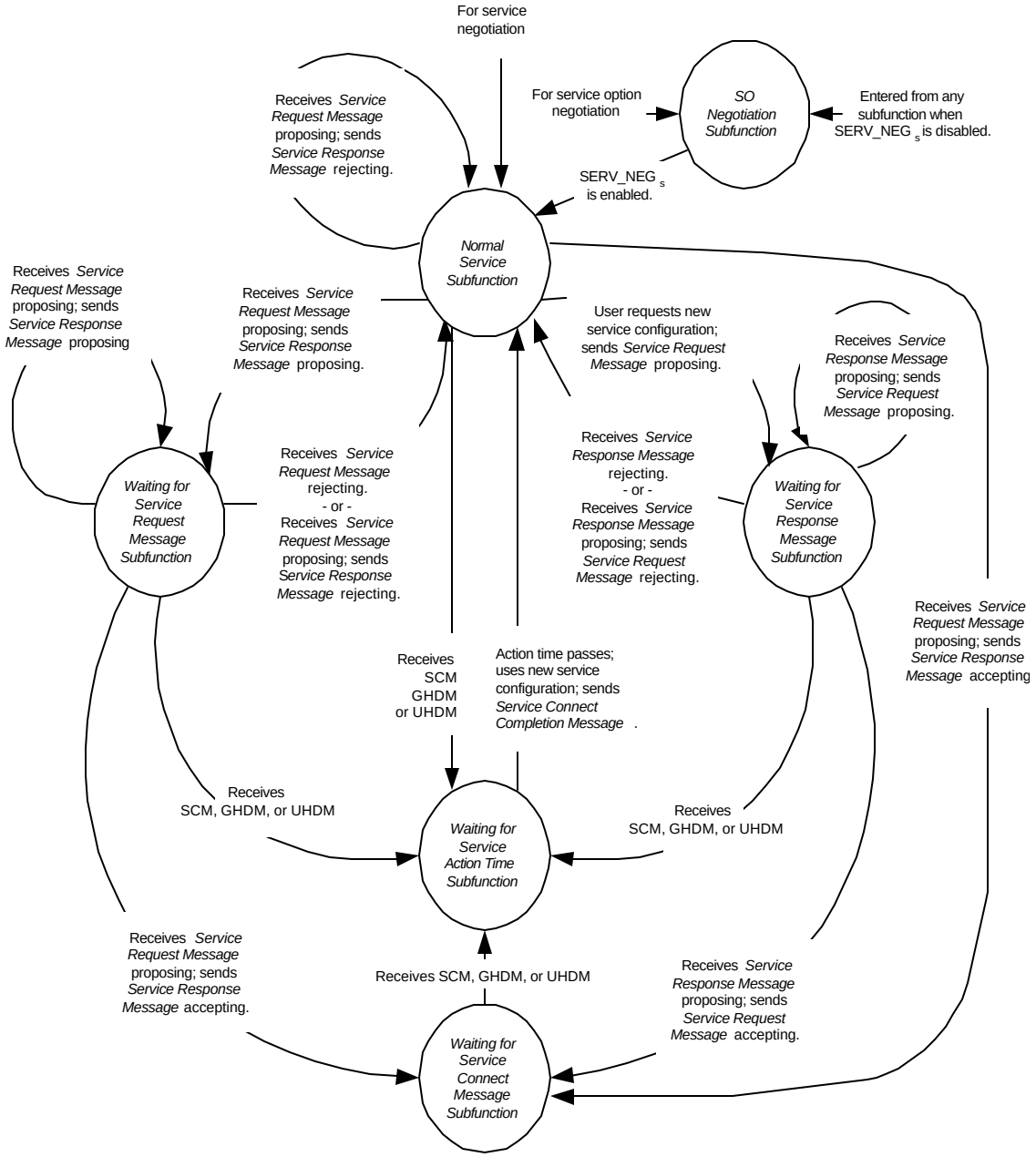
As illustrated in Figure 2.6.4.1.2.2-1, the mobile station supports service configuration and negotiation by performing the following set of service subfunctions:

- *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*

Substate of the *Mobile Station Control on the Traffic Channel State*, the *Normal Service Subfunction*, the *Waiting for Service Connect Message Subfunction* or the *SO Negotiation Subfunction* is active. Each of the other service subfunctions may become active in response to various events which occur during the Traffic Channel substates. Typically, the mobile station processes events pertaining to service configuration and negotiation in accordance with the requirements for the active service subfunction, however, some Traffic Channel substates do not allow for the processing of certain events pertaining to service configuration and negotiation, or specify requirements for processing such events which supersede the requirements of the active service subfunction.



Notes:

- SCM stands for *Service Connect Message* .
- GHDM stands for *General Handoff Direction Message* .
- UHDM stands for *Universal Handoff Direction Message* .
- Processing for special cases, such as timeouts and errors, is not shown in this diagram.

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.

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 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 process the message as follows:

   – If the purpose of the message is to reject a proposed service configuration, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.

   – 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 Response 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 Response Message* to reject the proposed service configuration within T_{59m} seconds.

     + 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*.

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*.

- 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

send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds and shall activate the *Normal Service Subfunction*.

- 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.

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 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 process the message as follows:

   – If the purpose of the message is to reject a proposed service configuration, the mobile station shall activate the *Normal Service Subfunction*.

   – 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 Response 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 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 reset the subfunction timer for T_{68m} 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 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*

2.6.4.1.2.2.3 Waiting for Service Response Message Subfunction

While this subfunction is active, the mobile station waits to receive a *Service Response Message*.

Upon activation of the *Waiting for Service Response Message Subfunction*, the mobile station shall set the subfunction timer for T_{68m} seconds.

While the *Waiting for Service Response 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 send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds and shall activate the *Normal Service Subfunction*.
     - 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.
  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 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 process the message as follows:
     - If the purpose of the message is to reject a proposed service configuration, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.
     - If the purpose of the message is to propose a service configuration, the mobile station shall discontinue processing the service configuration requested by the user and shall process the message as follows:
       + If the mobile station accepts the proposed service configuration, the mobile station shall send a *Service Response 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 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*.

- 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 and shall activate the *Normal Service Subfunction*.

     - 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.

  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 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 process the message as follows:

     – If the purpose of the message is to reject a proposed service configuration, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds.

     – 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 Response Message* to accept the proposed service configuration within T_{59m} seconds. The mobile station shall reset the subfunction timer for T_{65m} seconds.

       + 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 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.

- At 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 perform the following:
  - If this is a *Service Connect Message* with $USE\_OLD\_SERV\_CONFIG_r$ equals '1', the mobile station shall perform the following:
    - Layer 3 shall terminate the Call Control instance identified by NULL.
    - For each service option connection (with corresponding connection reference CON_REF_i) in the stored service configuration record, 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_i.
    - The mobile station shall begin to use the service configuration which was stored by the mobile station when it left the *Mobile Station Control on the Traffic Channel State* as the current service configuration and shall begin to process Forward and Reverse Traffic Channel frames accordingly. The mobile station shall send a *Service Connect Completion Message* within T_{56m} seconds after the action time. The mobile station shall exit this subfunction and activate the *Normal Service Subfunction*.
  - Otherwise, the mobile station shall perform the following:
    - The mobile station shall process the received Service Configuration Record as specified in 2.6.4.1.12, shall process the received Non-negotiable Service Configuration Record as specified in 2.6.4.1.13 (if included), and shall begin to use the service configuration specified by the *Service Connect Message*, *General Handoff Direction Message* or *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. If the action time was specified by a *Service Connect Message*, the mobile station shall send a *Service Connect Completion Message* within T_{56m} seconds after the action time. The mobile station shall exit this subfunction and activate the *Normal Service Subfunction*.
    - If $CC\_INFO\_INCL_r$ equals '1', then for each of the $NUM\_CALLS\_ASSIGN_r$ occurrences of the call control parameters included in the message, the mobile station shall perform the following:
      - If $RESPONSE\_IND_r$ equals '1', and TAG_r matches any of the TAG values contained in the list TAG_OUTSTANDING_LIST, 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 remove the TAG value specified by TAG_r from the list TAG_OUTSTANDING_LIST.

- 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*.

- If the mobile station receives a *Service Option Request Order*, it shall process the order as follows:
  - If the mobile station accepts the requested service option, the mobile station shall set SO_REQ_S to NULL and shall send a *Service Option Response Order* accepting the requested service option within T_{58m} seconds. The mobile station shall interpret the message action time of the *Service Option Request Order* in accordance with the requirements for the requested service option and the mobile station shall begin using the service configuration implied by the requested service option in accordance with those requirements. The implied service configuration shall include the default Forward and Reverse multiplex options and radio configurations associated with the requested service option, and shall include one service option connection for which the service option connection reference is 1, the service option is the requested service option, and the Forward and Reverse Traffic Channel types are both primary traffic.
  - If the mobile station does not accept the requested service option and has an alternative service option to request, the mobile station shall set SO_REQ_S to the alternative service option number and shall send a *Service Option Request Order* requesting the alternative service option within T_{58m} seconds.
  - If the mobile station does not accept the requested service option and does not have an alternative service option to request, the mobile station shall set SO_REQ_S to NULL and shall send a *Service Option Response Order* to reject the request within T_{58m} seconds. The mobile station shall continue to use the current service configuration.
- If the mobile station receives a *Service Option Response Order*, it shall process the order as follows:
  - If the service option number specified in the order is equal to SO_REQ_S, the mobile station shall set SO_REQ_S to NULL. The mobile station shall interpret the message action time of the *Service Option Response Order* in accordance with the requirements for the specified service option, and the mobile station shall begin using the service configuration implied by the specified service option in accordance with those requirements. The implied service configuration shall include the default Forward and Reverse multiplex options and radio configurations associated with the specified service option, and shall include one service option connection for which the service option connection reference is 1, the service option is the specified service option, and the Forward and Reverse Traffic Channel types are both primary traffic.
  - If the order indicates a service option rejection, the mobile station shall set SO_REQ_S to NULL. The mobile station shall continue to use the current service configuration.

- If the order does not indicate a service option rejection and the service option specified in the order is not equal to SO_REQ_s, the mobile station shall set SO_REQ_s to NULL and shall send a *Mobile Station Reject Order* (ORDQ = '00000100') within T_{58m} seconds. The mobile station shall continue to use the current service configuration.

- If the mobile station receives a *Service Option Control Order*, it shall process the order as follows:
  - If the current service configuration includes a service option connection, the mobile station shall interpret the message action time of the *Service Option Control Order* in accordance with the requirements for the service option associated with the service option connection and the mobile station shall process the *Service Option Control Order* in accordance with those requirements;
  - otherwise, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000001') within T_{56m} seconds.

- If the mobile station receives one of the following service negotiation messages, the mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000010') within T_{56m} seconds:
  1. *Service Connect Message*
  2. *Service Option Control Message*
  3. *Service Request Message*
  4. *Service Response Message*

2.6.4.1.3 Ordering of Messages

The Layer 2 protocol does not guarantee delivery of messages in any order. If the mobile station requires that the base station receive a set of messages in a certain order, the mobile 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.

2.6.4.1.4 Processing the In-Traffic System Parameters Message

The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to the specified value if the following conditions is true, and shall not perform any other action described in this section for processing the *In-Traffic System Parameters Message*:

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported), if P_REV has been changed from 6 or lower to 7 or higher, or visa versa.

If the above condition is not true, the mobile station shall store the following parameters from the *In-Traffic System Parameters Message*:

- System identification ($SID_s = SID_r$)

- Network identification ($NID_s = NID_r$)
- Search window size for the Active Set and the Candidate Set ($SRCH\_WIN\_A_s = SRCH\_WIN\_A_r$)
- Search window size for the Neighbor Set ($SRCH\_WIN\_N_s = SRCH\_WIN\_N_r$)
- Search window size for the Remaining Set ($SRCH\_WIN\_R_s = SRCH\_WIN\_R_r$)
- Pilot detection threshold ($T\_ADD_s = T\_ADD_r$)
- Pilot drop threshold ($T\_DROP_s = T\_DROP_r$)
- Active Set versus Candidate Set comparison threshold ($T\_COMP_s = T\_COMP_r$)
- Drop timer value ($T\_TDROP_s = T\_TDROP_r$)
- Maximum age for retention of Neighbor Set members ($NGHBR\_MAX\_AGE_s = NGHBR\_MAX\_AGE_r$)
- Protocol revision level ($P\_REV_s = P\_REV_r$), and protocol revision level currently in use ($P\_REV\_IN\_USE_s$ = min (P_REV_s, $MOB\_P\_REV_p$ of the current band class))
- Slope of the handoff add/drop criterion ($SOFT\_SLOPE_s = SOFT\_SLOPE_r$)
- Intercept of the handoff add criterion ($ADD\_INTERCEPT_s = ADD\_INTERCEPT_r$)
- Intercept of the handoff drop criterion ($DROP\_INTERCEPT_s = DROP\_INTERCEPT_r$)
- If included, Reverse Supplemental Code Channel or Reverse Supplemental Channel transmission offset threshold ($T\_MULCHAN_s = T\_MULCHAN_r$)
- If included, Reverse Supplemental Code Channel beginning of transmission preamble length ($BEGIN\_PREAMBLE_s = BEGIN\_PREAMBLE_r$)
- If included, Reverse Supplemental Code Channel discontinuous transmission resumption preamble length ($RESUME\_PREAMBLE_s = RESUME\_PREAMBLE_r$)
- If included, Slotted Timer ($T\_SLOTTED_s = T\_SLOTTED_r$)
- If the mobile station supports packet data service options, the mobile station shall store the packet data services zone identifier ($PACKET\_ZONE\_ID_s = PACKET\_ZONE\_ID_r$).

The mobile station shall determine its roaming status (see 2.6.5.3). The mobile station should indicate to the user whether the mobile station is roaming.

2.6.4.1.5 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 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*.

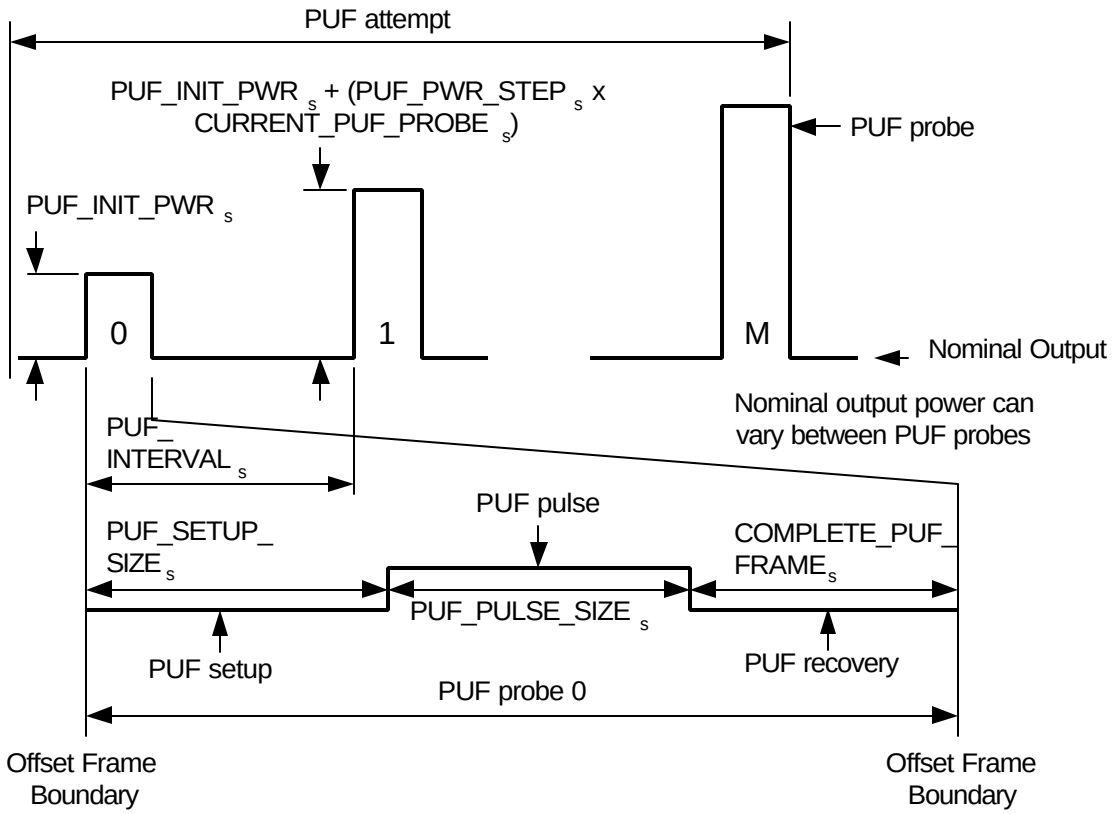


Figure 2.6.4.1.7-1. Structure of PUF Attempt

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 ($MAX\_PWR\_PUF_s = MAX\_PWR\_PUF_r + 1$)
- Total number of PUF probes ($TOTAL\_PUF\_PROBES_s = TOTAL\_PUF\_PROBES_r + 1$)
- PUF interval ($PUF\_INTERVAL_s = PUF\_INTERVAL_r$)
- Number of PUF setup power control groups ($PUF\_SETUP\_SIZE_s = PUF\_SETUP\_SIZE_r + 1$)
- Number of PUF pulse power control groups ($PUF\_PULSE\_SIZE_s = PUF\_PULSE\_SIZE_r + 1$)
- Power increase of initial PUF pulse ($PUF\_INIT\_PWR_s = PUF\_INIT\_PWR_r$)
- Power increase for each successive PUF pulse ($PUF\_PWR\_STEP_s = PUF\_PWR\_STEP_r$)?
- Frequency included indicator ($PUF\_FREQ\_INCL_s = PUF\_FREQ\_INCL_r$)

If $PUF\_FREQ\_INCL_s$ equals '1', the mobile station shall store the following:

- PUF probe Target Frequency CDMA Channel number ($PUF\_TF\_CDMACH_s = PUF\_CDMA\_FREQ_r$)
- PUF probe Target Frequency CDMA band class ($PUF\_TF\_CDMABAND_s = PUF\_BAND\_CLASS_r$)

The mobile station shall set $CURRENT\_PUF\_PROBE_s$ 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 $ACTION\_TIME\_FRAME_r \times 20$ ms + $FRAME\_OFFSET_s \times 1.25$ ms after the System Time specified by $ACTION\_TIME_r$. 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:

- The mobile station shall use closed loop power control procedures as specified in 2.1.2.3.2 of [2].
- The mobile station shall use the gated output procedures specified in 2.1.2.2.2.4 and 2.1.3.1.10.3 of [2].
- The mobile station shall control its mean output power as specified in 2.1.2.3.1 of [2].
- The mobile station shall monitor its output power during the PUF pulse, and should monitor its output power at least once during each power control group of the PUF pulse. If the mobile station detects that the transmit power level specified in of [2] is equal to or greater than the maximum power output of the mobile station at any time during a PUF pulse, the mobile station shall decrement $MAX\_PWR\_PUF_S$ by one for that PUF pulse.
- The mobile station shall transmit the traffic channel preamble for the duration of the PUF probe on the Reverse Fundamental Code Channel.

After the processing of each PUF probe, the mobile station shall increment $CURRENT\_PUF\_PROBE_S$ by 1. If $MAX\_PWR\_PUF_S$ is equal to 0, the mobile station shall terminate the PUF attempt. If $CURRENT\_PUF\_PROBE_S$ equal to $TOTAL\_PUF\_PROBE_S$, the mobile station shall terminate the PUF attempt.

2.6.4.1.7.2.2 PUF Probe On PUF Target Frequency

The mobile station shall process each PUF probe as follows:

- The mobile station shall use closed loop power control procedures as specified in 2.1.2.3.2 of [2].
- The mobile station shall use the gated output procedures specified in 2.1.3.1.10.3 of [2].
- The mobile station shall control its mean output power as specified in 2.1.2.3.1 of [2].
- The mobile station shall store the following Serving Frequency parameters from its current configuration:
  - CDMA Band Class ($PUF\_SF\_CDMABAND_S = CDMABAND_S$)
  - Frequency assignment ($PUF\_SF\_CDMACH_S = CDMACH_S$)
- The mobile station shall monitor its output power during the PUF pulse, and should monitor its output power at least once during each power control group of PUF pulse. If the mobile station detects that the transmit power level specified in 2.1.2.3.1 of [2] is equal to or greater than the maximum power output of the mobile station at any time during a PUF pulse, the mobile station shall decrement the $MAX\_PWR\_PUF_S$ by one for that PUF pulse.

- At the beginning of the PUF probe, the mobile station shall disable its transmitter, stop processing the Forward Supplemental Code Channel (if any), or the Forward Supplemental Channel (if any), disable all corrections to the mobile station time reference (see 2.1.5 of [2]), tune to the CDMA channel specified by $PUF\_TF\_CDMACH_s$, and $PUF\_TF\_CDMABAND_s$ and re-enable its transmitter.
- The mobile station shall transmit the traffic channel preamble on the Reverse Fundamental Code Channel during the PUF pulse at $PUF\_TX\_PWR_s$.
- The mobile station should disable its transmitter immediately after the end of the PUF pulse, and shall disable its transmitter before the end of the first power control group after the PUF pulse. It shall then tune to its assigned CDMA channel as given by $CDMACH_s$ and $CDMABAND_s$.
- If the interval between the time that the mobile station tunes to the PUF Target Frequency and the time that it re-tunes to the Serving Frequency is equal to or greater than $(N_{2m} \times 0.02)$ seconds, the mobile station shall wait to receive 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 then re-enable its transmitter and re-enable any adjustments to the mobile station time reference.
- If the Forward Supplemental Code Channel assignment has not expired while the mobile station has tuned to the PUF Target Frequency, then the mobile station shall resume processing the Forward Supplemental Code Channels after re-tuning to the Serving Frequency.
- If the Forward Supplemental Channel assignment has not expired while the mobile station has tuned to the PUF Target Frequency, then the mobile station shall resume processing the Forward Supplemental Channels after re-tuning to the Serving Frequency.
- If the Reverse Supplemental Code Channel assignment has not expired while the mobile station has tuned to the PUF Target Frequency, then the mobile station may resume transmitting the Reverse Supplemental Code Channels after re-tuning to the Serving Frequency.
- If the Reverse Supplemental Channel assignment has not expired while the mobile station has tuned to the PUF Target Frequency, then the mobile station may resume transmitting the Reverse Supplemental Code Channels after re-tuning to the Serving Frequency.

After the processing of each PUF probe, the mobile station shall increment $CURRENT\_PUF\_PROBE_s$ by one. If $MAX\_PWR\_PUF_s$ is equal to 0, the mobile station shall terminate the PUF attempt. If $CURRENT\_PUF\_PROBE_s$ is equal to $TOTAL\_PUF\_PROBE_s$, 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 sh all 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:

- The mobile station shall store the service option connection reference ($SO\_CON\_REC_s[i].CON\_REF = CON\_REF_r$).

- The mobile station shall store the service option ($SO\_CON\_REC_s[i].SERVICE\_OPTION = SERVICE\_OPTION_r$).

- The mobile station shall store the forward traffic channel traffic type ($SO\_CON\_REC_s[i].FOR\_TRAFFIC = FOR\_TRAFFIC_r$).

- The mobile station shall store the reverse traffic channel traffic type ($SO\_CON\_REC_s[i].REV\_TRAFFIC = REV\_TRAFFIC_r$).

- The mobile station shall store the encryption mode indicator for user information privacy ($SO\_CON\_REC_s[i].UI\_ENCRYPT\_MODE = UI\_ENCRYPT\_MODE_r$).

- The mobile station shall store the service reference identifier ($SO\_CON\_REC_s[i].SR\_ID = SR\_ID_r$).

- If $RLP\_INFO\_INCL_r$ equals ‘1’, the mobile station shall store the Radio Link Protocol block of bits ($SO\_CON\_REC_s[i].RLP\_BLOB = RLP\_BLOB_r$).

- If $QOS\_PARMS\_INCL_r$ equals ‘1’, the mobile station shall store the QoS parameters block ($SO\_CON\_REC_s[i].QOS\_PARMS = QOS\_PARMS_r$).

- If $FCH\_CC\_INCL_r$ equals ‘1’, the mobile station shall do the following:
  - The mobile station shall store the indicator for 5ms frames on Fundamental Channel as follows: if $FCH\_FRAME\_SIZE_r$ equals ‘1’, the mobile station shall set $FCH\_5MS\_FRAMES_s$ = ‘1’; otherwise, it is set to ‘0’.
  - The mobile station shall store the Forward Fundamental Channel Radio Configuration ($FOR\_FCH\_RC_s = FOR\_FCH\_RC_r$).
  - The mobile station shall store the Reverse Fundamental Channel Radio Configuration ($REV\_FCH\_RC_s = REV\_FCH\_RC_r$).
- If $DCCH\_CC\_INCL_r$ equals ‘1’, the mobile station shall do the following:
  - The mobile station shall store the indicator for 5ms frames on Dedicated Control Channel as follows: If $DCCH\_FRAME\_SIZE_r$ equals ‘10’ or ‘11’, the mobile station shall set $DCCH\_5MS\_FRAMES_s$ = ‘1’; otherwise, it is set to ‘0’.
  - The mobile station shall store the Forward Dedicated Control Channel Radio Configuration ($FOR\_DCCH\_RC_s = FOR\_DCCH\_RC_r$).

- The mobile station shall store the Reverse Dedicated Control Channel Radio Configuration ($REV\_DCCH\_RC_s = REV\_DCCH\_RC_r$).

- If $FOR\_SCH\_CC\_INCL_r$ equals ‘1’, the mobile station shall store the $NUM\_FOR\_SCH_r$ occurrences of the Forward Supplemental Channel channel configuration records as follows:
  - The mobile station shall store the Forward Supplemental Channel Identification ($FOR\_SCH\_ID[FOR\_SCH\_ID_r]_s = FOR\_SCH\_ID_r$).
  - The mobile station shall store the Forward Supplemental Channel Multiplex Option ($FOR\_SCH\_MUX[FOR\_SCH\_ID_r]_s = FOR\_SCH\_MUX_r$).
  - The mobile station shall store the Forward Supplemental Channel Radio Configuration ($FOR\_SCH\_RC[FOR\_SCH\_ID_r]_s = SCH\_RC_r$).
  - The mobile station shall store the Forward Supplemental Channel Coding Type ($FOR\_SCH\_CODING[FOR\_SCH\_ID_r]_s = CODING_r$).
  - If $FRAME\_40\_USED_r$ and $FRAME\_80\_USED_r$ are both equal to '0', the mobile station shall set $FOR\_SCH\_FRAME\_LENGTH_s[FOR\_SCH\_ID_r]$ to '00' (i.e., 20 ms frame length).
  - If $FRAME\_40\_USED_r$ is equal to '1', the mobile station shall set $FOR\_SCH\_FRAME\_LENGTH_s[FOR\_SCH\_ID_r]$ to '01' (i.e., 40 ms frame length).
  - If $FRAME\_80\_USED_r$ is equal to '1', the mobile station shall set $FOR\_SCH\_FRAME\_LENGTH_s[FOR\_SCH\_ID_r]$ to '10' (i.e., 80 ms frame length).
  - $F\_MAX\_RATE\_IDX_s[FOR\_SCH\_ID_r] = MAX\_RATE_r$.

- If $REV\_SCH\_CC\_INCL_r$ equals ‘1’, the mobile station shall store the $NUM\_REV\_SCH_r$ occurrences of the Reverse Supplemental Channel channel configuration records as follows:
  - The mobile station shall store the Reverse Supplemental Channel Identification ($REV\_SCH\_ID[REV\_SCH\_ID_r]_s = REV\_SCH\_ID_r$).
  - The mobile station shall store the Reverse Supplemental Channel Multiplex Option ($REV\_SCH\_MUX[REV\_SCH\_ID_r]_s = REV\_SCH\_MUX_r$).
  - The mobile station shall store the Reverse Supplemental Channel Radio Configuration ($REV\_SCH\_RC[REV\_SCH\_ID_r]_s = SCH\_RC_r$).
  - The mobile station shall store the Reverse Supplemental Channel Coding Type ($REV\_SCH\_CODING[REV\_SCH\_ID_r]_s = CODING_r$).
  - If $FRAME\_40\_USED_r$ and $FRAME\_80\_USED_r$ are both equal to '0', the mobile station shall set $REV\_SCH\_FRAME\_LENGTH_s[REV\_SCH\_ID_r]$ to '00' (i.e., 20 ms frame length).

- If $FRAME\_40\_USED_r$ is equal to '1', the mobile station shall set $REV\_SCH\_FRAME\_LENGTH_s[REV\_SCH\_ID_r]$ to '01' (i.e., 40 ms frame length).
- If $FRAME\_80\_USED_r$ is equal to '1', the mobile station shall set $REV\_SCH\_FRAME\_LENGTH_s[REV\_SCH\_ID_r]$ to '10' (i.e., 80 ms frame length).
- $R\_MAX\_RATE\_IDX_s[REV\_SCH\_ID_r] = MAX\_RATE_r$.

2.6.4.1.13 Processing the Non-Negotiable Service Configuration Record

The mobile station shall update the Non-Negotiable Service Configuration information record currently in use as follows:

- If FPC_INCL_r equals '1', the mobile station shall do the following:
  - The mobile station shall store the Power Control Subchannel indicator ($FPC\_PRI\_CHAN_s = FPC\_PRI\_CHAN_r$).
  - The mobile station shall store the forward power control operation mode ($FPC\_MODE\_NO\_SCH_s = FPC\_MODE_r$).
  - The mobile station shall set $FPC\_MODE_s = FPC\_MODE\_NO\_SCH_s$ if there is no forward Supplemental Channel assignment in progress (see 2.6.6.2.5.1.1).
  - If $FPC\_OLPC\_FCH\_INCL_r$ equals '1', the mobile station shall do the following:
    - The mobile station shall store the Fundamental Channel target Frame Error Rate ($FPC\_FCH\_FER_s = FPC\_FCH\_FER_r$).
    - The mobile station shall store the minimum Fundamental Channel Outer Loop E_b/N_t setpoint ($FPC\_FCH\_MIN\_SETPT_s = FPC\_FCH\_MIN\_SETPT_r$).
    - The mobile station shall store the maximum Fundamental Channel Outer Loop E_b/N_t setpoint ($FPC\_FCH\_MAX\_SETPT_s = FPC\_FCH\_MAX\_SETPT_r$).
  - If $FPC\_OLPC\_DCCH\_INCL_r$ equals '1', the mobile station shall do the following:
    - The mobile station shall store the Dedicated Control Channel target Frame Error Rate ($FPC\_DCCH\_FER_s = FPC\_DCCH\_FER_r$).
    - The mobile station shall store the minimum Dedicated Control Channel Outer Loop E_b/N_t setpoint ($FPC\_DCCH\_MIN\_SETPT_s = FPC\_DCCH\_MIN\_SETPT_r$).
    - The mobile station shall store the maximum Dedicated Control Channel Outer Loop E_b/N_t setpoint ($FPC\_DCCH\_MAX\_SETPT_s = FPC\_DCCH\_MAX\_SETPT_r$).
- If $GATING\_RATE\_INCL_r$ equals '1', the mobile station shall store the Reverse Pilot Channel gating rate ($PILOT\_GATING\_RATE_s = PILOT\_GATING\_RATE_r$).

- If $FOR\_SCH\_INCL_r$ equals '1', the mobile station shall store the $NUM\_FOR\_SCH_r$ occurrences of the Forward Supplemental Channel information as follows:
  - The mobile station shall store the Forward Supplemental Channel Multiframe Offset ($FOR\_MULTI\_FRAME\_OFFSET[FOR\_SCH\_ID_r]_s$ = $FOR\_MULTI\_FRAME\_OFFSET_r$).
- If $REV\_SCH\_CC\_INCL_r$ equals '1', the mobile station shall store the $NUM\_REV\_SCH_r$ occurrences of the Reverse Supplemental Channel information as follows:
  - The mobile station shall store the Reverse Supplemental Channel Multiframe Offset ($REV\_MULTI\_FRAME\_OFFSET[REV\_SCH\_ID_r]_s$ = $REV\_MULTI\_FRAME\_OFFSET_r$).
- The mobile station shall determine the Logical-to-Physical Mapping to be used as follows:
  - If LPM_IND_r equals '00', the mobile station shall reset the Logical-to-Physical Mapping to their default values as follows:
    - Default number of Logical-to-Physical Mapping entries ($NUM\_LPM\_ENTRIES_s$ = '0100').
    - Default Table(0) Logical-to-Physical Mapping service reference identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].SR\_ID_s$ = '000').
    - Default Table(0) Logical-to-Physical Mapping logical resource identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].LOGICAL\_RESOURCE_s$ = '0001']).
    - Default Table(0) Logical-to-Physical Mapping physical resource identifier:
      - If CH_IND_s is equal to '01' or '11', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PHYSICAL\_RESOURCE_s$ to '0000'.
      - If CH_IND_s is equal to '10', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PHYSICAL\_RESOURCE_s$ to '0001'.
    - Default Table(0) Logical-to-Physical Mapping forward mapping indicator ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].FORWARD\_FLAG_s$ = '1').
    - Default Table(0) Logical-to-Physical Mapping reverse mapping indicator ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].REVERSE\_FLAG_s$ = '1').
    - Default Table(0) Logical-to-Physical Mapping priority ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PRIORITY_s$ = '0000').
    - Default Table(1) Logical-to-Physical Mapping service reference identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[1].SR\_ID_s$ = '001').

- Default Table(1) Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].LOGICAL_RESOURCE$_S$ = ‘0000’).
- Default Table(1) Logical-to-Physical Mapping physical resource identifier:
  - If CH_IND$_S$ is equal to ‘01’ or ‘11’, the mobile station shall set LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE$_S$ to ‘0000’.
  - If CH_IND$_S$ is equal to ‘10’, the mobile station shall set LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PHYSICAL_RESOURCE$_S$ to ‘0001’.
- Default Table(1) Logical-to-Physical Mapping forward mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].FORWARD_FLAG$_S$ = ‘1’).
- Default Table(1) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].REVERSE_FLAG$_S$ = ‘1’).
- Default Table(1) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PRIORITY$_S$ = ‘0000’).
- Default Table(2) Logical-to-Physical Mapping service reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].SR_ID$_S$ = ‘001’).
- Default Table(2) Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].LOGICAL_RESOURCE$_S$ = ‘0000’].
- Default Table(2) Logical-to-Physical Mapping physical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE$_S$ to ‘0010’).
- Default Table(2) Logical-to-Physical Mapping forward mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].FORWARD_FLAG$_S$ = ‘1’).
- Default Table(2) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].REVERSE_FLAG$_S$ = ‘1’).
- Default Table(2) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PRIORITY$_S$ = ‘0000’).
- Default Table(3) Logical-to-Physical Mapping service reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].SR_ID$_S$ = ‘001’).
- Default Table(3) Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].LOGICAL_RESOURCE$_S$ = ‘0000’].
- Default Table(3) Logical-to-Physical Mapping physical resource identifier

(LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PHYSICAL_RESOURCE$_S$ to '0011').

+ Default Table(3) Logical-to-Physical Mapping forward mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].FORWARD_FLAG$_S$ = '1').

+ Default Table(3) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].REVERSE_FLAG$_S$ = '1').

+ Default Table(3) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PRIORITY$_S$ = '0000').

- If LPM_IND$_r$ equals '01', the mobile station shall use the Logical-to-Physical Mapping included in this Non-Negotiable Service Configuration Record. The mobile station shall do the following: The mobile station shall delete the Logical-to-Physical Mapping currently in use. The mobile station shall store the number of Logical-to-Physical Mapping entries (NUM_LPM_ENTRIES$_S$ = NUM_LPM_ENTRIES$_r$). For each ith record of the NUM_LPM_ENTRIES$_r$ Logical-to-Physical Mapping records included in the received Non-Negotiable Service Configuration Record:

  + The mobile station shall store the Logical-to-Physical Mapping service reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].SR_ID$_S$ = SR_ID$_r$).

  + The mobile station shall store the Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].LOGICAL_RESOURCE$_S$ = LOGICAL_RESOURCE$_r$).

  + The mobile station shall store the Logical-to-Physical Mapping Physical Channel (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].PHYSICAL_RESOURCE$_S$ = PHYSICAL_RESOURCE$_r$).

  + The mobile station shall store the Logical-to-Physical Mapping forward mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].FORWARD_FLAG$_S$ = FORWARD_FLAG$_r$).

  + The mobile station shall store the Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].REVERSE_FLAG$_S$ = REVERSE_FLAG$_r$).

  + The mobile station shall store the Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[i].PRIORITY$_S$ = PRIORITY$_r$).

- If LPM_IND_r equals '10', the mobile station shall use the Logical-to-Physical Mapping currently in use.

- For each of the NUM_REC_r occurrences of the service-specific records included in the Non-negotiable Service Configuration Record, the mobile station shall perform the following:
  - The mobile station shall store the Short Data Burst service option number omitted indicator ($SDB\_SO\_OMIT_s$ [SR_ID_r]= $SDB\_SO\_OMIT_r$).

- The mobile station shall store the following:
  - $USE\_FLEX\_NUM\_BITS_s$ = $USE\_FLEX\_NUM\_BITS_r$
  - $USE\_VAR\_RATE_s$ = $USE\_VAR\_RATE_r$
  - If $USE\_VAR\_RATE_r$ is equal to '1', then the mobile station shall store the following:
    - $R\_INC\_RATE\_ALLOWED_s$ = $R\_INC\_RATE\_ALLOWED_r$
    - $F\_INC\_RATE\_ALLOWED_s$ = $F\_INC\_RATE\_ALLOWED_r$

- If $USE\_OLD\_FLEX\_TABLE_r$ is included and equal to '0', the mobile station shall store NUM_BITS_TABLES_COUNT+1 instances of the Flexible Rate Table (NUM_RECS triplets of (NUM_BITS_IDX, NUM_BITS, CRC_LEN_IDX) corresponding to each NUM_BITS_TABLE_ID) as follows:
  - For each of the NUM_RECS occurrences of the three field record consisting of NUM_BITS_IDX, NUM_BITS, and CRC_LEN_IDX the mobile station shall store the following
    - $NUM\_BITS_s[NUM\_BITS\_TABLE\_ID_r][NUM\_BITS\_IDX_r] = NUM\_BITS_r$;
    - $CRC\_LEN\_IDX_s[NUM\_BITS\_TABLE\_ID_r][NUM\_BITS\_IDX_r] = CRC\_LEN\_IDX_r$;

- Otherwise, the mobile station shall use the previously stored values for the NUM_BITS_s and $CRC\_LEN\_IDX_s$.

- If $USE\_OLD\_FLEX\_MAPPING_r$ is included and equal to '0', the mobile station shall store the following:
  - $FFCH\_NBIT\_TABLE\_ID_s$ = $FFCH\_NBIT\_TABLE\_ID_r$.
  - $RFCH\_NBIT\_TABLE\_ID_s$ = $RFCH\_NBIT\_TABLE\_ID_r$.
  - $FSCH\_NBIT\_TABLE\_ID_s[1]$ = $FSCH0\_NBIT\_TABLE\_ID_r$.
  - $FSCH\_NBIT\_TABLE\_ID_s[2]$ = $FSCH1\_NBIT\_TABLE\_ID_r$.
  - $RSCH\_NBIT\_TABLE\_ID_s[1]$ = $RSCH0\_NBIT\_TABLE\_ID_r$.
  - $RSCH\_NBIT\_TABLE\_ID_s[2]$ = $RSCH1\_NBIT\_TABLE\_ID_r$.

- FDCCH_NBIT_TABLE_ID$_S$ = FDCCH_NBIT_TABLE_ID$_r$.
- If FDCCH_NBIT_TABLE_ID$_S$ is not equal to '0000', then the mobile station shall store FDCCH_NBITS_IDX$_S$ = FDCCH_NBITS_IDX$_r$.
- RDCCH_NBIT_TABLE_ID$_S$ = RDCCH_NBIT_TABLE_ID$_r$.
- If RDCCH_NBIT_TABLE_ID$_S$ is not equal to '0000', then the mobile station shall store RDCCH_NBITS_IDX$_S$ = RDCCH_NBITS_IDX$_r$.

• Otherwise, the mobile station shall use the previously stored values for the above six variables.

• If USE_FLEX_NUM_BITS$_r$ is equal to '0', the mobile station shall store the following:

- FFCH_NBIT_TABLE_ID$_S$ = '0000'.
- RFCH_NBIT_TABLE_ID$_S$ = '0000'.
- FSCH_NBIT_TABLE_ID$_S$[1] = '0000'.
- FSCH_NBIT_TABLE_ID$_S$[2] = '0000'.
- RSCH_NBIT_TABLE_ID$_S$[1] = '0000'.
- RSCH_NBIT_TABLE_ID$_S$[2] = '0000'.
- FDCCH_NBIT_TABLE_ID$_S$ = '0000'.
- FDCCH_NBITS_IDX$_S$ = '0000'.
- RDCCH_NBIT_TABLE_ID$_S$ = '0000'.
- FDCCH_NBITS_IDX$_S$ = '0000'.

• If USE_OLD_VAR_TABLE$_r$ is included and equal to '0', the mobile station shall store VAR_RATE_TABLES_COUNT+1 instances of the Variable Rate Mask Table (NUM_RECS pairs of (NUM_BITS_IDX, MASK) corresponding to each VAR_RATE_TABLE_ID) as follows:

- For each of the NUM_RECS + 1 occurrences of the two-field record consisting of NUM_BITS_IDX and MASK the mobile station shall store the following:
  + MASK$_S$[VAR_RATE_TABLE_ID$_r$][NUM_BITS_IDX$_r$] = MASK$_r$;
- If FSCH_VAR_TABLE_ID$_S$[1] is not equal to '000', then the mobile station shall store the following:
  + For row=1, …, 15
    - For i=1, …, row,

If the ith bit position in $MASK_S$[FSCH_VAR_TABLE_ID_S[1]][row] is equal to '1', then the mobile station shall set VAR_FSCH_RATE_OFFSET$_S$[1][row][i] to i,

otherwise, the mobile shall set VAR_FSCH_RATE_OFFSET$_S$[1][row][i] to '0'.

- If FSCH_VAR_TABLE_ID_S[2] is not equal to '000', then the mobile station shall store the following:
  - For row=1, …, 15
    - For i=1, …, row,

      If the ith bit position in $MASK_S$[FSCH_VAR_TABLE_ID_S[2]][row] is equal to '1', then the mobile station shall set VAR_FSCH_RATE_OFFSET$_S$[2][row][i] to i,

      otherwise, the mobile shall set VAR_FSCH_RATE_OFFSET$_S$[2][row][i] to '0'.
- If RSCH_VAR_TABLE_ID_S[1] is not equal to '000', then the mobile station shall store the following:
  - For row=1, …, 15
    - For i=1, …, row,

      If the ith bit position in $MASK_S$[RSCH_VAR_TABLE_ID_S[1]][row] is equal to '1', then the mobile station shall set VAR_RSCH_RATE_OFFSET$_S$[1][row][i] to i,

      otherwise, the mobile shall set VAR_RSCH_RATE_OFFSET$_S$[1][row][i] to '0'.
- If RSCH_VAR_TABLE_ID_S[2] is not equal to '000', then the mobile station shall store the following:
  - For row=1, …, 15
    - For i=1, …, row,

      If the ith bit position in $MASK_S$[RSCH_VAR_TABLE_ID_S[2]][row] is equal to '1', then the mobile station shall set VAR_RSCH_RATE_OFFSET$_S$[2][row][i] to i,

      otherwise, the mobile shall set VAR_RSCH_RATE_OFFSET$_S$[2][row][i] to '0'.

- Else (if USE_OLD_VAR_TABLE$_r$ is included and equal to '1'), use the previously stored values for VAR_RSCH_RATE_OFFSET$_S$ and VAR_FSCH_RATE_OFFSET$_S$.

- If $USE\_OLD\_VAR\_MAPPING_r$ is included and equal to ‘0’, the mobile station shall store the following:
  - $FSCH\_VAR\_TABLE\_ID_s[1] = FSCH0\_VAR\_TABLE\_ID_r$.
  - $FSCH\_VAR\_TABLE\_ID_s[2] = FSCH1\_VAR\_TABLE\_ID_r$.
  - $RSCH\_VAR\_TABLE\_ID_s[1] = RSCH0\_VAR\_TABLE\_ID_r$.
  - $RSCH\_VAR\_TABLE\_ID_s[2] = RSCH1\_VAR\_TABLE\_ID_r$.
- Otherwise, use the previously stored values for the above four variables.
- If $USE\_VAR\_RATE_r$ is equal to ‘0’, the mobile station shall store the following:
  - $FSCH\_VAR\_TABLE\_ID_s[1]$ = ‘000’.
  - $FSCH\_VAR\_TABLE\_ID_s[2]$ = ‘000’.
  - $RSCH\_VAR\_TABLE\_ID_s[1]$ = ‘000’.
  - $RSCH\_VAR\_TABLE\_ID_s[2]$ = ‘000’.
- If USE_OLD_LTU_TABLE is included and equal to ‘0’, then the mobile station shall store NUM_LTU_TABLES + 1 instances of the LTU Table which determines the size of the LTU for convolutionally encoded supplemental channels for each number of bits per frame. Each LTU Size Table is identified by its LTU_TABLE_ID.
  - For each of the NUM_ROWS +1 rows of the LTU Size Table, the mobile station shall store the following:
    - $LTU\_TAB_s[LTU\_TABLE\_ID_r][NBITS\_IDX_r] = LTU\_LEN_r$
- Else (if USE_OLD_LTU_TABLE is included and equal to ‘1’), the mobile station shall use the previously stored values for the LTU_TAB_s.
- If $USE\_OLD\_LTU\_MAPPING_r$ is included and equal to ‘0’, then the mobile station shall store the following:
  - $FSCH\_LTU\_TAB\_ID_s[1] = FSCH0\_LTU\_TAB\_ID_r$
  - $FSCH\_LTU\_TAB\_ID_s[2] = FSCH1\_LTU\_TAB\_ID_r$
  - $RSCH\_LTU\_TAB\_ID_s[1] = RSCH0\_LTU\_TAB\_ID_r$
  - $RSCH\_LTU\_TAB\_ID_s[2] = RSCH1\_LTU\_TAB\_ID_r$
- Else (1f $USE\_OLD\_LTU\_MAPPING_r$ is included and equal to ‘1’), the mobile station shall use the previously stored values for the above four variables.
- If $LTU\_INFO\_INC_r$ is equal to ‘0’, then the mobile station shall store the following:
  - $FSCH\_LTU\_TAB\_ID_s[1]$ = ‘000’
  - $FSCH\_LTU\_TAB\_ID_s[2]$ = ‘000’

- RSCH_LTU_TAB_ID$_S$[1] = ‘000’
- RSCH_LTU_TAB_ID$_S$[2] = ‘000’

- If USE_OLD_PARTITION_TABLE$_r$ is included and is equal to ‘0’, then the mobile station shall store NUM_PARTITION_TABLES + 1 instances of the Partition Table which determines the number of bits allocated to each service per FCH or DCCH frame as follows. Each Partition Table is identified by its PARTITION_TABLE_ID.
  - For each of the NUM_ROWS+1 rows of the Partition Table, the mobile station shall store the following:
    - PART_TAB$_S$[PARTITION_TABLE_ID$_r$][CATEGORY$_r$].MUX_HEADER_LEN = MUX_HEADER_LEN$_r$
    - PART_TAB$_S$[PARTITION_TABLE_ID$_r$][CATEGORY$_r$].MUX_HEADER = MUX_HEADER$_r$
    - PART_TAB$_S$[PARTITION_TABLE_ID$_r$][CATEGORY$_r$]. NUM_PARTITIONS = NUM_PARTITIONS$_r$
    - For i=1, …, NUM_PARTITIONS+1; the mobile station shall store the following:
      - PART_TAB$_S$[PARTITION_TABLE_ID$_r$][CATEGORY$_r$]. PARTITION_SR_ID[i] = SR_ID$_r$
      - PART_TAB$_S$[PARTITION_TABLE_ID$_r$][CATEGORY$_r$]. PARTITION_NBITS[i] = SRV_NUM_BITS$_r$
- Else (if USE_OLD_PARTITION_TABLE$_r$ is included and is equal to ‘1’), the mobile station shall use the previously stored values for the PART_TAB$_S$.
- If USE_OLD_PART_MAPPING$_r$ is included and is equal to ‘0’, then the mobile station shall store the following:
  - FFCH_PART_TAB_ID$_S$ = FFCH_PART_TAB_ID$_r$
  - RFCH_PART_TAB_ID$_S$ = RFCH_PART_TAB_ID$_r$
  - FDCCH_PART_TAB_ID$_S$ = FDCCH_PART_TAB_ID$_r$
  - RDCCH_PART_TAB_ID$_S$ = RDCCH_PART_TAB_ID$_r$
- Else (if USE_OLD_PART_MAPPING$_r$ is included and equal to ‘1’), the mobile station shall use the previously stored values for the above four variables.
- If USE_FLEX_NUM_BITS$_S$ is equal to ‘0’, then the mobile station shall store the following:
  - FFCH_PART_TAB_ID$_S$ = ‘000’

- $RFCH\_PART\_TAB\_ID_S$ = '000'
- $FDCCH\_PART\_TAB\_ID_S$ = '000'
- $RDCCH\_PART\_TAB\_ID_S$ = '000'

2.6.4.1.14 Processing the Security Mode Command Message

The mobile station shall process the received *Security Mode Command Message* as follows:

- The mobile station shall set $SIG\_ENCRYPT\_MODE_S$ to $SIG\_ENCRYPT\_MODE_r$.
- For each of the NUM_RECS_r instances of the two-field record consisting of CON_REF and UI_ENCRYPT_MODE, the mobile station shall set $UI\_ENCRYPT\_MODE_S[CON\_REF_r]$ to $UI\_ENCRYPT\_MODE_r$.
- For each of the service option connections specified by the CON_REF field included in this message, at the action time of the message the mobile station shall start encrypting user information (e.g., voice and data) using the encryption algorithm specified by $UI\_ENCRYPT\_MODE_S[CON\_REF_r]$ (see Table 3.7.4.5-1) with the key-size specified by KEY_SIZE_r (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 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.

2.6.4.2 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.

Upon entering the *Traffic Channel Initialization Substate*, the mobile station shall perform the following:

- The mobile station shall perform registration initialization as specified in 2.6.5.5.4.1.
- Layer 3 shall send an L2-Supervision.Request primitive to Layer 2 to reset the acknowledgment procedures as specified in 2.2.1.1 and 2.2.2.1 of [4].
- The mobile station shall initialize Forward Traffic Channel power control as specified in 2.6.4.1.1.1.
- The mobile station shall initialize the list TAG_OUTSTANDING_LIST to be empty.
- The mobile station shall set the following variables to their initial default values given below:

- Default power control step size
  ($PWR\_CNTL\_STEP_S$ = '000')
- Default channel on which the mobile station is to perform the primary inner loop estimation and the base station is to multiplex the Power Control Subchannel:

  If CH_IND_S is equal to '01', the mobile station shall set $FPC\_PRI\_CHAN_S$ to '0'.

  If CH_IND_S is equal to '10', the mobile station shall set $FPC\_PRI\_CHAN_S$ to '1'.
- Default forward power control operation mode used except during the forward Supplemental Channel interval
  ($FPC\_MODE\_NO\_SCH_S$ = '000')
- Default forward power control operation mode used during the forward Supplemental Channel interval
  ($FPC\_MODE\_SCH_S$ = '000')
- Default forward power control operation mode
  (FPC_MODE_S = '000')
- Slotted timer ($T\_SLOTTED_S = T_{74m}$)
- Default Reverse Pilot Channel gating (PILOT_GATING_USE_RATE='0')
- Default begin preamble for Reverse Supplemental Code Channels
  ($BEGIN\_PREAMBLE_S$ = '000')
- Default resume preamble for Reverse Supplemental Code Channels
  ($RESUME\_PREAMBLE_S$ = '000')
- Default start time for Reverse Supplemental Code Channel assignment
  ($REV\_START\_TIME_S$ = NULL)
- Default retry delays:

  $RETRY\_DELAY_S[010] = 0$

  $RETRY\_DELAY_S[001] = 0$
- Default pilot strength reporting offset
  ($T\_MULCHAN_S$ = '000')
- Default start time for forward Supplemental Code Channel Assignment
  ($FOR\_START\_TIME_S$ = NULL)
- Default number of Reverse Supplemental Code Channels
  ($NUM\_REV\_CODES_S$ = '000')
- Default reverse use T_ADD abort indicator
  ($USE\_T\_ADD\_ABORT_S$ = '0')

- Default *Supplemental Channel Request Message* sequence number ($SCRM\_SEQ\_NUM_S$ = NULL)
- Default indicator to ignore *Supplemental Channel Assignment Message* ($IGNORE\_SCAM_S$ = '0')
- Default indicator to ignore *Extended Supplemental Channel Assignment Message* ($IGNORE\_ESCAM_S$ = '0')
- Default maximum wait time on the CDMA Candidate Frequency ($CF\_WAIT\_TIME_S$ = '1111')
- Default search period for the candidate search ($SEARCH\_PERIOD_S$ = '1111')
- Default search window size for the Candidate Frequency Search Set ($CF\_SRCH\_WIN\_N_S$ = $SRCH\_WIN\_N_S$)
- Default search window size for the Remaining Set on the CDMA Candidate Frequency ($CF\_SRCH\_WIN\_R_S$ = $SRCH\_WIN\_R_S$)
- Default pilot PN sequence offset increment for the CDMA Candidate Frequency ($CF\_PILOT\_INC_S$ = $PILOT\_INC_S$)
- Default Candidate Frequency search priorities included indicator ($CF\_SEARCH\_PRIORITY\_INCL_S$ ='0')
- Default Candidate Frequency search window size included indicator ($CF\_SRCH\_WIN\_NGHBR\_INCL_S$ = '0')
- Default Candidate Frequency search window offset included indicator ($CF\_SRCH\_OFFSET\_INCL_S$ = '0')
- Default periodic search indicator ($PERIODIC\_SEARCH_S$ = '0')
- Default return-if-handoff-fail indicator ($RETURN\_IF\_HANDOFF\_FAIL_S$ = '0')
- Default total pilot E_C/I_O threshold ($MIN\_TOTAL\_PILOT\_EC\_IO_S$ = '00000')
- Default total pilot E_C threshold ($SF\_TOTAL\_EC\_THRESH_S$ = '11111')
- Default total pilot E_C/I_O threshold ($SF\_TOTAL\_EC\_IO\_THRESH_S$ = '11111')
- Default received power difference threshold ($DIFF\_RX\_PWR\_THRESH_S$ = '00000')
- Default maximum wait time on the CDMA Target Frequency

($TF\_WAIT\_TIME_S$ = '1111')

- Default Candidate Frequency Search Set
  (Candidate Frequency Search Set is empty)
- Default Analog Frequency Search Set
  (Analog Frequency Search Set is empty)
- Default Candidate Frequency CDMA band
  ($CF\_CDMABAND_S$ = NULL)
- Default Candidate Frequency CDMA channel
  (CF_CDMACH_S = NULL)
- Default indicator for 5ms frames on Fundamental Channel
  ($FCH\_5MS\_FRAMES_S$ = '0')
- Default indicator for 5ms frames on Dedicated Control Channel
  ($DCCH\_5MS\_FRAMES_S$ = '0')
- Default start time unit for Supplemental Channel
  ($START\_TIME\_UNIT_S$ = '000')
- Default Forward Supplemental Channel FER report indicator
  ($FOR\_SCH\_FER\_REP_S$ = '0')
- Default Forward Supplemental Channel Configuration parameters:
  - Set the Forward Supplemental Channel frame length
    $FOR\_SCH\_FRAME\_LENGTH_S[0]$ to NULL.
  - Set the Forward Supplemental Channel Multiplex Option $FOR\_SCH\_MUX_S[0]$ to NULL.
  - Set the Forward Supplemental Channel Radio Configuration
    $FOR\_SCH\_RC_S[0]$ to NULL.
  - Set the Forward Supplemental Channel Coding Type $FOR\_SCH\_CODING_S[0]$ to NULL.
  - Set $FOR\_SCH\_FRAME\_LENGTH_S[0]$ to NULL.
  - Set the Forward Supplemental Channel frame length
    $FOR\_SCH\_FRAME\_LENGTH_S[1]$ to NULL.
  - Set the Forward Supplemental Channel Multiplex Option $FOR\_SCH\_MUX_S[1]$ to NULL.
  - Set the Forward Supplemental Channel Radio Configuration
    $FOR\_SCH\_RC_S[1]$ to NULL.
  - Set the Forward Supplemental Channel Coding Type $FOR\_SCH\_CODING_S[1]$ to NULL.

+ Set $FOR\_SCH\_FRAME\_LENGTH_S[1]$ to NULL.

– Call Origination Transaction Identifier (TAG_S = '0000').

– Default Reverse Supplemental Channel Configuration parameters:

+ $REV\_WALSH\_ID_S[0][0000] = 1$
+ $REV\_WALSH\_ID_S[0][0001] = 1$
+ $REV\_WALSH\_ID_S[0][0010] = 1$
+ $REV\_WALSH\_ID_S[0][0011] = 1$
+ $REV\_WALSH\_ID_S[0][0100] = 0$
+ $REV\_WALSH\_ID_S[0][0101] = 0$
+ $REV\_WALSH\_ID_S[0][0110] = 0$
+ $REV\_WALSH\_ID_S[1][0000] = 1$
+ $REV\_WALSH\_ID_S[1][0001] = 1$
+ $REV\_WALSH\_ID_S[1][0010] = 1$
+ $REV\_WALSH\_ID_S[1][0011] = 0$
+ $REV\_WALSH\_ID_S[1][0100] = 0$
+ $REV\_WALSH\_ID_S[1][0101] = 0$
+ $REV\_WALSH\_ID_S[1][0110] = 0$
+ Set the Reverse Supplemental Channel frame length $REV\_SCH\_FRAME\_LENGTH_S[0]$ to NULL.
+ Set the Reverse Supplemental Channel Multiplex Option $REV\_SCH\_MUX_S[0]$ to NULL.
+ Set the Reverse Supplemental Channel Radio Configuration $REV\_SCH\_RC_S[0]$ to NULL.
+ Set the Reverse Supplemental Channel Coding Type $REV\_SCH\_CODING_S[0]$ to NULL.
+ Set $REV\_SCH\_FRAME\_LENGTH_S[0]$ to NULL.
+ Set the Reverse Supplemental Channel frame length $REV\_SCH\_FRAME\_LENGTH_S[1]$ to NULL.
+ Set the Reverse Supplemental Channel Multiplex Option $REV\_SCH\_MUX_S[1]$ to NULL.

- Set the Reverse Supplemental Channel Radio Configuration $REV\_SCH\_RC_S[1]$ to NULL.
- Set the Reverse Supplemental Channel Coding Type $REV\_SCH\_CODING_S[1]$ to NULL.
- Set $REV\_SCH\_FRAME\_LENGTH_S[1]$ to NULL.

– Default number of Logical-to-Physical Mapping entries ($NUM\_LPM\_ENTRIES_S$ = '0100')

– Default Table(0) Logical-to-Physical Mapping service reference identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].SR\_ID_S$ = '000')

– Default Table(0) Logical-to-Physical Mapping logical resource identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].LOGICAL\_RESOURCE_S$ = '0001')

– Default Table(0) Logical-to-Physical Mapping physical resource identifier:

- If CH_IND_S is equal to '01' or '11', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PHYSICAL\_RESOURCE_S$ to '0000'.
- If CH_IND_S is equal to '10', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PHYSICAL\_RESOURCE_S$ to '0001'.

– Default Table(0) Logical-to-Physical Mapping forward mapping indcator ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].FORWARD\_FLAG_S$ = '1')

– Default Table(0) Logical-to-Physical Mapping reverse mapping indicator ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].REVERSE\_FLAG_S$ = '1')

– Default Table(0) Logical-to-Physical Mapping priority ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[0].PRIORITY_S$ = '0000')

– Default Table(1) Logical-to-Physical Mapping service reference identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[1].SR\_ID_S$ = '001')

– Default Table(1) Logical-to-Physical Mapping logical resource identifier ($LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[1].LOGICAL\_RESOURCE_S$ = '0000')

– Default Table(1) Logical-to-Physical Mapping physical resource identifier:

- If CH_IND_S is equal to '01' or '11', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[1].PHYSICAL\_RESOURCE_S$ to '0000'.
- If CH_IND_S is equal to '10', the mobile station shall set $LOGICAL\_TO\_PHYSICAL\_MAPPING\_TABLE[1].PHYSICAL\_RESOURCE_S$ to '0001'.

- Default Table(1) Logical-to-Physical Mapping forward mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].FORWARD_FLAG$_S$ = '1')
- Default Table(1) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].REVERSE_FLAG$_S$ = '1')
- Default Table(1) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[1].PRIORITY$_S$ = '0000')
- Default Table(2) Logical-to-Physical Mapping service reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].SR_ID$_S$ = '001')
- Default Table(2) Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].LOGICAL_RESOURCE$_S$ = '0000')
- Default Table(2) Logical-to-Physical Mapping physical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE$_S$ to '0010').
- Default Table(2) Logical-to-Physical Mapping forward mapping indcator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].FORWARD_FLAG$_S$ = '1')
- Default Table(2) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].REVERSE_FLAG$_S$ = '1')
- Default Table(2) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PRIORITY$_S$ = '0000')
- Default Table(3) Logical-to-Physical Mapping service reference identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].SR_ID$_S$ = '001')
- Default Table(3) Logical-to-Physical Mapping logical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].LOGICAL_RESOURCE$_S$ = '0000')
- Default Table(3) Logical-to-Physical Mapping physical resource identifier (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[2].PHYSICAL_RESOURCE$_S$ to '0011').
- Default Table(3) Logical-to-Physical Mapping forward mapping indcator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].FORWARD_FLAG$_S$ = '1')
- Default Table(3) Logical-to-Physical Mapping reverse mapping indicator (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].REVERSE_FLAG$_S$ = '1')
- Default Table(3) Logical-to-Physical Mapping priority (LOGICAL_TO_PHYSICAL_MAPPING_TABLE[3].PRIORITY$_S$ = '0000')

- The mobile station shall disable the $T_{MS\_Slotted}$ timer, and set SLOTTED$_S$ to YES.
- If the ASSIGN_MODE$_r$ field from the *Channel Assignment Message* equals '000', the mobile station shall set SERV_NEG$_S$ to disabled.

- If the $ASSIGN\_MODE_r$ field from the *Channel Assignment Message* equals '100', the mobile station shall set $SERV\_NEG_S$ to enabled. For operation in Band Class 1, $SERV\_NEG_S$ is always equal to enabled.
- The mobile station shall determine the service configuration as follows:
  - If $SERV\_NEG_S$ equals 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 $SERV\_NEG_S$ equals enabled, and if $GRANTED\_MODE_S$ equals '00', the initial service configuration shall include the multiplex option and radio configuration for the Forward and Reverse Traffic Channels as specified by $DEFAULT\_CONFIG_S$, and shall include no service option connections.
  - If $SERV\_NEG_S$ equals enabled and $GRANTED\_MODE_S$ equals '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 $SERV\_NEG_S$ equals disabled, the mobile station shall perform the following:
    - If the call is mobile station originated and the *Origination Message* requests a special service option, the mobile station shall set SO_REQ_S to the special service option number.
    - If the call is mobile station originated and the *Origination Message* does not request a special service option, the mobile station shall set SO_REQ_S to 1 (the default service option number).
    - If the call is mobile station terminated, the mobile station shall set SO_REQ_S to the service option number requested in the *Page Response Message*.

While in the *Traffic Channel Initialization Substate*, the mobile station shall perform the following:

- The mobile station shall monitor Forward Traffic Channels associated with one or more pilots in the Active Set.
- The mobile station shall perform pilot strength measurements as specified in 2.6.6.2.2, but shall not send *Pilot Strength Measurement Messages* or *Extended Pilot Strength Measurement Messages*.
- The mobile station shall perform registration timer maintenance as specified in 2.6.5.5.4.2.

- 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.

If the mobile station does not support the assigned CDMA Channel (see 2.1.1 and 3.1.1 of [2]) or all of the assigned Forward Traffic code channels (see 2.1.3.1.9 of [2]), the mobile station shall enter the *System Determination Substate* of the *Mobile Station Initialization* State with an error indication (see 2.6.1.1).

If the mobile station supports the assigned CDMA Channel and the assigned Forward Traffic code channels, the mobile station shall perform the following:

- The mobile station shall tune to the assigned CDMA Channel.
- The mobile station shall set its code channel for the assigned Forward Traffic code channel.
- The mobile station shall set its Forward and Reverse Traffic Channel frame offsets to the assigned frame offset as determined by $FRAME\_OFFSET_s$.
- The mobile station shall set its Forward and Reverse Traffic Channel long code masks to the public long code mask (see 2.1.3.1.12 of [2]).

If the mobile station does not receive a period of ($N_{5m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_s$ within T_{50m} seconds after entering this substate, 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).

If the mobile station receives a period of ($N_{5m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_s$ within T_{50m} seconds after entering this substate, the mobile station shall perform the following additional functions while it remains in the *Traffic Channel Initialization Substate*:

- The mobile station shall perform Forward Traffic Channel supervision as specified in 2.6.4.1.8. If a loss of the Forward Traffic Channel is declared, 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).
- The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- The mobile station shall transmit the Traffic Channel preamble as specified in 2.1.3.6.2.3 and 2.1.3.7.2.3 of [2], and Layer 3 shall send an *acquiring dedicated channel* indication to Layer 2 (see 2.2.2.1.2 of [4]).
- The mobile station shall process Forward Traffic Channel signaling traffic and shall 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} × 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} ×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 $\text{PILOT\_GATING\_RATE}_S$ 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.

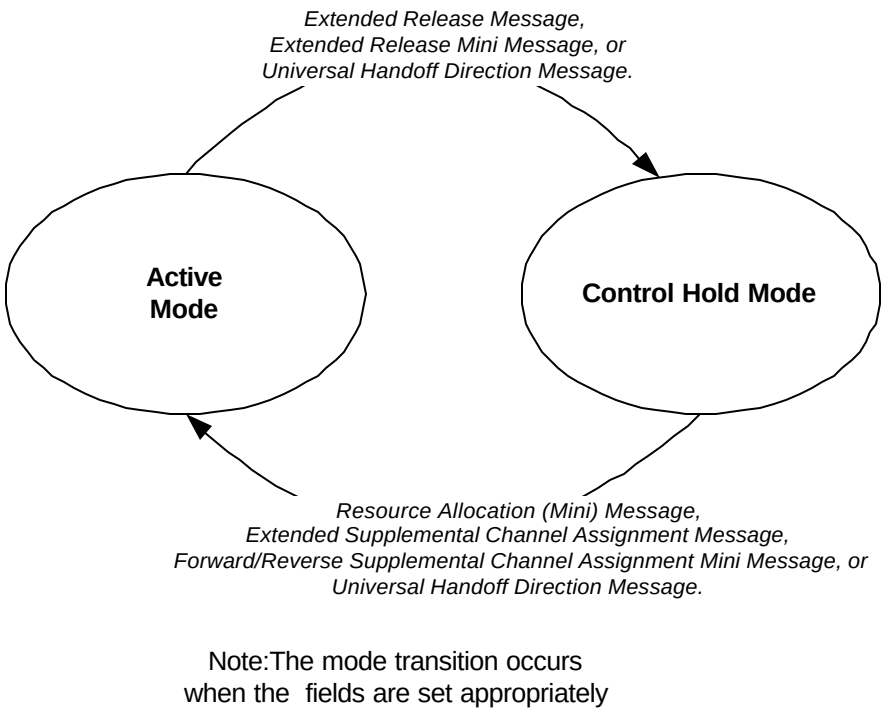


Figure 2.6.4.3-1. Mobile Station Modes

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:

- The mobile station shall perform Forward Traffic Channel supervision as specified in 2.6.4.1.8. If a loss of the Forward Fundamental Channel is declared, the layer 3 shall terminate all Call Control instances, and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).
- The mobile station may send a *Pilot Strength Measurement Mini Message* to report pilot strength order change information, periodic pilot strength information, or threshold based pilot strength information, as specified in the *Mobile Assisted Burst Operation Parameters Message*.
- The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- The mobile station shall perform Forward Traffic Channel power control as specified in 2.6.4.1.1.
- The mobile station shall perform handoff processing as specified in 2.6.6.
- The mobile station shall process Forward and Reverse Traffic Channel frames in accordance with requirements for the active service subfunction (see 2.6.4.1.2.2).
- The mobile station shall perform registration timer maintenance as specified in 2.6.5.5.4.2.
-
- If the mobile station has user data to send and if PILOT_GATING_USE_RATE is set to ‘0’, the mobile station shall send a *Data Burst Message*.
- If the mobile station has user data to send and PILOT_GATING_USE_RATE is equal to ‘1’, then the mobile station may send a *Resource Request Message, Resource Request Mini Message, Supplemental Channel Request Message, or Supplemental Channel Request Mini Message* to request for continuous reverse pilot transmission and user traffic transmission. The mobile station shall not send a *Resource Request Message* or a *Resource Request Mini Message* if $\text{RETRY\_DELAY}_S[010]$ is not equal to 0; the mobile station shall not send a *Supplemental Channel Request Message* or a *Supplemental Channel Request Mini Message* if $\text{RETRY\_DELAY}_S[011]$ is not equal to 0.
- If the mobile station is directed by the user to request a new service configuration, the mobile station shall initiate service negotiation or service option negotiation in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).
- The mobile station may send a *Service Option Control Message* or *Service Option Control Order* to invoke a service option specific function in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).
- If the mobile station is directed by the user to request a private long code transition and has the long code mask (see 2.3.12.3), the mobile station shall send a *Long Code Transition Request Order* (ORDQ = ‘00000001’) in assured mode.

- If the mobile station is directed by the user to request a public long code transition, the mobile station shall send a *Long Code Transition Request Order* (ORDQ = '00000000') in assured mode.
- If the mobile station is directed by the user to operate in analog mode, allowing operation in either wide or narrow analog mode, the mobile station shall send the *Request Analog Service Order* in assured mode.
- If the mobile station is directed by the user to operate in wide analog mode, the mobile station shall send the *Request Wide Analog Service Order* in assured mode.
- If the mobile station is directed by the user to operate in narrow analog mode, the mobile station shall send the *Request Narrow Analog Service Order* in assured mode.
- If the mobile station is directed by the user to originate a call, the mobile station shall perform the following:
  - The mobile station shall first determine the following conditions:
    - If $RETRY\_DELAY_S[001]$ is set to *infinity*, the mobile station shall not send the *Enhanced Origination Message* to the base station.
    - If $RETRY\_DELAY_S[001]$ is not 0 or *infinity*, the mobile station shall not send the *Enhanced Origination Message* until after the system time stored in $RETRY\_DELAY_S[001]$.
  - If the above conditions do not prohibit the mobile station from sending an *Enhanced Origination Message* at this time, the mobile station shall perform the following:
    - The mobile station shall increment the stored value of TAG_S.
    - The mobile station shall add TAG_S to the list TAG_OUTSTANDING_LIST.
    - The mobile station shall send an *Enhanced Origination Message* to the base station, with the TAG field of the message set to TAG_S.
  - Upon sending the *Enhanced Origination Message*, if the mobile station is directed by the user to cancel this call, the mobile station shall perform the following:
    - The mobile station shall send a *Call Cancel Message* to the base station, with the TAG field of the message set to the TAG value in the *Enhanced Origination Message* sent to originate this call.
    - The mobile station shall remove the TAG field corresponding to this call from the list TAG_OUTSTANDING_LIST.
- If the layer 3 receives a "call release request" from a Call Control instance, layer 3 shall perform the following:

- If the service option connection corresponding to this call is the only one connected, the layer 3 shall enter the *Release Substate* with a mobile station release indication (see 2.6.4.4).

  – If the service option connection corresponding to this call is not the only one connected, the mobile station shall send a *Service Request Message*, *Resource Release Request Message*, or a *Resource Release Request Mini Message* to the base station requesting to release this service option connection. If the mobile station sends a *Resource Release Request Message* or a *Resource Release Request Mini Message*, it shall set the PURGE_SERVICE field to '0'.

- If the layer 3 receives a "call inactive indication" from a Call Control instance, layer 3 shall perform the following:

  – If the service option connection corresponding to this call is the only one connected, the layer 3 shall enter the *Release Substate* with a service inactive indication (see 2.6.4.4).

  – If the service option connection corresponding to this call is not the only one connected, the mobile station shall send a *Service Request Message*, *Resource Release Request Message*, or a *Resource Release Request Mini Message*. If the mobile station sends a *Resource Release Request Message* or a *Resource Release Request Mini Message*, it shall set the PURGE_SERVICE field to '1'.

- If the mobile station is directed by the user to power down, the layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate* with a power-down indication (see 2.6.4.4).
- If Layer 3 receives a L2-Condition.Notification primitive from Layer 2 indicating an acknowledgment failure, the layer 3 shall terminate all Call Control instances, and the mobile station shall disable its transmitter and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a system lost indication (see 2.6.1.1).
- The mobile station shall perform the following:

  – The mobile station may send the *Resource Request Message* or *Resource Request Mini Message* in accordance with requirements for the currently connected service option whenever $RETRY\_DELAY_S$[RETRY_TYPE] is equal to 0, where, RETRY_TYPE is equal to '010'.

  – The mobile station shall not send the *Resource Request Message* or *Resource Request Mini Message* whenever $RETRY\_DELAY_S$[RETRY_TYPE] is set to *infinity*, where, RETRY_TYPE is equal to '010'.

- If $RETRY\_DELAY_S$[RETRY_TYPE] is not 0 or *infinity*, the mobile station shall not send the *Resource Request Message* or *Resource Request Mini Message* until after the system time stored in $RETRY\_DELAY_S$[RETRY_TYPE], where, RETRY_TYPE is equal to '010'.
- The mobile station may send the *Supplemental Channel Request Message* or *Supplemental Channel Request Mini Message* whenever $RETRY\_DELAY_S$[RETRY_TYPE] is set to '0', where, RETRY_TYPE is equal to '011'.
- The mobile station shall not send the *Supplemental Channel Request Message* or *Supplemental Channel Request Mini Message* whenever $RETRY\_DELAY_S$[RETRY_TYPE] is set to *infinity*, where, RETRY_TYPE is equal to '011'.
- If $RETRY\_DELAY_S$[RETRY_TYPE] is not 0 or *infinity*, the mobile station shall not send the *Supplemental Channel Request Message* or *Supplemental Channel Request Mini Message* until after the system time stored in $RETRY\_DELAY_S$[RETRY_TYPE], where, RETRY_TYPE is equal to '011'.
- At the system time stored in $RETRY\_DELAY_S$[RETRY_TYPE], the mobile station shall reset $RETRY\_DELAY_S$[RETRY_TYPE] to '0', where RETRY_TYPE is equal to '001', '010' or '011'.

• The mobile station may send a *Mobile Station Resource Release Request Message* or a *Mobile Station Resource Release Request Mini Message* to request for reverse pilot gating operation to be performed or to request the a service option connection to be disconnected.

• The mobile station may enter the *Release Substate* with a service inactive indication (see 2.6.4.4) if the service corresponding to the packet data service option instance is inactive at the mobile station.

• If layer 3 receives a "substate timer expired indication" from a Call Control instance, the layer 3 shall perform the following:

  - If the service option connection corresponding to this call is not the only one connected, the layer 3 shall terminate this Call Control instance.

  - If the service option connection corresponding to this call is the only one connected, the layer 3 shall terminate this Call Control instance. 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 the layer 3 determines that the user directs it to originate an emergency call, the mobile station shall perform the following:

  - The mobile station shall increment the stored value of TAG_S.

– The mobile station shall add TAG_S to the list TAG_OUTSTANDING_LIST.

– The mobile station shall send an *Enhanced Origination Message* to the base station, with the TAG field of the message set to TAG_S. Upon sending the *Enhanced Origination Message*, if the mobile station is directed by the user to cancel this call, the mobile station shall perform the following:

+ The mobile station shall send a *Call Cancel Message* to the base station, with the TAG field of the message set to the TAG value in the *Enhanced Origination Message* sent to originate this call.

+ The mobile station shall remove the TAG field corresponding to this call from the list TAG_OUTSTANDING_LIST.

• If the mobile station receives a message which is included in the following list and every message field value is within its permissible range, the mobile station 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 layer 3 shall deliver this message to the Call Control instance identified by NULL.

2. *Analog Handoff Direction Message:* If the analog mode directed by the base station is supported by the mobile station, the mobile station shall process the message as specified in 2.6.6.2.9, and shall perform the following at the action time of the message:

- If $CON\_REF\_INCL_r$ equals '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_r. The mobile 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 mobile station shall enter the Waiting for Order Task.

  + If this Call Control instance is in the *Waiting for Mobile Station Answer Substate*, the mobile station shall enter the Waiting for Answer Task.

  + If this Call Control instance is in the *Conversation Substate*, the mobile station shall enter the Conversation Task.

- 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).

3. *Audit Order*

4. *Authentication Challenge 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 shall respond as specified in 2.3.12.1.4 within T_{32m} seconds, regardless of the value of $AUTH_s$.

5. *Base Station Challenge Confirmation Order:* 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 shall respond with an *SSD Update Confirmation Order* or *SSD Update Rejection Order* as specified in 2.3.12.1.5 within T_{32m} seconds.

6. *Call Assignment Message:* The mobile station shall process this message as follows:

   – If $RESPONSE\_IND_r$ equals '1' and TAG_r matches any of the TAG values contained in the list TAG_OUTSTANDING_LIST, the mobile station shall perform the following:

     + If $ACCEPT\_IND_r$ equals '0', the mobile station shall remove the TAG value specified by TAG_r from the list TAG_OUTSTANDING_LIST.

     + If $ACCEPT\_IND_r$ equals '1', the mobile station shall perform the following:

       o 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.

       o Otherwise, layer 3 shall instantiate a Call Control instance (as specified in 2.6.10) at the action time of the message. The mobile station shall identify this Call Control instance by CON_REF_r.

       o The mobile station shall remove the TAG value specified by TAG_r from the list TAG_OUTSTANDING_LIST.

   – If $RESPONSE\_IND_r$ equals '1' and TAG_r does not match any of the TAG values contained in the list TAG_OUTSTANDING_LIST, the mobile station shall send a *Mobile Station Reject Order* with ORDQ field set to '00010100' (TAG received does not match TAG stored), with the TAG field of the order set to TAG_r, and the CON_REF field of the order set to CON_REF_r.

   – 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.

15. *Extended Release Message:* The mobile station shall process the message as specified in 2.6.4.1.9.

16. *Extended Release Mini Message*: The mobile station shall process the message as specified in 2.6.4.1.9.

17. *Forward Supplemental Channel Assignment Mini Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

18. *Flash With Information Message*: The layer 3 shall deliver this message to the Call Control instance identified by NULL.

19. *Extended Supplemental Channel Assignment Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

20. *General 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.

21. *In-Traffic System Parameters Message:* The mobile station shall process the message as specified in 2.6.4.1.4.

22. *Local Control Order*

23. *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 $ORDQ_r$). The mobile station should notify the user of the locked condition. The layer 3 shall terminate all Call Control instances, and 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*.

24. *Long Code Transition Request Order:* The mobile station shall process the message as specified in 2.6.4.1.6.

25. *Maintenance Order:* 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.

26. *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.

27. *Message Encryption Mode Order:* The mobile station shall process the message as specified in 2.3.12.2.

28. *Mobile Station Registered Message:* The mobile station shall process the message as specified in 2.6.5.5.4.3.

29. *Mobile Assisted Burst Operation Parameters Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

30. *Neighbor List Update Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

31. *Outer Loop Report Request Order*: The mobile station shall send the *Outer Loop Report Message* in assured mode to the base station.

32. *Parameter Update Order:* The layer 3 shall send a "reset waiting for order substate timer indication" to all Call Control instances. The mobile station shall increment $COUNT_{s-p}$ (see 2.3.12.1.3). The mobile station shall send a *Parameter Update Confirmation Order* within T_{56m} seconds. The mobile station shall set the ORDQ field of the *Parameter Update Confirmation Order* to the same value as the ORDQ field of the *Parameter Update Order.*

33. *Periodic Pilot Measurement Request Order:* The mobile station shall process the order as specified in 2.6.6.2.5.1.

34. *Pilot Measurement Request Order:* The mobile station shall process the order as specified in 2.6.6.2.5.1.

35. *Power Control Message:* The mobile station shall process the message as specified in 2.6.4.1.1.3.

36. *Power Control Parameters Message:* The mobile station shall process the message as specified in 2.6.4.1.1.2.

37. *Power Up Function Message:* The mobile station shall process the message as specified in 2.6.4.1.7.1.

38. *Power Up Function Completion Message:* The mobile station shall process the message as specified in 2.6.4.1.7.3.

39. *Release Order:* The layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate* with a base station release indication (see 2.6.4.4).

40. *Resource Allocation Message*: The mobile station shall process the message as specified in 2.6.4.1.10.

41. *Resource Allocation Mini Me*ssage: The mobile station shall process the message as specified in 2.6.4.1.10.

42. *Retrieve Parameters Message:* The mobile station shall send, within T_{56m} seconds, a *Parameters Response Message.*

43. *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 $RETRY\_DELAY_s$[$RETRY\_TYPE_r$].
- If $RETRY\_TYPE_r$ is equal to '010' or '011', the mobile station shall perform the following:
  - If $RETRY\_DELAY_r$[$RETRY\_TYPE_r$] is '00000000', then the mobile station shall set $RETRY\_DELAY_s$ [$RETRY\_TYPE_r$] to '0'.
  - If $RETRY\_DELAY_r$[$RETRY\_TYPE_r$] is '11111111', then the mobile station shall set $RETRY\_DELAY_s$[$RETRY\_TYPE_r$] to *infinity*.
  - If $RETRY\_DELAY_r$[$RETRY\_TYPE_r$] is not equal to '00000000' or '11111111', the mobile station shall store the next system time 80 ms boundary + $RETRY\_DELAY_r$[$RETRY\_TYPE_r$] $\times$ 320 ms as $RETRY\_DELAY_s$[$RETRY\_TYPE_r$].

44. *Reverse Supplemental Channel Assignment Mini Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

45. *Security Mode Command Message:* The mobile station shall process the message as specified in 2.6.4.1.14.

46. *Send Burst DTMF Message:* 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.

47. *Service Connect 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).

48. *Service Option Control 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).

49. *Service Option Control Order:* The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

50. *Service Option Request Order:* The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

51. *Service Option Response Order:* The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

52. *Service Redirection Message:* The mobile station shall process the message as follows:

If $RECORD\_TYPE_r$ is equal to '00000000', the mobile station shall do the following:

- The mobile station shall set $RETURN\_IF\_FAIL_s = RETURN\_IF\_FAIL_r$.
- 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 layer 3 shall send a "release indication" to all Call Control instances, and shall enter the Release Substate with an NDSS off indication (see 2.6.1.1).

If $RECORD\_TYPE_r$ is not equal to '00000000', $REDIRECT\_TYPE_r$ is '1', and the mobile station supports the band class and operating mode specified in the message, the mobile station shall do the following:

- The mobile station shall store the redirection record received in the message as $REDIRECT\_REC_s$.
- The mobile station shall enable $NDSS\_ORIG_s$ and shall record the dialed digits.
- The mobile station shall set $RETURN\_IF\_FAIL_s = RETURN\_IF\_FAIL_r$.
- 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 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.

- If the mobile station receives a message that is not included in the above list, cannot be processed, or requires a capability which is not supported, 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 exists, 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.

2.6.4.4 Release Substate

In this substate, the mobile station confirms the disconnect of all calls and physical channels.

Upon entering the *Release Substate*, the mobile station shall perform the following:

- The mobile station shall set the substate timer for T_{55m} seconds.
- If the mobile station enters the *Release Substate* with a power-down indication, the mobile station shall send a *Release Order* (ORDQ = '00000001'), and shall perform power-down registration procedures (see 2.6.5.5.4.4). The layer 3 shall terminate all Call Control instances.
- If the mobile station enters the *Release Substate* with a mobile station release indication, the mobile station shall send a *Release Order* (ORDQ = '00000000'), and set $RETURN\_CAUSE_s$ to '0000'. The mobile station may store the current service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record).
- If the mobile station enters the *Release Substate* with a service inactive indication, the mobile station shall send a *Release Order* (ORDQ = '00000010'), and set $RETURN\_CAUSE_s$ to '0000'.

- If the mobile station enters the *Release Substate* with a base station release indication, the mobile station shall send a *Release Order* (ORDQ = '00000000'). The layer 3 shall terminate all Call Control instances. The mobile station may store the current service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record). The mobile station shall disable its transmitter, set $RETURN\_CAUSE_S$ to '0000', and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
- If the mobile station entered the *Release Substate* with a base station extended release indication, the mobile station shall perform the following:
  - The mobile station may store the current service configuration (that is, both the Service Configuration information record and the Non-negotiable Service Configuration information record).
  - The mobile station shall send an *Extended Release Response Message* to the base station.
  - The layer 3 shall terminate all Call Control instances.
  - The mobile station shall disable its transmitter, set $RETURN\_CAUSE_S$ to '0000', and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
- If the mobile station entered the *Release Substate* with a base station extended release with mini message indication, then the mobile station shall perform the following:
  - The mobile station shall send an *Extended Release Response Mini Message* to the base station.
  - The layer 3 shall terminate all Call Control instances.
  - The mobile station shall disable its transmitter, set $RETURN\_CAUSE_S$ to '0000', and shall enter 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 *Release Substate* with a redirection indication, the mobile station shall send a *Release Order* (ORDQ = '00000000') and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a redirection indication (see 2.6.1.1). The layer 3 shall terminate all Call Control instances.
- If the mobile station enters the *Release Substate* with an NDSS off indication, the mobile station shall send a *Release Order* (ORDQ = '00000000'), and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with an NDSS off indication (see 2.6.1.1). The layer 3 shall terminate all Call Control instances.

While in the *Release Substate*, the mobile station shall perform the following:

- If the substate timer expires, the layer 3 shall terminate all Call Control instances, and the mobile station shall disable its transmitter and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
- The mobile station shall perform Forward Traffic Channel supervision as specified in 2.6.4.1.8. If a loss of the Forward Traffic Channel is declared, the layer 3 shall terminate all Call Control instances, and shall enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
- The mobile station shall adjust its transmit power as specified in 2.1.2.3 of [2].
- The mobile station shall perform Forward Traffic Channel power control as specified in 2.6.4.1.1.
- The mobile station shall perform handoff processing as specified in 2.6.6.
- If the Fundamental Channel is present, the mobile station shall transmit null traffic, except when transmitting signaling traffic, on the Reverse Fundamental Channel.
- The mobile station shall process Forward Traffic Channel signaling traffic and shall discard other types of Forward Traffic Channel traffic.
- The mobile station shall perform registration timer maintenance as specified in 2.6.5.5.4.2.
- If Layer 3 receives a L2-Condition.Notification primitive from Layer 2 indicating an acknowledgment failure, the layer 3 shall terminate all Call Control instances, and the mobile station shall disable its transmitter and enter the *System Determination Substate* of the *Mobile Station Initialization State* with a release indication (see 2.6.1.1).
- If the layer 3 receives an “enter traffic channel substate indication” from a Call Control instance, the layer 3 shall enter the *Traffic Channel substate*.

- If the mobile station receives a message which is included in the following list, and if every message field value is within its permissible range, the mobile station 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 layer 3 shall deliver this message to the Call Control instance identified by NULL.
  2. *Candidate Frequency Search Control Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.
  3. *Candidate Frequency Search Request Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

4. *Data Burst Message*

5. *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.

6. *Extended Handoff Direction Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

7. *Extended Neighbor List Update Message:* The mobile station shall process the message as specified in 2.6.6.2.6.3.

8. *Extended Supplemental Channel Assignment Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

9. *General Handoff Direction Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

10. *In-Traffic System Parameters Message:* The mobile station shall process the message as specified in 2.6.4.1.4.

11. *Local Control Order*

12. *Mobile Assisted Burst Operation Parameters Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

13. *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 $ORDQ_r$). The mobile station should notify the user of the locked condition. The layer 3 shall terminate all Call Control instances. The layer 3 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*.

14. *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.

15. *Mobile Station Registered Message:* The mobile station shall process the message as specified in 2.6.5.5.4.3.

16. *Mobile Assisted Burst Operation Parameters Message:* The mobile station shall process the message as specified in 2.6.6.2.5.1.

17. *Neighbor List Update Message:* The mobile station shall process the message as 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 $RETRY\_DELAY_s$[$RETRY\_TYPE_r$].

26. *Service Option Control 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).

27. *Service Option Control Order:* The mobile station shall process the message in accordance with the requirements for the active service subfunction (see 2.6.4.1.2.2).

28. *Service Redirection Message:* The mobile station shall disable its transmitter. If the mobile station enters the *Release Substate* with a power-down indication, the mobile station may power down (if powering down, the layer 3 shall terminate all Call Control instances); otherwise, the mobile station shall process the message as follows:

    - If $RECORD\_TYPE_r$ is '00000000', the mobile station shall do the following:
        - The mobile station shall set $RETURN\_IF\_FAIL_s$ = $RETURN\_IF\_FAIL_r$.
        - 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 layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate* with an NDSS off indication (see 6.6.1.1).
    - If RECORD_TYPE is not equal to '00000000', $REDIRECT\_TYPE_r$ is '1', and the mobile station supports the band class and operating mode specified in the message, the mobile station shall do the following:
        - The mobile station shall store the redirection record received in the message as $REDIRECT\_REC_s$.
        - The mobile station shall set $RETURN\_IF\_FAIL_s$ = $RETURN\_IF\_FAIL_r$.
        - 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 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 6.6.1.1).
    - 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.

29. *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 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 exists, 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.

2. Power-down registration. The mobile station registers when it powers off if previously registered in the current serving system.
3. Timer-based registration. The mobile station registers when a timer expires.
4. 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.
5. Zone-based registration. The mobile station registers when it enters a new zone.
6. Parameter-change registration. The mobile station registers when certain of its stored parameters change or when it enters a new system.
7. Ordered registration. The mobile station registers when the base station requests it.
8. 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.
9. 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.
10. 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 enabled by roaming status (see 2.6.5.3). Parameter-change registration is independent of roaming status. Ordered registration is initiated by the base station through an *Order Message*. Implicit registration does not involve the exchange of any registration messages between the base station and the mobile station. The base station can obtain registration information by sending the *Status Request Message* to the mobile station on either the f-csch or the f-dsch. The base station can obtain limited registration information by sending the *Status Request Order* to the mobile station on the f-dsch. The mobile station can be notified that it is registered through the *Mobile Station Registered Message*.

Any of the various forms of autonomous registration and parameter-change registration can be enabled or disabled. The forms of registration that are enabled and the corresponding registration parameters are communicated in the *System Parameters Message* on the Paging Channel, or the *ANSI-41 System Parameters Message* on the Broadcast Control Channel.

In addition, the mobile station may enable or disable autonomous registration for each type of roaming described in 2.6.5.3.

2.6.5.1.1 Power-Up Registration

Power-up registration is performed when the mobile station is turned on. To prevent multiple registrations when power is quickly turned on and off, the mobile station delays 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

$$REG\_COUNT\_MAX_S = ?\ 2^{REG\_PRD/4}?\ .$$

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:

$$\text{DISTANCE} = \left\lfloor \frac{\sqrt{(\Delta lat)^2 + (\Delta long)^2}}{16} \right\rfloor,$$

where

$$\Delta lat = BASE\_LAT_s - BASE\_LAT\_REG_{s-p}$$

and

$$\Delta long = (BASE\_LONG_s - BASE\_LONG\_REG_{s-p}) \times \cos(\pi/180 \times BASE\_LAT\_REG_{s-p}/14400).$$

The mobile station shall compute DISTANCE with an error of no more than ±5% of its true value when $|BASE\_LAT\_REG_{s-p}/14400|$ is less than 60 and with an error of no more than ±7% of its true value when $|BASE\_LAT\_REG_{s-p}/14400|$ 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

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[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.

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[15] The mobile station need not maintain a separate identifier for Band Class 0, 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.

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[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.

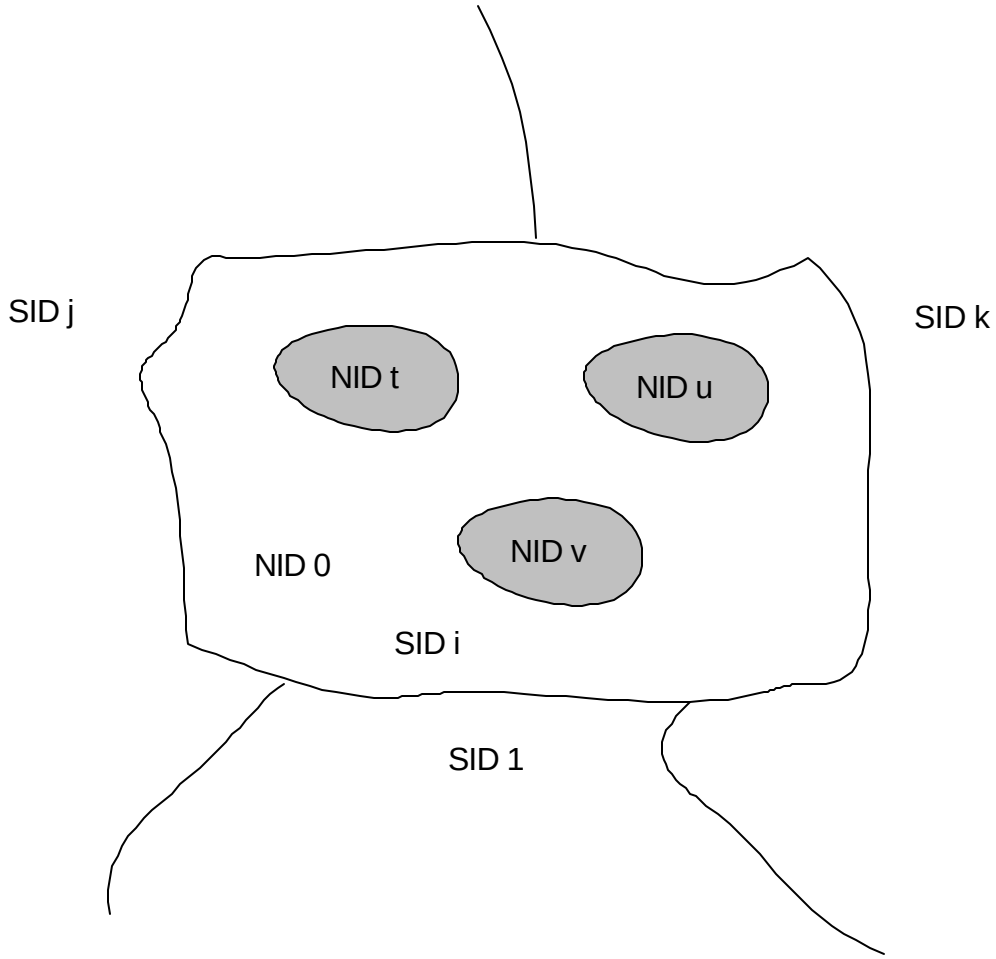


Figure 2.6.5.2-1. Systems and Networks Example

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

SID_s[17]. The mobile station may use the special NID value 65535 to indicate that the mobile station considers all NIDs within a SID to be non-roaming (i.e., that the mobile station is not roaming when operating with any base station in that system).

The mobile station shall store three 1-bit parameters in its permanent memory (see 2.3.8). These parameters are $MOB\_TERM\_HOME_p$, $MOB\_TERM\_FOR\_SID_p$, and $MOB\_TERM\_FOR\_NID_p$. The mobile station shall set $MOB\_TERM\_HOME_p$ to '1' if the mobile station is configured to receive mobile station terminated calls when using a home (SID, NID) pair; otherwise, the mobile station shall set $MOB\_TERM\_HOME_p$ to '0'. The mobile station shall set $MOB\_TERM\_FOR\_SID_p$ to '1' if the mobile station is configured to receive mobile station terminated calls when it is a foreign SID roamer; otherwise $MOB\_TERM\_FOR\_SID_p$ shall be set to '0'. The mobile station shall set $MOB\_TERM\_FOR\_NID_p$ to '1' if the mobile station is configured to receive mobile station terminated calls when it is a foreign NID roamer; otherwise the mobile station shall set $MOB\_TERM\_FOR\_NID_p$ to '0'.

The mobile station determines the registration status using these parameters and the HOME_REG, FOR_NID_REG, and FOR_SID_REG fields of the *System Parameters Message* or *ANSI-41 System Parameters Message*.

The mobile station shall store a mobile station call termination enabled indicator, MOB_TERM_s. The mobile station shall set MOB_TERM_s to YES if any of the following conditions is met:

- The mobile station is not roaming, and $MOB\_TERM\_HOME_p$ is equal to '1'; or
- The mobile station is a foreign NID roamer and $MOB\_TERM\_FOR\_NID_p$ is equal to '1'; or
- The mobile station is a foreign SID roamer and $MOB\_TERM\_FOR\_SID_p$ is equal to '1'; otherwise the mobile station shall set MOB_TERM_s to NO.

The mobile station shall store a registration status indicator, $REG\_ENABLED_s$. The mobile station shall set the indicator $REG\_ENABLED_s$ to YES if any of the following conditions is met for the mobile station:

- The mobile station is not roaming, and both $HOME\_REG_s$ and $MOB\_TERM\_HOME_p$ 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.

- The mobile station is a foreign NID roamer and both $FOR\_NID\_REG_S$ and $MOB\_TERM\_FOR\_NID_p$ are equal to '1'; or
- The mobile station is a foreign SID roamer and both $FOR\_SID\_REG_S$ and $MOB\_TERM\_FOR\_SID_p$ are equal to '1'; otherwise the mobile station shall set $REG\_ENABLED_S$ to NO.

The mobile station performs autonomous registrations if $REG\_ENABLED_S$ is YES.

2.6.5.4 Registration Timers and Indicators

The mobile station shall provide the following registration timers:

- Power-up/initialization timer (see 2.6.5.1.1).
- Timer-based registration timer (see 2.6.5.1.3).
- Zone list entry timers (see 2.6.5.1.5).
- SID/NID list entry timers (see 2.6.5.1.5).

The mobile station shall provide a means of enabling and disabling each timer. When a timer is disabled, it shall not be considered expired. A timer that has been enabled is referred to as active.

2.6.5.5 Registration Procedures

2.6.5.5.1 Actions in the Mobile Station Initialization State

2.6.5.5.1.1 Power-Up or Change to a Different Operating Mode, Band Class, Serving System, or PCS Frequency Block

Upon power-up, the mobile station shall perform the following actions:

- Delete all entries of $ZONE\_LIST_S$.
- If $ZONE\_LIST_{S-p}$ contains an entry, copy the entry to $ZONE\_LIST_S$ and disable the corresponding entry timer.
- Delete all entries of $SID\_NID\_LIST_S$.
- If $SID\_NID\_LIST_{S-p}$ contains an entry, copy the entry to $SID\_NID\_LIST_S$ and disable the corresponding entry timer.
- Set the registered flag ($REGISTERED_S$) to NO.
- 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'.

Upon switching from using CDMA in a different band class, from using CDMA in a different 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

d. REG_PRD_S is not equal to zero.

2. If any zone list entry timer (see 2.6.5.1.5) has expired, the mobile station shall delete the corresponding entry from $ZONE\_LIST_S$.

3. If any SID/NID list entry timer (see 2.6.5.1.5) has expired, the mobile station shall delete the corresponding entry from $SID\_NID\_LIST_S$.

4. The mobile station shall perform power-up registration, as specified in 2.6.5.1.1, if all the following conditions are met:

   a. $POWER\_UP\_REG_S$ is equal to '1'; and

   b. The stored configuration parameters are current (see 2.6.2.2); and

   c. $REGISTERED_S$ is equal to NO, and

   d. $REG\_ENABLED_S$ is equal to YES.

5. The mobile station shall perform parameter-change registration (see 2.6.5.1.6) if all the following conditions are met:

   a. $PARAMETER\_REG_S$ is equal to '1'; and

   b. The stored configuration parameters are current (see 2.6.2.2); and

   c. There is no entry of $SID\_NID\_LIST_S$ whose SID and NID fields match the stored SID_S and NID_S.

6. The mobile station shall perform timer-based registration (see 2.6.5.1.3) if all the following conditions are met:

   a. $COUNTER\_ENABLED_S$ is equal to YES; and

   b. The stored configuration parameters are current (see 2.6.2.2); and

   c. $REG\_ENABLED_S$ is equal to YES; and

   d. REG_COUNT_S is greater than or equal to $REG\_COUNT\_MAX_S$.

7. The mobile station shall perform distance-based registration (see 2.6.5.1.4) if all the following conditions are met:

   a. REG_DIST_S is not equal to zero; and

   b. The stored configuration parameters are current (see 2.6.2.2); and

   c. $REG\_ENABLED_S$ is equal to YES; and

   d. The current base station's distance from the base station in which the mobile station last registered (see 2.6.5.1.4) is greater than or equal to $REG\_DIST\_REG_{S\text{-}p}$.

8. The mobile station shall perform zone-based registration (see 2.6.5.1.5) if all the following conditions are met:

a. $TOTAL\_ZONES_S$ is not equal to zero; and

b. The stored configuration parameters are current (see 2.6.2.2); and

c. $REG\_ENABLED_S$ is equal to YES; and

d. There is no entry of $ZONE\_LIST_S$ whose SID, NID and REG_ZONE fields match the stored SID_S, NID_S and REG_ZONE_S.

9. The mobile station shall perform User Zone registration (see 2.6.2.5.1.10) if it selects an active User Zone (see 2.6.9.1.2).

2.6.5.5.2.2 Processing the Registration Fields of the System Parameters Message and ANSI-41 System Parameters Message

When the mobile station processes the *System Parameters Message* or *ANSI-41 System Parameters Message*, it shall perform the following actions:

1. If REG_PRD_S is equal to zero, the mobile station shall set $COUNTER\_ENABLED_S$ to NO.
2. If REG_PRD_S is not equal to zero, the mobile station shall set $REG\_COUNT\_MAX_S$ as specified in 2.6.5.1.3.
3. The mobile station shall update its roaming status and set $REG\_ENABLED_S$ as specified in 2.6.5.3.
4. If $ZONE\_LIST_S$ contains more than $TOTAL\_ZONES_S$ entries, the mobile station shall delete the excess entries according to the rules specified in 2.6.5.1.5.
5. If $MULT\_SIDS_S$ is equal to '0' and SID_NID_LIST contains entries with different SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
6. If $MULT\_NIDS_S$ is equal to '0' and SID_NID_LIST contains more than one entry for any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.

2.6.5.5.2.3 Ordered Registration

Ordered registration is performed after receiving a *Registration Request Order* while in the *Mobile Station Order and Message Processing Operation* (see 2.6.2.4).

The mobile station shall enter the *Update Overhead Information Substate* of the *System Access State* with a registration indication within T_{33m} seconds after the *Registration Request Order* is received.

2.6.5.5.2.4 Power Off

These procedures are performed when the mobile station is directed by the user to power off.

The mobile station shall perform the following actions:

- If an entry of $ZONE\_LIST_S$ does not have an active timer, copy that entry to $ZONE\_LIST_{S-P}$; otherwise, delete any entry in $ZONE\_LIST_{S-P}$.
- 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 any entry in $SID\_NID\_LIST_{S-P}$.

The mobile station shall perform power-down registration (see 2.6.5.1.2) by entering the *System Access State* with a registration indication within T_{33m} seconds after the user directs the mobile station to power off, if all the following conditions are true:

- $REG\_ENABLED_S$ equals YES; and
- $POWER\_DOWN\_REG_S$ equals '1'; and
- There is an entry of $SID\_NID\_LIST_S$ for which the SID and NID fields are equal to SID_S and NID_S; and
- The power-up/initialization timer (see 2.6.5.1.1) is disabled or has expired.

2.6.5.5.2.5 Full-TMSI Timer Expiration

When the mobile station sets all the bits of $TMSI\_CODE_{S-P}$ to '1' upon expiration of the full-TMSI timer (see 2.6.2), the mobile station shall delete all entries from $SID\_NID\_LIST_S$ and $ZONE\_LIST_S$.

2.6.5.5.3 Actions in the System Access State

Requirements in this section and its subsections apply only when the mobile station is in the *System Access State*.

2.6.5.5.3.1 Successful Access, Registration, or Implicit Registration

These procedures shall be performed after the mobile station receives confirmation of delivery of a *Registration Message*, *Origination Message*, or *Page Response Message* sent on the r-csch (see 2.6.3.1.2).

- Disable the power-up/initialization timer (see 2.6.5.1.1).
- 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'.
- Set REG_COUNT_S to zero.
- Set $REGISTERED_S$ to YES.
- 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 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.
- 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.
- Disable the zone list entry timer for the entry of $ZONE\_LIST_S$ containing REG_ZONE_S, SID_S, and NID_S. For any other entry of $ZONE\_LIST_S$ whose entry timer is not active, enable the entry timer with the duration specified by $ZONE\_TIMER_S$ (see 2.6.5.1.5).
- If $ZONE\_LIST_S$ contains more than $TOTAL\_ZONES_S$ entries, delete the excess entries according to the rules specified in 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 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.
- Add SID_S and NID_S to $SID\_NID\_LIST_S$ 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.
- Disable the SID/NID list entry timer for the entry of $SID\_NID\_LIST_S$ containing SID_S, and NID_S. For any other entry of $SID\_NID\_LIST_S$ whose entry timer is not active, enable the entry timer with the duration specified in 2.6.5.1.5.
- If $SID\_NID\_LIST_S$ contains more than N_{10m} entries, delete the excess entries according to the rules specified in 2.6.5.1.5.
- If $MULT\_SIDS_S$ is equal to '0' and SID_NID_LIST contains entries with different SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
- If $MULT\_NIDS_S$ is equal to '0' and SID_NID_LIST contains more than one entry for any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.
- Set the stored location of last registration ($BASE\_LAT\_REG_{s-p}$ and $BASE\_LONG\_REG_{s-p}$) to the current base station's location ($BASE\_LAT_S$ and $BASE\_LONG_S$). Set the stored registration distance ($REG\_DIST\_REG_{s-p}$) to the current base station's 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 $CDMABAND_s$.

- 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).

2.6.5.5.3.3 Power Off

These procedures are performed when the mobile station is directed by the user to power off.

The mobile station shall perform the following actions:

- If an entry of $ZONE\_LIST_S$ does not have an active timer, copy that entry to $ZONE\_LIST_{S-p}$; otherwise, delete any entry in $ZONE\_LIST_{S-p}$.
- 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 any entry in $SID\_NID\_LIST_{S-p}$.

2.6.5.5.4 Actions in the Mobile Station Control on the Traffic Channel State

Requirements in this section and its subsections apply only when the mobile station is in the *Mobile Station Control on the Traffic Channel State*.

2.6.5.5.4.1 Traffic Channel Initialization

Upon entering the *Traffic Channel Initialization Substate* of the *Mobile Station Control on the 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 ($SID_S = SID_r$)
- Network identification ($NID_S = NID_r$)
- Registration zone ($REG\_ZONE_S = REG\_ZONE_r$)
- Number of registration zones to be retained ($TOTAL\_ZONES_S = TOTAL\_ZONES_r$)
- Zone timer length ($ZONE\_TIMER_S = ZONE\_TIMER_r$)
- Multiple SID storage indicator ($MULT\_SIDS_S = MULT\_SIDS_r$)
- Multiple NID storage indicator ($MULT\_NIDS_S = MULT\_NIDS_r$)
- Base station latitude ($BASE\_LAT_S = BASE\_LAT_r$)
- Base station longitude ($BASE\_LONG_S = BASE\_LONG_r$)
- Registration distance ($REG\_DIST_S = REG\_DIST_r$)

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 $CDMABAND_S$.

- Disable the zone list entry timer for the entry of $ZONE\_LIST_S$ containing REG_ZONE_S, SID_S, and NID_S. For any other entry of $ZONE\_LIST_S$ whose entry timer is not active, enable the entry timer with the duration specified by $ZONE\_TIMER_S$ (see 2.6.5.1.5).
- If $ZONE\_LIST_S$ contains more than $TOTAL\_ZONES_S$ entries, delete the excess entries according to the rules specified in 2.6.5.1.5.
- Delete all entries from $SID\_NID\_LIST_S$ belonging to a different band class (see [2]) than $CDMABAND_S$.
- Add SID_S and NID_S to $SID\_NID\_LIST_S$ 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.
- Disable the SID/NID list entry timer for the entry of $SID\_NID\_LIST_S$ containing SID_S, and NID_S. For any other entry of $SID\_NID\_LIST_S$ whose entry timer is not active, enable the entry timer with the duration specified in 2.6.5.1.5.
- If $SID\_NID\_LIST_S$ contains more than N_{10m} entries, delete the excess entries according to the rules specified in 2.6.5.1.5.
- If $MULT\_SIDS_S$ is equal to '0' and SID_NID_LIST contains entries with different SIDs, delete the excess entries according to the rules specified in 2.6.5.1.5.
- If $MULT\_NIDS_S$ is equal to '0' and SID_NID_LIST contains more than one entry for any SID, delete the excess entries according to the rules specified in 2.6.5.1.5.
- Set the stored location of last registration ($BASE\_LAT\_REG_{S-p}$ and $BASE\_LONG\_REG_{S-p}$) to the base station's location ($BASE\_LAT_S$ and $BASE\_LONG_S$). Set the stored registration distance ($REG\_DIST\_REG_{S-p}$) to the base station's registration distance (REG_DIST_S).
- Update its roaming status and set MOB_TERM_S as specified in 2.6.5.3. The mobile station should indicate to the user whether the mobile station is roaming.

2.6.5.5.4.4 Power Off

These procedures are performed when the mobile station is directed by the user to power off.

The mobile station shall perform the following actions:

- If an entry of $ZONE\_LIST_S$ does not have an active timer, copy that entry to $ZONE\_LIST_{S-p}$; otherwise, delete the entry in $ZONE\_LIST_{S-p}$ if $ZONE\_LIST_{S-p}$ 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

Extended Pilot Strength Measurement Message to the base station. The base station can then assign a Forward Traffic Channel associated with that pilot to the mobile station and direct the mobile station to perform a handoff.

The pilot search parameters and the rules for *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* transmission are expressed in terms of the following sets of pilots:

- *Active Set:* The pilots associated with the Forward Traffic Channels assigned to the mobile station.
- *Candidate Set:* The pilots that are not currently in the Active Set but have been received by the mobile station with sufficient strength to indicate that the associated Forward Traffic Channels could be successfully demodulated.
- *Neighbor Set:* The pilots that are not currently in the Active Set or the Candidate Set and are likely candidates for handoff.
- *Remaining Set:* The set of all possible pilots in the current system on the current CDMA Frequency Assignment, excluding the pilots in the Neighbor Set, the Candidate Set, and the Active Set. This set of possible pilots consists of pilots whose pilot PN sequence offset indices are integer multiples of $PILOT\_INC_S$.

The base station may direct the mobile station to search for pilots on a different CDMA frequency to detect the presence of CDMA Channels and to measure their strengths. The mobile station reports the results of the search to the base station using the *Candidate Frequency Search Report Message*. Depending upon the pilot strength measurements reported in the *Candidate Frequency Search Report Message*, the base station can direct the mobile station to perform an inter-frequency hard handoff.

The pilot search parameters are expressed in terms of the following sets of pilots on the CDMA Candidate Frequency:

- *Candidate Frequency Neighbor Set:* A list of pilots on the CDMA Candidate Frequency.
- *Candidate Frequency Search Set:* A subset of the Candidate Frequency Neighbor Set that the base station may direct the mobile station to search.

2.6.6.2 Requirements

2.6.6.2.1 Pilot Search

For the pilot sets defined in 2.6.6.1.2, the base station sets the search window (range of PN offsets) in which the mobile station is to search for usable multipath components (i.e., multipath components that the mobile station can use for demodulation of the associated Forward Traffic Channel) of the pilots in the set.

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 size[18] 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_NGHBR SRCH_WIN_R CF_SRCH_WIN_N	window_size (PN chips)	SRCH_WIN_A SRCH_WIN_N SRCH_WIN_NGHBR 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_NGHBR CF_SRCH_OFFSET_NGHBR	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 × window_size / 2
7	Reserved

- *Neighbor Set*: If $SRCH\_WIN\_NGHBR\_INCL_S$ is equal to '1', 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 $SRCH\_WIN\_NGHBR_S$ associated with the pilot being searched. If $SRCH\_WIN\_NGHBR\_INCL_S$ is equal to '0', 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 $SRCH\_WIN\_N_S$. If $SRCH\_OFFSET\_INCL_S$ is equal to '1', the search window offset for each pilot in the Neighbor 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 $SRCH\_OFFSET\_INCL_S$ is equal to '0', the search window offset for each pilot in the Neighbor Set shall be zero PN chip. 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 search window offset, using timing defined by the mobile station's time reference (see [2]). If $SEARCH\_PRIORITY\_INCL_S$ is equal to '1', the mobile station should use $SEARCH\_PRIORITY_S$ for the corresponding pilot to schedule its neighbor search. If the mobile station supports hopping pilot beacons and the TIMING_INCL field of the NGHBR_REC for the corresponding pilot is equal to '1', then the mobile station shall use the information included in the NGHBR_TX_OFFSET, NGHBR_TX_DURATION, and NGHBR_TX_PERIOD fields of the NGHBR_REC for the corresponding pilot to schedule the time for searching the neighbor. If ADD_PILOT_REC_INCL field of the NGHBR_REC for the corresponding pilot is equal to '1', the mobile station shall use the information included in the NGHBR_PILOT_REC field 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]). The mobile station should only search for Remaining Set pilots whose pilot PN sequence offset indices are equal to integer multiples of $PILOT\_INC_S$.

- *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

$$\frac{1}{3}\times\left(\left(\frac{E_c}{I_o}\right)_{Primary}+\frac{\left(\frac{E_c}{I_o}\right)_1}{\Delta_1}+\frac{\left(\frac{E_c}{I_o}\right)_2}{\Delta_2}\right)$$ where:

- $\left(\frac{E_c}{I_o}\right)_{Primary}$ is the pilot Ec/Io measured on the Primary carrier (computed as specified above for SR1 pilots),

- $\left(\frac{E_c}{I_o}\right)_1$ is the pilot Ec/Io 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 Ec/Io 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., $PS_1 < PS_2 < PS_3 < \ldots < PS_{NA}$ 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:

$$10 \times \log_{10} PS_i < \max\left(\frac{SOFT\_SLOPE_s}{8} \times 10 \times \log_{10} \sum_{j>i} PS_j + \frac{DROP\_INTERCEPT_s}{2}, -\frac{T\_DROP_s}{2}\right)$$

$$i = 1, 2, \ldots, PS_{N_A-1}$$

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

$$\text{PILOT\_PN\_PHASE} = (\text{PILOT\_ARRIVAL} + (64 \times \text{PILOT\_PN})) \bmod 2^{15},$$

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:

- If $FRAME\_OFFSET_r$ is not equal to $FRAME\_OFFSET_s$, change the frame offset on all of the code channels of the Forward Traffic Channel and of the Reverse Traffic Channel.
- If $RESET\_L2_r$ is equal to '1', Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to reset the acknowledgment procedures as specified in 2.2.1.1 and 2.2.2.1 of [4]. The acknowledgment procedures shall be reset immediately after the action time of the *Extended Handoff Direction Message*.
- If $RESET\_FPC_r$ is equal to '1', initialize the Forward Traffic Channel power control counters as specified in 2.6.4.1.1.1.
- If $SERV\_NEG\_TYPE_r$ is equal to '1', set $SERV\_NEG_s$ to enabled; otherwise set $SERV\_NEG_s$ to disabled. For operation in Band Class 1, $SERV\_NEG_s$ is always equal to enabled.
- Use the long code mask specified by the $PRIVATE\_LCM_r$ (see 2.3.12.3) and indicate to the user the voice privacy mode status.
- Process the ENCRYPT_MODE field as specified in 2.3.12.2.

• Store the following parameters from the current configuration:
- Serving Frequency Assignment ($SF\_CDMACH_s = CDMACH_s$)
- Serving Frequency band class ($SF\_BAND\_CLASS_s = BAND\_CLASS_s$)
- Serving Frequency frame offset ($SF\_FRAME\_OFFSET_s = FRAME\_OFFSET_s$)

• If HARD_INCLUDED is not equal to '1', set $NUM\_PREAMBLE_s$ = '000'.

• Store the following parameters from the *Extended Handoff Direction Message*:
- *Extended Handoff Direction Message* sequence number ($HDM\_SEQ_s = HDM\_SEQ_r$)
- If SEARCH_INCLUDED is equal to '1', then store the following:
  + Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_s = SRCH\_WIN\_A_r$)
  + Pilot detection threshold ($T\_ADD_s = T\_ADD_r$)
  + Pilot drop threshold ($T\_DROP_s = T\_DROP_r$)
  + Active Set versus Candidate Set comparison threshold ($T\_COMP_s = T\_COMP_r$)
  + Drop timer value ($T\_TDROP_s = T\_TDROP_r$)
- If HARD_INCLUDED is equal to '1', then store the following:
  + Frame offset ($FRAME\_OFFSET_s = FRAME\_OFFSET_r$)
  + Nominal power setting of the target cell ($NOM\_PWR_s = NOM\_PWR_r$)

+ Hard handoff traffic channel preamble count required before transmitting *Handoff Completion Message* or *Extended Handoff Completion Message* ($NUM\_PREAMBLE_s = NUM\_PREAMBLE_r$)

+ CDMA band class ($CDMABAND_s = BAND\_CLASS_r$)

+ Frequency assignment ($CDMACH_s = CDMA\_FREQ_r$)

+ Nominal power setting of the target cell (If $CDMABAND_s$ = '00001', then $NOM\_PWR\_EXT_s = NOM\_PWR\_EXT_r$; otherwise, $NOM\_PWR\_EXT_s$ = '0')

– One occurrence of PILOT_PN and PWR_COMB_IND for each included member of the Active Set.

– If ADD_LENGTH is not equal to '000', then store the following:

+ Protocol revision level ($P\_REV_s = P\_REV_r$)

+ Protocol revision level currently in use ($P\_REV\_IN\_USE_s$ = the minimum value of P_REV_s and $MOB\_P\_REV_p$ of the current band class)

– Disable return on failure ($RETURN\_IF\_HANDOFF\_FAIL_s$ = '0')

• Perform a soft or hard handoff depending on the following conditions:

– If any of the following conditions is true, the mobile station shall perform a hard handoff:

+ HARD_INCLUDED is set to '1' and either $BAND\_CLASS_r$ is not equal to $SF\_CDMABAND_s$, $CDMA\_FREQ_r$ is not equal to SF_CDMACH_s, or $FRAME\_OFFSET_r$ is not equal to $SF\_FRAME\_OFFSET_s$, or

+ The set of pilots specified by the message is disjoint from the Active Set prior to the action time of the message.

– If the mobile station performs a hard handoff, it shall do the following:

+ If a Periodic Serving Frequency Pilot Report Procedure is in progress, abort the procedure (see 2.6.6.2.12).

+ If a Candidate Frequency periodic search is in progress, abort the periodic search (see 2.6.6.2.8.3.4 and 2.6.6.2.10.4) and set $PERIODIC\_SEARCH_s$ to '0'.

+ Perform the actions specified in 2.6.6.2.8.1. If the message specifies more than one pilot, the mobile station shall also perform the actions specified in 2.6.6.2.7.1 and 2.6.6.2.7.2.

– Otherwise, the mobile station shall perform a soft handoff as specified in 2.6.6.2.7.

5. *Candidate Frequency Search Request 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 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 (*fwd_time*, *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

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 the Candidate Frequency, to search *rec_search_set*, 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 to the Candidate Frequency in a search period (see 2.6.6.2.8.3.2)

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 the Candidate Frequency, to search *rec_search_set*, 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 to the Candidate 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:
  - The mobile station shall send a *Candidate Frequency Search Response Message* in assured mode, within T_{56m} seconds of receiving the *Candidate Frequency Search Request Message*. The mobile station shall set the fields of the *Candidate Frequency Search Response Message* as follows:
    - The mobile station shall set TOTAL_OFF_TIME_FWD and TOTAL_OFF_TIME_REV to its estimate of the total number of frames or power control groups for which it will need to suspend its current Forward Traffic Channel processing and Reverse Traffic Channel processing, respectively, in order to tune to the Candidate Frequency, to search *rec_search_set*, and to re-tune to the Serving Frequency (see 2.6.6.2.8.3.2). If the mobile station searches *rec_search_set* in multiple visits to the Candidate Frequency, the mobile station shall report the total number of frames or power control groups in all visits in a search period for which it will need to suspend its current Forward Traffic Channel and the Reverse Traffic Channel processing.

+ The mobile station shall set MAX_OFF_TIME_FWD and MAX_OFF_TIME_REV to its estimate of the maximum number of frames or power control groups for which it will need to suspend its current Forward Traffic Channel processing and Reverse Traffic Channel processing, respectively, during any single visit to tune to the Candidate Frequency, to search a subset of *rec_search_set*, and to re-tune to the Serving Frequency.[19]

+ The mobile station shall set PCG_OFF_TIMES to '1' if TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_-FWD and MAX_OFF_TIME_FWD are expressed in units of power control groups. If these time estimates are expressed in units of frames, the mobile station shall set PCG_OFF_TIMES to '0'. The mobile station shall not use power control groups as the unit of delay if $P\_REV\_IN\_USE_s$ is less than six.

+ If $ALIGN\_TIMING_r$ is equal to '1', the mobile station shall set ALIGN_TIMING_USED to '1' to indicate if it will align its search as requested by the base station; otherwise, the mobile station shall set ALIGN_TIMING_USED to '0'. If ALIGN_TIMING_USED is set to '1', the mobile station shall set NUM_VISITS to the number of visits per search period minus one and, if NUM_VISITS is not equal to 0, the mobile station shall set INTER_VISIT_TIME, in units of frames or power control groups, to its estimate of the time between subsequent visits within the same search period.

– When the message takes effect, the mobile station shall perform the following actions:

+ 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 may stop maintaining the average of the Serving Frequency received power that 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.

+ If $SEARCH\_TYPE_r$ is equal to '01' or '11', and 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.

+ Store the following parameters from the *Candidate Frequency Search Request Message:*

  - *Candidate Frequency Search Request Message* sequence number ($CFSRM\_SEQ_s = CFSRM\_SEQ_r$)
  - Periodic search flag: If $SEARCH\_TYPE_r$ is equal to '11', the mobile station shall set $PERIODIC\_SEARCH_s$ to '1'; otherwise, the mobile station shall set $PERIODIC\_SEARCH_s$ to '0'.
  - Search period on the Candidate Frequency ($SEARCH\_PERIOD_s = SEARCH\_PERIOD_r$)
  - Candidate Frequency search mode ($SEARCH\_MODE_s = SEARCH\_MODE_r$)
  - Band class for the Candidate Frequency ($CF\_CDMABAND_s = BAND\_CLASS_r$)
  - CDMA Channel number for the CDMA Candidate Frequency ($CF\_CDMACH_s = CDMA\_FREQ_r$)
  - Serving Frequency total pilot E_c threshold ($SF\_TOTAL\_EC\_THRESH_s = SF\_TOTAL\_EC\_THRESH_r$)
  - Serving Frequency total pilot E_c/I_o threshold ($SF\_TOTAL\_EC\_IO\_THRESH_s = SF\_TOTAL\_EC\_IO\_THRESH_r$)
  - Received power difference threshold ($DIFF\_RX\_PWR\_THRESH_s = DIFF\_RX\_PWR\_THRESH_r$)
  - Candidate Frequency Total pilot E_c/I_o threshold ($MIN\_TOTAL\_PILOT\_EC\_IO_s = MIN\_TOTAL\_PILOT\_EC\_IO_r$)
  - Pilot detection threshold on the CDMA Candidate Frequency ($CF\_T\_ADD_s = CF\_T\_ADD_r$)

- 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 $FPC\_PRI\_CHAN_s$ ($TF\_WAIT\_TIME_s = TF\_WAIT\_TIME_r$)
- Pilot PN sequence offset increment on the CDMA Candidate Frequency ($CF\_PILOT\_INC_s = CF\_PILOT\_INC_r$)
- Search window for pilots in the Neighbor Set on the CDMA Candidate Frequency ($CF\_SRCH\_WIN\_N_s = CF\_SRCH\_WIN\_N_r$)
- Search window for pilots in the Remaining Set on the CDMA Candidate Frequency ($CF\_SRCH\_WIN\_R_s = CF\_SRCH\_WIN\_R_r$)
- 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 $CF\_SRCH\_OFFSET\_INCL_r$.
- 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.

+ Set the AUX_PILOT_WALSH_CODE field of the Candidate Frequency Neighbor Set Pilot Record 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_TD_QOF field of the Candidate Frequency Neighbor Set Pilot Record to QOF_r.

+ Set the AUX_PILOT_TD_WALSH_CODE field of the Candidate Frequency Neighbor Set Pilot Record to $AUX\_TD\_WALSH_r$ with the Walsh Code length specified by $WALSH\_LENGTH_r$.

+ Set the AUX_TD_POWER_LEVEL field of the Candidate Frequency Neighbor Set Pilot Record to $AUX\_TD\_POWER\_LEVEL_r$.

+ Set the TD_MODE field of the Candidate Frequency Neighbor Set Pilot Record 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 Candidate Frequency Neighbor Set Pilot Record to $SR3\_PRIMARY\_PILOT_r$.

+ Set the SR3_PILOT_POWER1 field of Candidate Frequency Neighbor Set Pilot Record to $SR3\_PILOT\_POWER1_r$.

+ Set the SR3_PILOT_POWER2 field of Candidate Frequency Neighbor Set Pilot Record 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 Candidate Frequency Neighbor Set Pilot Record to $SR3\_PRIMARY\_PILOT_r$.

+ Set the SR3_PILOT_POWER1 field of Candidate Frequency Neighbor Set Pilot Record to $SR3\_PILOT\_POWER1_r$.

+ Set the SR3_PILOT_POWER2 field of Candidate Frequency Neighbor Set Pilot Record to $SR3\_PILOT\_POWER2_r$.

+ Set the AUX_PILOT_QOF field of Candidate Frequency Neighbor Set Pilot Record to QOF_r.

+ Set the AUX_PILOT_WALSH_CODE field of Candidate Frequency Neighbor Set Pilot Record 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 Candidate Frequency Neighbor Set Pilot Record to $QOF1_r$ and set the AUX_PILOT_WALSH_CODE1 field of Candidate Frequency Neighbor Set Pilot Record to $AUX\_PILOT\_WALSH1_r$ with the Walsh Code length specified by $WALSH\_LENGTH1_r$; otherwise, set the AUX_PILOT_QOF1 field of Candidate Frequency Neighbor Set Pilot Record to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of Candidate Frequency Neighbor Set Pilot Record 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 Candidate Frequency Neighbor Set Pilot Record to $QOF2_r$ and set the AUX_PILOT_WALSH_CODE2 field of Candidate Frequency Neighbor Set Pilot Record to $AUX\_PILOT\_WALSH2_r$ with the Walsh Code length specified by $WALSH\_LENGTH2_r$; otherwise, set the AUX_PILOT_QOF2 field of Candidate Frequency Neighbor Set Pilot Record to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of Candidate Frequency Neighbor Set Pilot Record to $AUX\_PILOT\_WALSH_r$ with the Walsh Code length specified by $WALSH\_LENGTH_r$.

o If PILOT_UPDATE is equal to '1' and $CF\_SEARCH\_PRIORITY\_INCL_s$ is equal to '1', the mobile station shall store the search priority ($SEARCH\_PRIORITY_s = SEARCH\_PRIORITY_r$) associated with each of the neighboring base stations contained in the Candidate Frequency Neighbor Set.

o If PILOT_UPDATE is equal to '1' and $CF\_SRCH\_WIN\_NGHBR\_INCL_s$ is equal to '1', the mobile station shall perform 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 Candidate Frequency Neighbor Set,

◊ If $CF\_SRCH\_OFFSET\_INCL_r$ equals to '1', store the neighbor pilot channel search window offset ($SRCH\_OFFSET\_NGHBR_s$ = $SRCH\_OFFSET\_NGHBR_r$) associated with each of the neighboring base stations contained in the Candidate Frequency Neighbor Set.

- o If PILOT_UPDATE is equal to '1', the mobile station shall replace the Candidate Frequency Search Set with all flagged pilots (those with the corresponding SEARCH_SET field set to '1') specified in the *Candidate Frequency Search Request Message*.
- o Search offset time ($SEARCH\_OFFSET_s$ = $SEARCH\_OFFSET_r$)

+ If $ALIGN\_TIMING_r$ is equal to '1' and the mobile station will align its search as requested by the base station, the mobile station shall set $ALIGN\_TIMING\_USED_s$ to '1'; otherwise, the mobile station shall set $ALIGN\_TIMING\_USED_s$ to '0'.

+ If the mobile station sets the PCG_OFF_TIMES field of the *Candidate Frequency Search Response Message* to '1', it shall set $SEARCH\_TIME\_RESOLUTION_s$ to 0.00125; otherwise, it shall set $SEARCH\_TIME\_RESOLUTION_s$ to 0.02.

+ The mobile station shall store the following parameters from its current configuration:
  - o CDMA band class ($SF\_CDMABAND_s$ = $CDMABAND_s$)
  - o Frequency Assignment (SF_CDMACH_s = $CDMACH_s$)
  - o Pilot detection threshold ($SF\_T\_ADD_s$ = T_ADD_s)

+ If $SEARCH\_TYPE_r$ is equal to '01', 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 perform the periodic search procedures, as described in 2.6.6.2.8.3.2.

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 (*fwd_time*, *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:

- The mobile station shall send a *Candidate Frequency Search Response Message* in assured mode, within T_{56m} seconds of receiving the *Candidate Frequency Search Request Message*. The mobile station shall set the fields of the *Candidate Frequency Search Response Message* as follows:
  - The mobile station shall set TOTAL_OFF_TIME_FWD and TOTAL_OFF_TIME_REV to its estimate of the total number of frames or power control groups for which it will need to suspend its current Forward Traffic Channel processing and Reverse Traffic Channel processing, respectively, in order to tune to each analog frequency in *rec_search_set*, and to re-tune to the Serving Frequency (see 2.6.6.2.8.3.2). If the mobile station searches *rec_search_set* in multiple visits away from the Serving Frequency, the mobile station shall report the total number of frames or power control groups in all visits in a search period for which it will need to suspend its current Forward Traffic Channel and the Reverse Traffic Channel processing.
  - The mobile station shall set MAX_OFF_TIME_FWD and MAX_OFF_TIME_REV to its estimate of the maximum number of frames or power control groups for which it will need to suspend its current Forward Traffic Channel processing and Reverse Traffic Channel processing, respectively, during any single visit away from the Serving Frequency, to search a subset of *rec_search_set*, and to re-tune to the Serving Frequency.
  - The mobile station shall set PCG_OFF_TIMES to ‘1’ if TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_-FWD and MAX_OFF_TIME_FWD are expressed in units of power control groups. If these time estimates are expressed in units of frames, the mobile station shall set PCG_OFF_TIMES to ‘0’. The mobile station shall not use power control groups as the unit of delay if $P\_REV\_IN\_USE_s$ is less than six.
  - If $ALIGN\_TIMING_r$ is equal to ‘1’, the mobile station shall set ALIGN_TIMING_USED to ‘1’ to indicate if it will align its search as requested by the base station; otherwise, the mobile station shall set ALIGN_TIMING_USED to ‘0’. If ALIGN_TIMING_USED is set to ‘1’, the mobile station shall set NUM_VISITS to the number of visits per search period minus one and, if NUM_VISITS is not equal to 0, the mobile station shall set INTER_VISIT_TIME, in units of frames or power control groups, to its estimate of the time between subsequent visits within the same search period.
- When the message takes effect, the mobile station shall perform the following actions:
  - 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 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', and 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.

+ Store the following parameters from the *Candidate Frequency Search Request Message:*

  - *Candidate Frequency Search Request Message* sequence number ($CFSRM\_SEQ_s = CFSRM\_SEQ_r$)
  - Periodic search flag: If $SEARCH\_TYPE_r$ is equal to '11', the mobile station shall set $PERIODIC\_SEARCH_s$ to '1'; otherwise, the mobile station shall set $PERIODIC\_SEARCH_s$ to '0'.
  - Search period for the analog frequencies search ($SEARCH\_PERIOD_s = SEARCH\_PERIOD_r$)
  - Candidate Frequency search mode ($SEARCH\_MODE_s = SEARCH\_MODE_r$)
  - Band class for the analog frequencies ($CF\_CDMABAND_s = BAND\_CLASS_r$)
  - Serving Frequency total pilot E_c threshold ($SF\_TOTAL\_EC\_THRESH_s = SF\_TOTAL\_EC\_THRESH_r$)
  - Serving Frequency total pilot E_c/I_o threshold ($SF\_TOTAL\_EC\_IO\_THRESH_s = SF\_TOTAL\_EC\_IO\_THRESH_r$)
  - Candidate Frequency Analog Search Set: The mobile station shall replace the Candidate Frequency Analog Search Set with the analog frequencies included in the *Candidate Frequency Search Request Message*.
  - Search offset time ($SEARCH\_OFFSET_s = SEARCH\_OFFSET_r$)

+ If $ALIGN\_TIMING_r$ is equal to '1' and the mobile station will align its search as requested by the base station, the mobile station shall set $ALIGN\_TIMING\_USED_s$ to '1'; otherwise, the mobile station shall set $ALIGN\_TIMING\_USED_s$ to '0'.

+ If the mobile station sets the PCG_OFF_TIMES field of the *Candidate Frequency Search Response Message* to '1', it shall set $SEARCH\_TIME\_RESOLUTION_s$ to 0.00125; otherwise, it shall set $SEARCH\_TIME\_RESOLUTION_s$ to 0.02.

+ If $SEARCH\_TYPE_r$ is equal to '01', the mobile station shall perform a single search of the Candidate Frequency Analog Search Set as described in 2.6.6.2.10.1. If $SEARCH\_TYPE_r$ is equal to '11', the mobile station shall perform the periodic search procedures described in 2.6.6.2.10.2.

6. *Candidate Frequency Search Control Message:* The mobile station shall process the message as follows:

If $SEARCH\_MODE_s$ is equal to '0000':

- 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 Search Set is empty.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00001011' (invalid search request), if $SEARCH\_TYPE_r$ is not equal to '00' and the Candidate Frequency is the same as the Serving Frequency ($CF\_CDMABAND_s$ is equal to $CDMABAND_s$ and CF_CDMACH_s is equal to $CDMACH_s$).
- 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 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, *fwd_time* is the total time for all visits to the Candidate Frequency in a search period (see 2.6.6.2.8.3.2),

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 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).

- 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':
  - The mobile station shall set $PERIODIC\_SEARCH_s$ to '0'.
  - If 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 Analog Search Set, as described in 2.6.6.2.10.1.
- If $SEARCH\_TYPE_r$ is equal to '11':
  - The mobile station shall set $PERIODIC\_SEARCH_s$ to '1'.
  - If 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 Analog Search Set, as described in 2.6.6.2.10.2.

7. *Extended Neighbor List Update Message:* The mobile station shall update its neighbor set as specified in 2.6.6.2.6.3 and perform the following:

- If $NGHBR\_SRCH\_MODE_r$ is equal to '01' or '11', the mobile station shall store the search priority ($SEARCH\_PRIORITY_s$ = $SEARCH\_PRIORITY_r$) associated with each of the neighboring base stations contained in the *Extended Neighbor List Update Message* which are in the mobile's neighbor set.
- If $NGHBR\_SRCH\_MODE_r$ is equal to '01' or '00', the mobile station shall set the $SRCH\_OFFSET\_INCL_s$ field '0'.
- If $NGHBR\_SRCH\_MODE_r$ is equal to '10' or '11', the mobile station shall perform 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 ith 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.

- For each of the neighboring base stations contained in the *General Neighbor List Message*, the mobile station shall set ADD_PILOT_REC_INCL field of NGHBR_REC[i] to the ith occurrence of $ADD\_PILOT\_REC\_INCL_r$. If $ADD\_PILOT\_REC\_INCL_r$ equals '1', for each pilot, 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 $TD\_POWER\_LEVEL_r$ 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 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_TD_QOF field of NGHBR_PILOT_REC to QOF_r.
    - Set the AUX_PILOT_TD_WALSH_CODE field of NGHBR_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 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.

+ 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 $ADD\_INFO\_INCL1_r$ is equal to '1', set the AUX_PILOT_QOF1 field of NGHBR_PILOT_REC to $QOF1_r$ and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE1 field of NGHBR_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 NGHBR_PILOT_REC to $QOF2_r$ and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_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 NGHBR_PILOT_REC to QOF_r and set the AUX_PILOT_WALSH_CODE2 field of NGHBR_PILOT_REC to $AUX\_PILOT\_WALSH_r$ with the Walsh Code length specified by $WALSH\_LENGTH_r$.

8. *Supplemental Channel Assignment 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 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 *Supplemental Channel Assignment Message:*

   - The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported), if the number of forward or reverse Supplemental Code Channels specified in the *Supplemental Channel Assignment Message* is greater than the maximum number of Supplemental Code Channels supported by the mobile station.

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000011' (message structure not acceptable), if both USE_REV_HDM_SEQ and EXPL_REV_START_TIME or both USE_FOR_HDM_SEQ and EXPL_FOR_START_TIME specified in the *Supplemental Channel Assignment Message* are set to '1'.
- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000100' (message field not in valid range), if PILOT_PN specified in the *Supplemental Channel Assignment Message* is not in the Active Set and this message is not linked with a *General Handoff Direction Message*.

If none of the above conditions is true, the mobile station shall perform the following.

- The mobile station shall store the following parameters from the *Supplemental Channel Assignment Message*:
  - Use *General Handoff Direction Message* forward sequence number indicator ($USE\_FOR\_HDM\_SEQ_s$ = $USE\_FOR\_HDM\_SEQ_r$)
  - If $USE\_FOR\_HDM\_SEQ_r$ is equal to '1', then the mobile station shall store the following:
    - The sequence number of the *General Handoff Direction Message* to which this messaged is linked for the Forward Supplemental Code Channel assignment ($FOR\_LINKED\_HDM\_SEQ_s$ = $FOR\_LINKED\_HDM\_SEQ_r$)
    - The forward Supplemental Code Channel assignment order ($SCAM\_FOR\_ORDER_s$ = least significant bit of $FOR\_SUP\_CONFIG_r$)
    - The forward duration assignment indicator ($SCAM\_FOR\_DURATION\_MODE_s$ = $USE\_FOR\_DURATION_r$).
  - Use *General Handoff Direction Message* reverse sequence number indicator ($USE\_REV\_HDM\_SEQ_s$ = $USE\_REV\_HDM\_SEQ_r$)
  - If $USE\_REV\_HDM\_SEQ_r$ is equal to '1', then the mobile station shall store the following:
    - The sequence number of the *General Handoff Direction Message* to which this messaged is linked for the Reverse Supplemental Code Channel assignment ($REV\_LINKED\_HDM\_SEQ_s$ = $REV\_LINKED\_HDM\_SEQ_r$)
    - The reverse duration assignment indicator ($SCAM\_REV\_DURATION\_MODE_s$ = $USE\_REV\_DURATION_r$).
- If $USE\_RETRY\_DELAY_r$ is '0', then the mobile station shall store 0 as $RETRY\_DELAY_s$. The mobile station may send subsequent *Supplemental Channel Request Messages* whenever $RETRY\_DELAY_s$ is set to 0.

- If $USE\_RETRY\_DELAY_r$ is set to '1', the mobile station shall interpret the *Supplemental Channel Assignment Message* as an indication that the base station has specified a *Supplemental Channel Request Message* retry delay in $RETRY\_DELAY_r$ as follows:
  - The mobile station shall store the next system time 80 ms boundary + $RETRY\_DELAY_r \times 320$ ms as $RETRY\_DELAY_s$. The mobile station shall not send any subsequent *Supplemental Channel Request Message* until after the system time stored in $RETRY\_DELAY_s$. At the system time stored in $RETRY\_DELAY_s$, the mobile station shall reset $RETRY\_DELAY_s$ to 0.
  - If $RETRY\_DELAY_r$ is '00000000', then the mobile station shall store 0 as $RETRY\_DELAY_s$. The mobile station may send subsequent *Supplemental Channel Request Messages* whenever $RETRY\_DELAY_s$ is set to 0.
  - If $RETRY\_DELAY_r$ is '11111111', then the mobile station shall store *infinity* as $RETRY\_DELAY_s$, and the mobile station shall not send any further *Supplemental Channel Request Messages* until the mobile station receives a new *Supplemental Channel Assignment Message* with no retry delay or a non-infinite retry delay specified, or until the mobile station receives a *General Handoff Direction Message* with a CLEAR_RETRY_DELAY indication set.
- If $REV\_INCLUDED_r$ is equal to '1', then the mobile station shall process Reverse Supplemental Code Channel assignment information for the *Supplemental Channel Assignment Message*. This information shall be processed as follows:
  - The mobile station shall store $USE\_T\_ADD\_ABORT_r$, the Reverse Supplemental Code Channel assignment T_ADD abort indicator, as $USE\_T\_ADD\_ABORT_s$.
  - The mobile station shall store $REV\_DTX\_DURATION_r$, Reverse Supplemental Channel Discontinuous Transmission Duration, as $REV\_DTX\_DURATION_s$.
  - If $REV\_PARMS\_INCLUDED_r$ is equal to '1', the mobile station shall store the following:
    - $T\_MULCHAN_s = T\_MULCHAN_r$
    - $BEGIN\_PREAMBLE_s = BEGIN\_PREAMBLE_r$
    - $RESUME\_PREAMBLE_s = RESUME\_PREAMBLE_r$
  - If $IGNORE\_SCAM_s$ is equal to '1' and $SCRM\_SEQ\_NUM_r$ is not present or is present and is not equal to $SCRM\_SEQ\_NUM_s$, then the mobile station shall not process the remaining Reverse Supplemental Code Channel assignment information in this message.

- If $IGNORE\_SCAM_S$ is equal to '1' and $SCRM\_SEQ\_NUM_r$ is present and is equal to $SCRM\_SEQ\_NUM_S$, then the mobile station shall set $IGNORE\_SCAM_S$ to '0'.
- The mobile station shall set $REV\_START\_TIME_S$ as follows:
  - If $EXPL\_REV\_START\_TIME_r$ is equal to '1', the mobile station shall set the $REV\_START\_TIME_S$ to $REV\_START\_TIME_r$.
  - If $USE\_REV\_HDM\_SEQ_r$ is equal to '1' and $REV\_LINKED\_HDM\_SEQ_r$ is not equal to HDM_SEQ_S, the mobile station shall set the $REV\_START\_TIME_S$ to NULL.
  - If $USE\_REV\_HDM\_SEQ_r$ is equal to '1' and $REV\_LINKED\_HDM\_SEQ_r$ is equal to HDM_SEQ_S, then the mobile station shall set the $REV\_START\_TIME_S$ to the action time of the *General Handoff Direction Message* that is linked to the *Supplemental Channel Assignment Message*.
  - If $EXPL\_REV\_START\_TIME_r$ is equal to '0' and $USE\_REV\_HDM\_SEQ_r$ is equal to '0', the mobile station shall set the $REV\_START\_TIME_S$ to the next 80 ms boundary following the action time of the *Supplemental Channel Assignment Message*.

- The mobile station shall set $NUM\_REV\_CODES_S$ to $NUM\_REV\_CODES_r$. If $REV\_START\_TIME_S$ is not equal to NULL, the mobile station shall perform the following actions:
  - If $NUM\_REV\_CODES_r$ is equal to '000', the mobile station shall stop transmitting the Reverse Supplemental Code Channels at the start time specified by $REV\_START\_TIME_S$.
  - If $NUM\_REV\_CODES_r$ is not equal to '000', the mobile station shall set PILOT_GATING_USE_RATE to '0' at the action time of the message and the mobile station may start transmitting on $NUM\_REV\_CODES_S$ Reverse Supplemental Code Channels at the start time specified by $REV\_START\_TIME_S$ for a duration of time specified by the following rules:
    - If $USE\_REV\_DURATION_r$ is equal to '1', the mobile station shall set $REV\_DURATION_S$ to $REV\_DURATION_r$. The mobile station may continue transmitting on the Reverse Supplemental Code Channels for a period of ($REV\_DURATION_S \times 80$) ms, or until it receives the action time of a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental assignment duration or start time.

- If $USE\_REV\_DURATION_r$ is equal to '0', the mobile station may continue to transmit indefinitely on the Reverse Supplemental Code Channels, or until it receives the action time of a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental assignment duration or start time.

- If FOR_INCLUDED is equal to '1', then the mobile station shall process Forward Supplemental Code Channel assignment information as follows:
  - The mobile station shall assign a value to $FOR\_START\_TIME_s$ according to the following rules:
    - If EXPL_FOR_START_TIME is equal to '1', the mobile station shall set the $FOR\_START\_TIME_s$ to $FOR\_START\_TIME_r$.
    - If $USE\_FOR\_HDM\_SEQ_r$ is equal to '1' and $FOR\_LINKED\_HDM\_SEQ_r$ is not equal to HDM_SEQ_s, the mobile station shall set the $FOR\_START\_TIME_s$ to NULL.
    - If $USE\_FOR\_HDM\_SEQ_r$ is equal to '1' and $FOR\_LINKED\_HDM\_SEQ_r$ is equal to HDM_SEQ_s, then the mobile station shall set the $FOR\_START\_TIME_s$ to the action time of the *General Handoff Direction Message* that is linked to the *Supplemental Channel Assignment Message*.
    - If $EXPL\_FOR\_START\_TIME_r$ is equal to '0' and $USE\_FOR\_HDM\_SEQ_r$ equals '0', the mobile station shall set the $FOR\_START\_TIME_s$ to the action time of the *Supplemental Channel Assignment Message*.
  - If $FOR\_SUP\_CONFIG_r$ is equal to '00' and $FOR\_START\_TIME_s$ is not equal to NULL, the mobile station should stop processing the Forward Supplemental Code Channels at the time specified by $FOR\_START\_TIME_s$.
  - If $FOR\_SUP\_CONFIG_r$ is equal to '01' and $FOR\_START\_TIME_s$ is not equal to NULL, the mobile station shall set PILOT_GATING_USE_RATE to '0' at the action time of the message and start processing the Forward Supplemental Code Channels in the $CODE\_CHAN\_LIST_s$ at $FOR\_START\_TIME_s$ for a period of time specified by the following rules:
    - If USE_FOR_DURATION is equal to '1', the mobile station shall set $FOR\_DURATION_s$ to $FOR\_DURATION_r$. The mobile station shall continue processing the Forward Supplemental Code Channels for a period of $(FOR\_DURATION_s \times 80)$ ms, or until it receives the action time of a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental assignment duration or start time.

+ If $USE\_FOR\_DURATION_r$ is equal to '0', the mobile station shall continue processing the Forward Supplemental Code Channels until it receives the action time of a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental assignment duration or start time.

– If $FOR\_SUP\_CONFIG_r$ is equal to '10', the mobile station shall perform the following:

  + The mobile station shall update the $CODE\_CHAN\_LIST_s$ as specified in 2.6.8.

  + If $FOR\_START\_TIME_s$ is not equal to NULL the mobile station should stop processing Forward Supplemental Code Channels at the time specified by $FOR\_START\_TIME_s$.

– If $FOR\_SUP\_CONFIG_r$ is equal to '11', the mobile station shall perform the following:

  + The mobile station shall update the $CODE\_CHAN\_LIST_s$ as specified in 2.6.8.

  + If $FOR\_START\_TIME_s$ is not equal to NULL, then the mobile station shall set PILOT_GATING_USE_RATE to '0' at the action time of the message and start processing the Forward Supplemental Code Channels in the $CODE\_CHAN\_LIST_s$ at the time specified by $FOR\_START\_TIME_s$ for a period of time specified by the following rules:

    o If $USE\_FOR\_DURATION_r$ is equal to '1', the mobile station shall set $FOR\_DURATION_s$ to $FOR\_DURATION_r$. The mobile station shall continue processing the Forward Supplemental Code Channels for ($FOR\_DURATION_s \times 80$) ms, until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental assignment duration or start time.

    o If $USE\_FOR\_DURATION_r$ is equal to '0', the mobile station shall continue processing the Forward Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental assignment duration or start time.

9. *General 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 *General 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 *General 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 number of forward or reverse Supplemental Code Channels specified in the *General Handoff Direction Message* is greater than the maximum number of Supplemental Code Channels supported by the mobile station.
- 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 *General Handoff Direction Message.*
  - The mobile station shall send a *Mobile Station Reject Order* (ORDQ = '00000111') within T_{56m} seconds, if the mobile station supports the service configuration specified but does not accept the service configuration specified in the *General 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 *General 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 *General 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 '00001101' (search period too short), if the PERIODIC_SEARCH field is included in the *General Handoff Direction Message* and is set to '1', and *search_period* is less than (max *(fwd_time, rev_time)* + T_{71m} seconds), where

  search_period = time period corresponding to SEARCH_PERIOD_S 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 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* 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 = 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* is the total time for all visits to the CDMA Candidate Frequency in a search period.

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 *General Handoff Direction Message* at the action time of the message.

If EXTRA_PARMS is equal to '1', the mobile station shall store the return on failure indicator from the *General Handoff Direction Message* ($\text{RETURN\_IF\_HANDOFF\_FAIL}_s$ = $\text{RETURN\_IF\_HANDOFF\_FAIL}_r$); otherwise the mobile station shall set $\text{RETURN\_IF\_HANDOFF\_FAIL}_s$ to '0'.

The mobile station shall set $\text{RETURN\_IF\_HANDOFF\_FAIL}_s$ to '0' (disable return on failure) if any of the following conditions is true:

- If P_REV_IN_USE_s is less than or equal to four and the mobile station does not support hard handoff with return on failure, or
- At least one of the pilots specified by the message is also included in the Active Set prior to the action time of the message, and one of the following conditions is true:
  - EXTRA_PARMS is equal to '0', or
  - EXTRA_PARMS is equal to '1', the message specifies the same Frequency Assignment as the Serving Frequency (BAND_CLASS_r is equal to CDMABAND_s and CDMA_FREQ_r is equal to CDMACH_s), and FRAME_OFFSET_r is equal to FRAME_OFFSET_s.

The mobile station shall store the following parameters from its current configuration:

- CDMA band class (SF_CDMABAND_s = CDMABAND_s)

- Frequency assignment ($SF\_CDMACH_S = CDMACH_S$)
- Frame Offset ($SF\_FRAME\_OFFSET_S = FRAME\_OFFSET_S$)

If $RETURN\_IF\_HANDOFF\_FAIL_S$ is equal to '1', the mobile station shall also store the following parameters from its current configuration:

- Protocol revision level
  ($SF\_P\_REV_S = P\_REV_S$)
- Protocol revision level in use on the Serving Frequency
  ($SF\_P\_REV\_IN\_USE_S = P\_REV\_IN\_USE_S$)
- Search window size for the Active Set and Candidate Set
  ($SF\_SRCH\_WIN\_A_S = SRCH\_WIN\_A_S$)
- Search window size for the Neighbor Set
  ($SF\_SRCH\_WIN\_N_S = SRCH\_WIN\_N_S$)
- Search window size for the Remainder Set
  ($SF\_SRCH\_WIN\_R_S = SRCH\_WIN\_R_S$)
- Pilot detection threshold
  ($SF\_T\_ADD_S = T\_ADD_S$)
- Pilot drop threshold
  ($SF\_T\_DROP_S = T\_DROP_S$)
- Active Set versus Candidate Set comparison threshold
  ($SF\_T\_COMP_S = T\_COMP_S$)
- Drop timer value
  ($SF\_T\_TDROP_S = T\_TDROP_S$)
- Soft slope for the dynamic add and drop thresholds
  ($SF\_SOFT\_SLOPE_S = SOFT\_SLOPE_S$)
- Intercept for the dynamic add threshold
  ($SF\_ADD\_INTERCEPT_S = ADD\_INTERCEPT_S$)
- Intercept for the dynamic drop threshold
  ($SF\_DROP\_INTERCEPT_S = DROP\_INTERCEPT_S$)
- Private long code mask indicator: If the mobile station is using the private long code mask on the Serving Frequency, it shall set $SF\_PRIVATE\_LCM_S$ to '1'; otherwise, it shall set $SF\_PRIVATE\_LCM_S$ to '0'.
- Service negotiation type
  ($SF\_SERV\_NEG_S = SERV\_NEG_S$)

- Service configuration:
  Store the current service configuration (service configuration record and non-negotiable service configuration record) in $SF\_SERVICE\_CONFIG_S$
- Message encryption mode: If message encryption is on, the mobile station shall set $SF\_ENCRYPT\_MODE_S$ to '1'; otherwise, the mobile station shall set $SF\_ENCRYPT\_MODE_S$ to '0'.
- Extended nominal power setting of the current cell
  ($SF\_NOM\_PWR\_EXT_S = NOM\_PWR\_EXT_S$)
- Nominal power setting of the current cell
  ($SF\_NOM\_PWR_S = NOM\_PWR_S$)
- Power control step
  ($SF\_PWR\_CNTL\_STEP_S = PWR\_CNTL\_STEP_S$)
- Serving Frequency Active Set (SF Active Set = ?For each pilot in the current Active Set: (PILOT_PN, PWR_COMB_IND) ?)
- Serving Frequency Code Channel List
  ($SF\_CODE\_CHAN\_LIST_S = CODE\_CHAN\_LIST_S$)

When the message takes effect, the mobile station shall perform the following actions:

- 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 *General 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 *General Handoff Direction Message*.
- If EXTRA_PARMS is equal to '1', perform the following actions:
  - If $FRAME\_OFFSET_r$ is not equal to $FRAME\_OFFSET_S$, change the frame offset on all of the code channels of the Forward Traffic Channel and of the Reverse Traffic Channel.
  - If $RESET\_L2_r$ is equal to '1', and $RETURN\_IF\_HANDOFF\_FAIL_S$ is equal to '0', Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to reset the acknowledgment procedures, as specified in 2.2.1.1 and 2.2.2.1 of [4]. The mobile station shall reset the acknowledgment procedures immediately after the action time of the *General Handoff Direction Message*.
  - If $RESET\_FPC_r$ is equal to '1' and $RETURN\_IF\_HANDOFF\_FAIL_S$ is equal to '0', initialize the Forward Traffic Channel power control counters, as specified in 2.6.4.1.1.1.

- If $SERV\_NEG\_TYPE_r$ is equal to '1', set $SERV\_NEG_s$ to enabled; otherwise set $SERV\_NEG_s$ to disabled. For operation in Band Class 1, $SERV\_NEG_s$ is always equal to enabled.
- Use the long code mask specified by the $PRIVATE\_LCM_r$ (see 2.3.12.3) and indicate to the user the voice privacy mode status.
- Process the ENCRYPT_MODE field, as specified in 2.3.12.2.

• If EXTRA_PARMS is equal to '0', set the following variables to the values indicated:

- Hard handoff traffic channel preamble count required before transmitting a *Handoff Completion Message* or an *Extended Handoff Completion Message* ($NUM\_PREAMBLE_s$ = '000')
- Complete search flag ($COMPLETE\_SEARCH_s$ = '1')
- CDMA band class for the Target Frequency ($TF\_CDMABAND_s = SF\_CDMABAND_s$)
- Frequency assignment for the Target Frequency ($TF\_CDMACH_s = SF\_CDMACH_s$)

• Store the following parameters from the *General Handoff Direction Message*:

- *General Handoff Direction Message* sequence number ($HDM\_SEQ_s = HDM\_SEQ_r$)
- Forward power control subchannel relative gain ($FPC\_SUBCHAN\_GAIN_s = FPC\_SUBCHAN\_GAIN_r$).
- If the mobile station uses $FPC\_SUBCHAN\_GAIN_s$, the mobile station shall perform the following:
  + If $PC\_ACTION\_TIME_r$ is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_s$ at the time specified by $PC\_ACTION\_TIME_r$.
  + If PC_ACTION_TIME is not received and the explicit action time is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_s$ at the action time.
  + If neither $PC\_ACTION\_TIME_r$ nor explicit action time is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_s$ at the first 80ms boundary occurring at least 80ms after the end of the frame containing the last bit of the *General Handoff Direction Message* sent to the mobile station.
- Reverse Eighth Gating Mode ($REV\_FCH\_GATING\_MODE_s = REV\_FCH\_GATING\_MODE_r$).

- Reverse Power Control Delay if $REV\_PWR\_CNTL\_DELAY\_INCL_r$ is equal to '1' ($REV\_PWR\_CNTL\_DELAY_s = REV\_PWR\_CNTL\_DELAY_r$).
- If SEARCH_INCLUDED is equal to '1', store the following:
  - Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_s = SRCH\_WIN\_A_r$)
  - Pilot detection threshold ($T\_ADD_s = T\_ADD_r$)
  - Pilot drop threshold ($T\_DROP_s = T\_DROP_r$)
  - Active Set versus Candidate Set comparison threshold ($T\_COMP_s = T\_COMP_r$)
  - Drop timer value ($T\_TDROP_s = T\_TDROP_r$)
  - Soft slope for the dynamic add and drop thresholds ($SOFT\_SLOPE_s = SOFT\_SLOPE_r$)
  - Intercept for the dynamic add threshold ($ADD\_INTERCEPT_s = ADD\_INTERCEPT_r$)
  - Intercept for the dynamic drop threshold ($DROP\_INTERCEPT_s = DROP\_INTERCEPT_r$)
- If EXTRA_PARMS is equal to '1', store the following:
  - Protocol revision level ($P\_REV_s = P\_REV_r$), and protocol revision level currently in use ($P\_REV\_IN\_USE_s$ = min (P_REV_s, $MOB\_P\_REV_p$ of the current band class))
  - If the mobile station supports packet data service options, the packet data services zone identifier ($PACKET\_ZONE\_ID_s = PACKET\_ZONE\_ID_r$)
  - Frame offset ($FRAME\_OFFSET_s = FRAME\_OFFSET_r$)
  - Acknowledgment procedures reset indicator (If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '1', set $TF\_RESET\_L2_s$ to $RESET\_L2_r$)
  - Indicator to initialize the Forward Traffic Channel power control counters (If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '1', set $TF\_RESET\_FPC_s$ to $RESET\_FPC_r$)
  - Nominal power setting of the target cell ($NOM\_PWR_s = NOM\_PWR_r$)

+ Extended nominal power setting of the target cell (If $CDMABAND_s$ = '00001', then $NOM\_PWR\_EXT_s$ = $NOM\_PWR\_EXT_r$; otherwise, $NOM\_PWR\_EXT_s$ = '0')

+ Hard handoff traffic channel preamble count required before transmitting a *Handoff Completion Message* or an *Extended Handoff Completion Message* ($NUM\_PREAMBLE_s$ = $NUM\_PREAMBLE_r$)

+ CDMA band class for the Target Frequency ($TF\_CDMABAND_s$ = $BAND\_CLASS_r$ and $CDMABAND_s$ = $BAND\_CLASS_r$)

+ Frequency assignment for the Target Frequency (TF_CDMACH_s = $CDMA\_FREQ_r$ and $CDMACH_s$ = $CDMA\_FREQ_r$)

+ Complete search flag ($COMPLETE\_SEARCH_s$ = $COMPLETE\_SEARCH_r$)

+ Periodic search flag ($PERIODIC\_SEARCH_s$ = $PERIODIC\_SEARCH_r$)

+ Nominal code channel output power offset relative to the Reverse Pilot Channel power ($RLGAIN\_TRAFFIC\_PILOT_s$ = $RLGAIN\_TRAFFIC\_PILOT_r$)

– If EXTRA_PARMS is equal to '1' and DEFAULT_RLAG is equal to '1', the mobile station shall set each entry of the Reverse Link Attribute Adjustment Gain Table and Reverse Channel Adjustment Gain Table (see 2.1.2.3.3 of [2]) to 0.

– If REV_PARMS_INCLUDED is included and is equal to '1', the mobile station shall store the following:

+ Reverse Supplemental Code Channel Request Message neighbor channel pilot strength offset ($T\_MULCHAN_s$ = $T\_MULCHAN_r$)

+ Reverse Supplemental Code Channel beginning of transmission preamble length ($BEGIN\_PREAMBLE_s$ = $BEGIN\_PREAMBLE_r$)

+ Reverse Supplemental Code Channel resumption of transmission preamble length ($RESUME\_PREAMBLE_s$ = $RESUME\_PREAMBLE_r$)

– For each pilot included in the message, the mobile station shall store the following:

+ PILOT_PN, the pilot PN sequence offset index

+ PWR_COMB_IND, the power control symbol combining indicator

– If USE_PWR_CNTL_STEP is equal to '1' and $PWR\_CNTL\_STEP_r$ corresponds to a power control step size supported by the mobile station (see 2.1.2.3.2 of [2]), then the mobile station shall set $PWR\_CNTL\_STEP_s$ to $PWR\_CNTL\_STEP_r$.

• 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 FOR_INCLUDED is included and is equal to '0', the mobile station shall perform the following:

- The mobile station shall update the Code Channel List, $CODE\_CHAN\_LIST_S$, as specified in 2.6.8.
- If $USE\_FOR\_HDM\_SEQ_S$ is equal to '1' and $FOR\_LINKED\_HDM\_SEQ_S$ is equal to HDM_SEQ_r (this indicates that there is pending Forward Supplemental Code Channel assignment information, received in a *Supplemental Channel Assignment Message*, linked to this *General Handoff Direction Message*), then the mobile station shall perform the following actions:
  + The mobile station shall set $USE\_FOR\_HDM\_SEQ_S$ to '0'.
  + If $SCAM\_FOR\_ORDER_S$ is equal to '0', the mobile station shall stop processing all Forward Supplemental Code Channels at the action time of the *General Handoff Direction Message*.
  + If $SCAM\_FOR\_ORDER_S$ is equal to '1', the mobile station shall start processing the Forward Supplemental Code Channels specified in $CODE\_CHAN\_LIST_S$ at the action time of the *General Handoff Direction Message*, for a period of time determined by the following rules:
    o If $SCAM\_FOR\_DURATION\_MODE_S$ is equal to '1', the mobile station shall continue processing the Forward Supplemental Code Channels for a period of ($FOR\_DURATION_S \times 80$) ms, until it receives a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Forward Supplemental Code Channel assignment.
    o If $SCAM\_FOR\_DURATION\_MODE_S$ is equal to '0', the mobile station shall continue processing the Forward Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental Code Channel assignment.
- If $USE\_FOR\_HDM\_SEQ_S$ is equal to '0' or $FOR\_LINKED\_HDM\_SEQ_S$ is not equal to HDM_SEQ_r, and if the mobile station is currently processing Forward Supplemental Code Channels, it shall continue processing the Forward Supplemental Code Channels using the updated Code Channel List, $CODE\_CHAN\_LIST_S$.

- If NNSCR_INCLUDED field is included and set to '1' and SCR_INCLUDED field is either not included or included but set to '0', the mobile station shall process the received Non-negotiable Service Configuration Record as specified in 2.6.4.1.13 at the action time of this message.
- If FOR_INCLUDED is included and is equal to '1', then the mobile station shall process the Forward Supplemental Code Channel assignment information as follows:
  - The mobile station shall set $USE\_FOR\_HDM\_SEQ_S$ to '0'.
  - If $FOR\_START\_TIME_S$ specifies a time which is after the action time of the *General Handoff Direction Message*, the mobile station shall cancel any pending Forward Supplemental Code Channel assignment and shall set $FOR\_START\_TIME_S$ to NULL.
  - The?mobile station shall update the Code Channel List, $CODE\_CHAN\_LIST_S$, in accordance with the value of FOR_SUP_CONFIG, as specified in 2.6.8.
  - If FOR_SUP_CONFIG is equal to '00' or '10', the mobile station should stop processing Forward Supplemental Code Channels, if any, when the message takes effect.
  - If FOR_SUP_CONFIG is equal to '01' or '11', the mobile station shall set PILOT_GATING_USE_RATE to '0' at the action time of the message and start processing the Forward Supplemental Code Channels in the updated Code Channel List, $CODE\_CHAN\_LIST_S$, at the action time of the message, for a period of time determined by the following rules:
    - If USE_FOR_DURATION is equal to '1', the mobile station shall set $FOR\_DURATION_S$ to $FOR\_DURATION_r$. The mobile station shall continue processing the Forward Supplemental Code Channels for a period of ($FOR\_DURATION_S \times 80$) ms, until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental Code Channel assignment.
    - If USE_FOR_DURATION is equal to '0', the mobile station shall continue processing the Forward Supplemental Code Channels until it receives a subsequent *Supplemental Channel* Assignment *Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental Code Channel assignment.
- If REV_INCLUDED is included and is equal to '0', the mobile station shall perform the following:

- If $USE\_REV\_HDM\_SEQ_S$ is equal to '1' and $REV\_LINKED\_HDM\_SEQ_S$ is equal to HDM_SEQ_r (this indicates that there is pending Reverse Supplemental Code Channel assignment information, received in a *Supplemental Channel Assignment Message*, linked to this *General Handoff Direction Message*), the mobile station shall perform the following actions:
  - If $NUM\_REV\_CODES_S$ is equal to '000', the mobile station shall stop transmitting on all Reverse Supplemental Code Channels at the action time of the message.
  - If $NUM\_REV\_CODES_S$ is not equal to '000', the mobile station may start transmitting on $NUM\_REV\_CODES_S$ Reverse Supplemental Code Channels at the action time of the message, for a duration of time determined by the following rules:
    - If $SCAM\_REV\_DURATION\_MODE_S$ is equal to '1', the mobile station may continue transmitting on the Reverse Supplemental Code Channels for a period of ($REV\_DURATION_S \times 80$) ms, until it receives a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental Code Channel assignment.
    - If $SCAM\_REV\_DURATION\_MODE_S$ is equal to '0', the mobile station may continue transmitting on the Reverse Supplemental Code Channels until it receives a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental Code Channel assignment.
  - The mobile station shall set $USE\_REV\_HDM\_SEQ_S$ to '0'.
- If $USE\_REV\_HDM\_SEQ_S$ is equal to '0' or $REV\_LINKED\_HDM\_SEQ_S$ is not equal to HDM_SEQ_r, and if the previous Reverse Supplemental Code Channel assignment is still valid, the mobile station may continue to transmit on the Reverse Supplemental Code Channels according to the previously specified Reverse Supplemental Code Channel assignment.

• If REV_INCLUDED is included and is equal to '1', then the mobile station shall process the Reverse Supplemental Code Channel assignment information as follows:
- The mobile station shall set $REV\_DTX\_DURATION_S$ to $REV\_DTX\_DURATION_r$.
- The mobile station shall set $USE\_REV\_HDM\_SEQ_S$ to '0'.
- If $REV\_START\_TIME_S$ specifies a time which is after the action time of the *General Handoff Direction Message*, the mobile station shall cancel any pending Reverse Supplemental Code Channel assignment and shall set $REV\_START\_TIME_S$ to NULL.

- If CLEAR_RETRY_DELAY is equal to '1', the mobile station shall cancel any previously indicated retry delay and shall set $RETRY\_DELAY_S$ to 0; otherwise, the mobile station shall continue to honor any previously active retry delay stored in $RETRY\_DELAY_S$.
- The mobile station shall set $NUM\_REV\_CODES_S$ to $NUM\_REV\_CODES_r$, and shall perform the following actions:
  - If $NUM\_REV\_CODES_S$ is equal to '000', the mobile station shall stop transmitting on all Reverse Supplemental Code Channels at the action time of the message.
  - If $NUM\_REV\_CODES_S$ is not equal to '000', the mobile station shall set PILOT_GATING_USE_RATE to '0' at the action time of the message and may start transmitting on $NUM\_REV\_CODES_S$ Reverse Supplemental Code Channels at the action time of the message, for a duration of time determined by the following rules:
    - If $USE\_REV\_DURATION_r$ is equal to '1', the mobile station shall set $REV\_DURATION_S$ to $REV\_DURATION_r$. The mobile station may continue transmitting on the Reverse Supplemental Code Channels for a period of ($REV\_DURATION_S \times 80$) ms, until it receives a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental Code Channel assignment.
    - If USE_REV_DURATION is equal to '0', the mobile station may continue to transmit on the Reverse Supplemental Code Channels until it receives a subsequent *General Handoff Direction Message* or a *Supplemental Channel Assignment Message* that specifies a different Reverse Supplemental Code Channel assignment.
- The mobile station shall store $USE\_T\_ADD\_ABORT_r$, the Reverse Supplemental Code Channel assignment T_ADD abort indicator, as $USE\_T\_ADD\_ABORT_S$.

- The mobile station shall set $IGNORE\_SCAM_S$ and $IGNORE\_ESCAM_S$ to '0'.
- 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).
- Perform a soft or hard handoff depending on the following conditions:
  - If any of the following conditions is true, the mobile station shall perform a hard handoff:

+ EXTRA_PARMS is set to '1' and either $BAND\_CLASS_r$ is not equal to $SF\_CDMABAND_s$, $CDMA\_FREQ_r$ is not equal to SF_CDMACH_s, or $FRAME\_OFFSET_r$ is not equal to $SF\_FRAME\_OFFSET_s$, or

+ The set of pilots specified by the message is disjoint from the Active Set prior to the action time of the message.

– If the mobile station performs a hard handoff, it shall do the following:

+ If a Periodic Serving Frequency Pilot Report Procedure is in progress, the mobile station shall abort the procedure (see 2.6.6.2.12).

+ If a Candidate Frequency 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).

+ If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '0', the mobile station shall perform actions specified in 2.6.6.2.8.1. If the message specifies more than one pilot, the mobile station shall also perform actions specified in 2.6.6.2.7.1 and 2.6.6.2.7.2.

+ If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '1', the mobile station shall perform actions specified in 2.6.6.2.8.2. If the message specifies more than one pilot, the mobile station shall also perform actions specified in 2.6.6.2.7.1 and 2.6.6.2.7.2.

– Otherwise, the mobile station shall perform a soft handoff as specified in 2.6.6.2.7.

10. *Periodic Pilot Measurement Request Order:* The mobile station shall perform the following:

- If the PPSMM timer is enabled, disable it.
- If ORDQ is equal to '11111111', the mobile station shall send a *Periodic Pilot Strength Measurement Message* to the base station within T_{56m} seconds.
- If ORDQ is not equal to '11111111', the mobile station shall perform the following:

  – Set the $MIN\_PILOT\_PWR\_THRESH_s$ to $MIN\_PILOT\_PWR\_THRESH_r$ received from the *Periodic Pilot Strength Measurement Request Order*.

  – Set the $MIN\_PILOT\_EC\_IO\_THRESH_s$ to $MIN\_PILOT\_EC\_IO\_THRESH_r$ received from the *Periodic Pilot Strength Measurement Request Order*.

  – Set $PPSMM\_PERIOD_s$ equal to the larger value of ORDQ and the total length of time, in units of 80 ms, required by the mobile station to update the pilot strength measurement of each pilot in the Active Set and the Candidate Set.

  – Perform the Periodic Serving Frequency Pilot Report Procedure as 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* (ORDQ = '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} seconds), where

  search_period = time period corresponding to $SEARCH\_PERIOD_s$ 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 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* 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 = 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* is the total time for all visits to the CDMA Candidate Frequency in a search period.

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 *Universal Handoff Direction* Message at the action time of the message.

If EXTRA_PARMS is equal to '1', the mobile station shall store the return on failure indicator from the *Universal Handoff Direction Message* ($RETURN\_IF\_HANDOFF\_FAIL_S$ = $RETURN\_IF\_HANDOFF\_FAIL_r$); otherwise the mobile station shall set $RETURN\_IF\_HANDOFF\_FAIL_S$ to '0'.

The mobile station shall set $RETURN\_IF\_HANDOFF\_FAIL_S$ to '0' (disable return on failure) if any of the following conditions is true:

- If $P\_REV\_IN\_USE_S$ is less than or equal to four and the mobile station does not support hard handoff with return on failure, or
- At least one of the pilots specified by the message is also included in the Active Set prior to the action time of the message, and one of the following conditions is true:
  - EXTRA_PARMS is equal to '0', or
  - EXTRA_PARMS is equal to '1', the message specifies the same Frequency Assignment as the Serving Frequency ($BAND\_CLASS_r$ is equal to $CDMABAND_S$ and $CDMA\_FREQ_r$ is equal to $CDMACH_S$), and $FRAME\_OFFSET_r$ is equal to $FRAME\_OFFSET_S$.

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 = $CDMACH_S$)
- Frame Offset ($SF\_FRAME\_OFFSET_S$ = $FRAME\_OFFSET_S$)

If $RETURN\_IF\_HANDOFF\_FAIL_S$ is equal to '1', the mobile station shall also store the following parameters from its current configuration:

- Protocol revision level ($SF\_P\_REV_S$ = P_REV_S)
- Protocol revision level in use on the Serving Frequency ($SF\_P\_REV\_IN\_USE_S$ = $P\_REV\_IN\_USE_S$)
- Search window size for the Active Set and Candidate Set ($SF\_SRCH\_WIN\_A_S$ = $SRCH\_WIN\_A_S$)
- Search window size for the Neighbor Set ($SF\_SRCH\_WIN\_N_S$ = $SRCH\_WIN\_N_S$),
- Search window size for the Remainder Set ($SF\_SRCH\_WIN\_R_S$ = $SRCH\_WIN\_R_S$)

- Pilot detection threshold ($SF\_T\_ADD_S = T\_ADD_S$)
- Pilot drop threshold ($SF\_T\_DROP_S = T\_DROP_S$)
- Active Set versus Candidate Set comparison threshold ($SF\_T\_COMP_S = T\_COMP_S$)
- Drop timer value ($SF\_T\_TDROP_S = T\_TDROP_S$)
- Soft slope for the dynamic add and drop thresholds ($SF\_SOFT\_SLOPE_S = SOFT\_SLOPE_S$)
- Intercept for the dynamic add threshold ($SF\_ADD\_INTERCEPT_S = ADD\_INTERCEPT_S$)
- Intercept for the dynamic drop threshold ($SF\_DROP\_INTERCEPT_S = DROP\_INTERCEPT_S$)
- Private long code mask indicator: If the mobile station is using the private long code mask on the Serving Frequency, it shall set $SF\_PRIVATE\_LCM_S$ to '1'; otherwise, it shall set $SF\_PRIVATE\_LCM_S$ to '0'.
- Service negotiation type ($SF\_SERV\_NEG_S = SERV\_NEG_S$)
- Service configuration: Store the current service configuration (service configuration record and non-negotiable service configuration record) in $SF\_SERVICE\_CONFIG_S$
- Message encryption mode: If message encryption is on, the mobile station shall set $SF\_ENCRYPT\_MODE_S$ to '1'; otherwise, the mobile station shall set $SF\_ENCRYPT\_MODE_S$ to '0'.
- If NNSCR_INCLUDED field is included and set to '1' and SCR_INCLUDED field is either not included or included but set to '0', the mobile station shall process the received Non-negotiable Service Configuration Record as specified in 2.6.4.1.13 at the action time of this message.
- Extended nominal power setting of the current cell ($SF\_NOM\_PWR\_EXT_S = NOM\_PWR\_EXT_S$)
- Nominal power setting of the current cell ($SF\_NOM\_PWR_S = NOM\_PWR_S$)
- Power control step ($SF\_PWR\_CNTL\_STEP_S = PWR\_CNTL\_STEP_S$)
- Serving Frequency Active Set (SF Active Set = (For each pilot in the current Active Set: (PILOT_PN, PWR_COMB_IND)))
- Serving Frequency Code Channel List ($SF\_CODE\_CHAN\_LIST_S = CODE\_CHAN\_LIST_S$)

When the message takes effect, the mobile station shall perform the following actions:

- 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 *Universal 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 in the updated Active Set.
- If PARMS_INCL is equal to '1', perform the following actions:
  - Set protocol revision level ($P\_REV_S = P\_REV_r$), and protocol revision level currently in use ($P\_REV\_IN\_USE_S$ = min (P_REV_S, $MOB\_P\_REV_p$ of the current band class)).
  - If $SERV\_NEG\_TYPE_r$ is equal to '1', set $SERV\_NEG_S$ to enabled; otherwise set $SERV\_NEG_S$ to disabled. For operation in Band Class 1, $SERV\_NEG_S$ is always equal to enabled.
- If EXTRA_PARMS is equal to '1', perform the following actions:
  - If $FRAME\_OFFSET_r$ is not equal to $FRAME\_OFFSET_S$, change the frame offset on all of the code channels of the Forward Traffic Channel and of the Reverse Traffic Channel.
  - If $RESET\_L2_r$ is equal to '1', and RETURN_IF_HANDOFF_FAILs is equal to '0', Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to reset the acknowledgment procedures, as specified in 2.2.1.1 and 2.2.2.1 of [4]. The mobile station shall reset the acknowledgment procedures immediately after the action time of the *Universal Handoff Direction Message*.
  - If $RESET\_FPC_r$ is equal to '1' and $RETURN\_IF\_HANDOFF\_FAIL_S$ is equal to '0', initialize the Forward Traffic Channel power control counters, as specified in 2.6.4.1.1.1.
  - Use the long code mask specified by the $PRIVATE\_LCM_r$ (see 2.3.12.3) and indicate to the user the voice privacy mode status.
  - Process the ENCRYPT_MODE field, as specified in 2.3.12.2.
- If EXTRA_PARMS is equal to '0', set the following variables to the values indicated:
  - Hard handoff traffic channel preamble count required before transmitting a *Handoff Completion Message* or an *Extended Handoff Completion Message* ($NUM\_PREAMBLE_S$ = '000')
  - Complete search flag ($COMPLETE\_SEARCH_S$ = '1')

- CDMA band class for the Target Frequency ($TF\_CDMABAND_S = SF\_CDMABAND_S$)
- Frequency assignment for the Target Frequency ($TF\_CDMACH_S = SF\_CDMACH_S$)

• Store the following parameters from the *Universal Handoff Direction Message*:

- *Universal Handoff Direction Message* sequence number ($HDM\_SEQ_S = HDM\_SEQ_r$)
- Forward power control subchannel relative gain ($FPC\_SUBCHAN\_GAIN_S = FPC\_SUBCHAN\_GAIN_r$).
- If the mobile station uses $FPC\_SUBCHAN\_GAIN_s$, the mobile station shall perform the following:
  + If $PC\_ACTION\_TIME_r$ is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_S$ at the time specified by $PC\_ACTION\_TIME_r$.
  + If PC_ACTION_TIME is not received and the explicit action time is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_S$ at the action time.
  + If neither $PC\_ACTION\_TIME_r$ nor explicit action time is received, the mobile station shall apply its usage of the $FPC\_SUBCHAN\_GAIN_S$ at the first 80ms boundary occurring at least 80ms after the end of the frame containing the last bit of the *Universal Handoff Direction Message* sent to the mobile station.
- Reverse Eighth Gating Mode ($REV\_FCH\_GATING\_MODE_S = REV\_FCH\_GATING\_MODE_r$).
- Reverse Power Control Delay if $REV\_PWR\_CNTL\_DELAY\_INCL_r$ is equal to '1' ($REV\_PWR\_CNTL\_DELAY_S = REV\_PWR\_CNTL\_DELAY_r$).
- If SEARCH_INCLUDED is equal to '1', store the following:
  + Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_S = SRCH\_WIN\_A_r$)
  + Pilot detection threshold ($T\_ADD_S = T\_ADD_r$)
  + Pilot drop threshold ($T\_DROP_S = T\_DROP_r$)
  + Active Set versus Candidate Set comparison threshold ($T\_COMP_S = T\_COMP_r$)
  + Drop timer value ($T\_TDROP_S = T\_TDROP_r$)

+ Soft slope for the dynamic add and drop thresholds ($SOFT\_SLOPE_s$ = $SOFT\_SLOPE_r$)

+ Intercept for the dynamic add threshold ($ADD\_INTERCEPT_s$ = $ADD\_INTERCEPT_r$)

+ Intercept for the dynamic drop threshold ($DROP\_INTERCEPT_s$ = $DROP\_INTERCEPT_r$)

– If EXTRA_PARMS is equal to ‘1’, store the following:

+ If the mobile station supports packet data service options, the packet data services zone identifier ($PACKET\_ZONE\_ID_s$ = $PACKET\_ZONE\_ID_r$)

+ Frame offset ($FRAME\_OFFSET_s$ = $FRAME\_OFFSET_r$)

+ Acknowledgment procedures reset indicator (If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to ‘1’, set $TF\_RESET\_L2_s$ to $RESET\_L2_r$)

+ Indicator to initialize the Forward Traffic Channel power control counters (If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to ‘1’, set $TF\_RESET\_FPC_s$ to $RESET\_FPC_r$)

+ Nominal power setting of the target cell (NOM_PWR_s = NOM_PWR_r)

+ Extended nominal power setting of the target cell (If $BAND\_CLASS_r$ = ‘00001’, then $NOM\_PWR\_EXT_s$ = $NOM\_PWR\_EXT_r$; otherwise, $NOM\_PWR\_EXT_s$ = ‘0’)

+ Hard handoff traffic channel preamble count required before transmitting a *Handoff Completion Message* or an *Extended Handoff Completion Message* ($NUM\_PREAMBLE_s$ = $NUM\_PREAMBLE_r$)

+ CDMA band class for the Target Frequency ($TF\_CDMABAND_s$ = $BAND\_CLASS_r$ and $CDMABAND_s$ = $BAND\_CLASS_r$)

+ Frequency assignment for the Target Frequency (TF_CDMACH_s = $CDMA\_FREQ_r$ and $CDMACH_s$ = $CDMA\_FREQ_r$)

+ Complete search flag ($COMPLETE\_SEARCH_s$ = $COMPLETE\_SEARCH_r$)

+ Periodic search flag ($PERIODIC\_SEARCH_s$ = $PERIODIC\_SEARCH_r$)

+ Nominal code channel output power offset relative to the Reverse Pilot Channel power ($RLGAIN\_TRAFFIC\_PILOT_s$ = $RLGAIN\_TRAFFIC\_PILOT_r$)

– If EXTRA_PARMS is equal to ‘1’ and DEFAULT_RLAG is equal to ‘1’, the mobile station shall set each entry of the Reverse Link Attribute Adjustment Gain Table and Reverse Channel Adjustment Gain Table (see 2.1.2.3.3 of [2]) to 0.

– If USE_PWR_CNTL_STEP is equal to ‘1’ and $PWR\_CNTL\_STEP_r$ corresponds to a power control step size supported by the mobile station (see of [2]), then the mobile station shall set $PWR\_CNTL\_STEP_s$ to $PWR\_CNTL\_STEP_r$.

– If $CLEAR\_RETRY\_DELAY_r$ is equal to ‘1’, the mobile station shall cancel any previously indicated retry delay and shall set $RETRY\_DELAY_s$[RETRY_TYPE] to 0, where RETRY_TYPE is equal to ‘001’, ‘010’ or ‘011’; otherwise, the mobile station shall continue to honor any previously active retry delay stored in $RETRY\_DELAY_s$.

– If $3XFL\_1XRL\_INCL_r$ is equal to ‘1’, the mobile station shall set $1XRL\_FREQ\_OFFSET_s$ to $1XRL\_FREQ\_OFFSET_r$.

– If SCH_INCL_r is equal to ‘1’ and $NUM\_FOR\_ASSIGN_r$ is not equal to ‘00’, the mobile station shall store the following information for each occurrence of the record and process the Forward Supplemental Burst as specified in 2.6.6.2.5.1.1:

  + $FOR\_SCH\_START\_TIME\_INCL_s[FOR\_SCH\_ID_r] = FOR\_SCH\_START\_TIME\_INCL_r$

  + If $FOR\_SCH\_START\_TIME\_INCL_s[FOR\_SCH\_ID_r]$ is equal to’1’, set $FOR\_SCH\_START\_TIME_s[FOR\_SCH\_ID_r] = FOR\_SCH\_START\_TIME_r$

  + $FOR\_SCH\_DURATION_s[FOR\_SCH\_ID_r] = FOR\_SCH\_DURATION_r$

  + $SCCL\_INDEX_s[FOR\_SCH\_ID_r] = SCCL\_INDEX_r$

– If SCH_INCL_r is equal to ‘1’ and $NUM\_REV\_ASSIGN_r$ is not equal to ‘00’, the mobile station shall store the following information for each occurrence of the record and process the Reverse Supplemental Burst as specified in 2.6.6.2.5.1.2:

  + $REV\_SCH\_START\_TIME\_INCL_s[REV\_SCH\_ID_r] = REV\_SCH\_START\_TIME\_INCL_r$

  + If $REV\_SCH\_START\_TIME\_INCL_s[REV\_SCH\_ID_r]$ is equal to’1’, set $REV\_SCH\_START\_TIME_s[REV\_SCH\_ID_r] = REV\_SCH\_START\_TIME_r$

  + $REV\_SCH\_DURATION_s[REV\_SCH\_ID_r] = REV\_SCH\_DURATION_r$

  + $REV\_SCH\_NUM\_BITS\_IDX_s[REV\_SCH\_ID_r] = REV\_SCH\_NUM\_BITS\_IDX_r$

- If CH_IND_r is equal to '101', the mobile station shall perform the following:
  - The mobile station shall set CH_IND_s = '01'.
  - 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:
    - 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:

      - If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ is equal to '0000', then the mobile station shall set the number of information bits per frame, $N\_FSCH\_BITS\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$ and number of CRC bits per frame, $FSCH\_CRC\_LEN\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$, according to Table 3.7.3.3.2.37-2 using $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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, …, $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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 $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 ith 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 ith 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:
  - Set $REV\_SCH\_NUM\_BITS\_IDX_s[REV\_SCH\_ID_r]$ to $REV\_SCH\_NUM\_BITS\_IDX_r$.
  - 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:
  - Set PILOT_PN to $PILOT\_PN_r$.
  - 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'.
  - Set ADD_PILOT_REC_INCL to $ADD\_PILOT\_REC\_INCL_r$.

- 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 $WALSH\_LENGTH_r$.

o Store PWR_COMB_IND, CODE_CHAN_FCH and QOF_MASK_ID_FCH.

o If 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 entries of the corresponding Supplemental Channel.

o If SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000', for 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 $CODE\_CHAN\_SCH_r$.

If $3X\_SCH\_HIGH\_INCL_r$ equals ‘1’, set the $QOF\_ID\_SCH\_HIGH_s$ $[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ 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 $QOF\_ID\_SCH\_HIGH_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $QOF\_MASK\_ID\_SCH_r$, and $FOR\_SCH\_CC\_INDEX\_HIGH_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ 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.

– If CH_IND_r is equal to ‘010’ or ‘110’, the mobile station shall perform the following:

+ The mobile station shall set CH_IND_s = ‘10’.

+ 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:

– If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ is equal to ‘0000’, then the mobile station shall set the number of information bits per frame, $N\_FSCH\_BITS\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$ and number of CRC bits per frame, $FSCH\_CRC\_LEN\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$, according to Table 3.7.3.3.2.37-2 using $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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, …, $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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 $FSCH\_NBIT\_TABLE\_ID_S[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 $FSCH\_NBIT\_TABLE\_ID_S[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 ith 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 ith 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:

- Set $REV\_SCH\_NUM\_BITS\_IDX_s[REV\_SCH\_ID_r]$ to $REV\_SCH\_NUM\_BITS\_IDX_r$.
- 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 followings:
  - Set PILOT_PN to $PILOT\_PN_r$.
  - 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'.
  - Set ADD_PILOT_REC_INCL to $ADD\_PILOT\_REC\_INCL_r$.
  - 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 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 Store PWR_COMB_IND, CODE_CHAN_DCCH and QOF_MASK_ID_DCCH.

- If SCH_INCL_r is equal to '1' and NUM_SCH is equal to '00000', the mobile station shall delete the corresponding pilot from all entries of the corresponding Supplemental Channel.
- If SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000', 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 $PILOT\_PN_S$ $[FOR\_SCH\_ID_r][SCCL\_INDEX_S][i]$ to $PILOT\_PN_r$, $QOF\_ID_S[FOR\_SCH\_ID_r][SCCL\_INDEX_S][i]$ to $QOF\_MASK\_ID\_SCH_r$, and $FOR\_SCH\_CC\_INDEX_S$ $[FOR\_SCH\_ID_S][SCCL\_INDEX_S][i]$ 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 $3X\_DCCH\_INFO\_INCL_r$ equals to '1', for each included member of the Active Set, the mobile station store the following:
  - 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 $CODE\_CHAN\_FCH_r$.
  - 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 $CODE\_CHAN\_FCH_r$.
  - 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 $QOF\_ID\_SCH\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ 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:

– If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ is equal to '0000', then the mobile station shall set the number of information bits per frame, $N\_FSCH\_BITS\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$ and number of CRC bits per frame, $FSCH\_CRC\_LEN\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$, according to Table 3.7.3.3.2.37-2 using $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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 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, …, $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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 $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ 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 ith 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 ith 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 ith 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 ith 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:
  - Set $REV\_SCH\_NUM\_BITS\_IDX_s[REV\_SCH\_ID_r]$ to $REV\_SCH\_NUM\_BITS\_IDX_r$.
  - Set $REV\_WALSH\_ID_s[REV\_SCH\_ID_r][REV\_SCH\_NUM\_BITS\_IDX_s]$ to $REV\_WALSH\_ID_r$.
- For each member in the Active Set included in the message, the mobile station shall perform the followings:
  - Set PILOT_PN to $PILOT\_PN_r$.
  - 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'.
  - Set ADD_PILOT_REC_INCL to $ADD\_PILOT\_REC\_INCL_r$.
  - 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 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 Store PWR_COMB_IND, CODE_CHAN_FCH, QOF_MASK_ID_FCH, CODE_CHAN_DCCH and QOF_MASK_ID_DCCH.

o If SCH_INCL_r is equal to '1' and NUM_SCH is equal to '00000', the mobile station shall delete the corresponding pilot from all entries of the corresponding Supplemental Channel.

o If SCH_INCL_r is equal to '1' and NUM_SCH is not equal to '00000', 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$_r$.
+ If 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$_r$.
+ If 3X_FCH_INFO_INCL$_r$ or 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_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 $QOF\_ID\_SCH\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ 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).

- Perform a soft or hard handoff depending on the following conditions:
  - If any of the following conditions is true, the mobile station shall perform a hard handoff:
    - EXTRA_PARMS is set to '1' and either $BAND\_CLASS_r$ is not equal to $SF\_CDMABAND_s$, $CDMA\_FREQ_r$ is not equal to SF_CDMACH_s, or $FRAME\_OFFSET_r$ is not equal to $SF\_FRAME\_OFFSET_s$, or
    - The set of pilots specified by the message is disjoint from the Active Set prior to the action time of the message.
  - If the mobile station performs a hard handoff, it shall do the following:
    - If a Periodic Serving Frequency Pilot Report Procedure is in progress, the mobile station shall abort the procedure (see 2.6.6.2.12).
    - If a Candidate Frequency 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).
    - If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '0', the mobile station shall perform actions specified in 2.6.6.2.8.1. If the message specifies more than one pilot, the mobile station shall also perform actions specified in 2.6.6.2.7.1 and 2.6.6.2.7.2.
    - If $RETURN\_IF\_HANDOFF\_FAIL_s$ is equal to '1', the mobile station shall perform actions specified in 2.6.6.2.8.2. If the message specifies more than one pilot, the mobile station shall also perform actions specified in 2.6.6.2.7.1 and 2.6.6.2.7.2.
  - Otherwise, the mobile station shall perform a soft handoff as specified in 2.6.6.2.7.

12. *Mobile Assisted Burst Operation Parameters Message*: The mobile station shall process this message as follows:

- The mobile station shall set $ORDER\_FLAG_s$ to $ORDER\_FLAG_r$.
- If $ORDER\_FLAG_r$ is equal to '1', the mobile station shall perform the following:
  - The mobile station shall set $PS\_MIN\_DELTA_s$ to $PS\_MIN\_DELTA_r$.
  - The mobile station shall set $ORDER\_INTERVAL_s$ to $ORDER\_INTERVAL_r$.
- If $ORDER\_FLAG_r$ is equal to '0', the mobile station shall perform the following:
  - The mobile station shall set $PS\_MIN\_DELTA_s$ to 0.
  - The mobile station shall set $ORDER\_INTERVAL_s$ to 0.

- The mobile station shall set $PERIODIC\_FLAG_s$ to $PERIODIC\_FLAG_r$.
- If $PERIODIC\_FLAG_r$ is equal to '1', the mobile station shall perform the following:
  - The mobile station shall set NUM_PILOTS_s to NUM_PILOTS_r.
  - The mobile station shall set $PERIODIC\_INTERVAL_s$ to $PERIODIC\_INTERVAL_r$.
- If $PERIODIC\_FLAG_r$ is equal to '0', the mobile station shall perform the following:
  - The mobile station shall set NUM_PILOTS_s to 0.
  - The mobile station shall set $PERIODIC\_INTERVAL_s$ to 0.
- The mobile station shall set $THRESHOLD\_FLAG_s$ to $THRESHOLD\_FLAG_r$.
- If $THRESHOLD\_FLAG_r$ is equal to '1', the mobile station shall perform the following:
  - The mobile station shall set $PS\_FLOOR\_LOW_s$ to $PS\_FLOOR\_LOW_r$.
  - The mobile station shall set $PS\_FLOOR\_HIGH_s$ to $PS\_FLOOR\_HIGH_r$.
  - The mobile station shall set $PS\_CEILING\_LOW_s$ to $PS\_CEILING\_LOW_r$.
  - The mobile station shall set $PS\_CEILING\_HIGH_s$ to $PS\_CEILING\_HIGH_r$.
- If $THRESHOLD\_FLAG_r$ is equal to '0', the mobile station shall perform the following:
  - The mobile station shall set $PS\_FLOOR\_LOW_s$ to '0'.
  - The mobile station shall set $PS\_FLOOR\_HIGH_s$ to '0'.
  - The mobile station shall set $PS\_CEILING\_LOW_s$ to '0'.
  - The mobile station shall set $PS\_CEILING\_HIGH_s$ to '0'.

13. *Extended Supplemental Channel Assignment 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 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 *Extended Supplemental Channel Assignment Message:*

    - The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000110' (capability not supported), if the number of forward or reverse Supplemental Channels specified in the *Extended Supplemental Channel Assignment Message* is greater than the maximum number of Supplemental Channels supported by the mobile station.

- The mobile station shall send a *Mobile Station Reject Order* with the ORDQ field set to '00000100' (message field not in valid range), if PILOT_PN specified in the *Extended Supplemental Channel Assignment Message* is not in the Active Set.
- 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 parameter 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.

If none of the above conditions is true, the mobile station shall perform the following:

- The mobile station shall store $REV\_DTX\_DURATION_r$, Reverse Supplemental Channel Discontinuous Transmission Duration, as $REV\_DTX\_DURATION_s$.
- The mobile station shall store the unit for $START\_TIME\_UNIT_s$ = $START\_TIME\_UNIT_r$.
- The mobile station shall store $USE\_T\_ADD\_ABORT_r$, Reverse Supplemental Channel assignment T_ADD abort indicator, as $USE\_T\_ADD\_ABORT_s$.
- If $IGNORE\_ESCAM_s$ is equal to '1' and $SCRM\_SEQ\_NUM_r$ is not present or is present and is not equal to $SCRM\_SEQ\_NUM_s$, then the mobile station shall not process the remaining Reverse Supplemental Channel assignment information in this message.
- If $IGNORE\_ESCAM_s$ is equal to '1' and $SCRM\_SEQ\_NUM_r$ is present and is equal to $SCRM\_SEQ\_NUM_s$, then the mobile station shall set $IGNORE\_ESCAM_s$ to '0'.
- If $ADD\_INFO\_INCL_r$ is equal to '1' and the message includes a Supplemental Channel assignment, the mobile station shall process the following information of the *Extended Supplemental Channel Assignment Message* at the start time of the first assignment specified in the message.
  - The mobile station shall set $FPC\_PRI\_CHAN_s$ = $FPC\_PRI\_CHAN_r$.

- If REV_CFG_INCLUDED is equal to '1', for all the (NUM_REV_CFG_RECS + 1) occurrences of the reverse configuration record, the mobile station shall store the REV_WALSH_ID matrix as follows:
  - $REV\_WALSH\_ID_s[REV\_SCH\_ID_r][REV\_SCH\_NUM\_BITS\_IDX_r] = REV\_WALSH\_ID_r$
- If $NUM\_REV\_SCH_r$ is not equal to '00', then the mobile station set PILOT_GATING_USE_RATE to '0' and shall store the following information for each occurrence of the record and process the Reverse Supplemental Burst as specified in 2.6.6.2.5.1.2:
  - $REV\_SCH\_START\_TIME\_INCL_s[REV\_SCH\_ID_r] = REV\_SCH\_START\_TIME\_INCL_r$
  - If $REV\_SCH\_START\_TIME\_INCL_s[REV\_SCH\_ID_r]$ is set to '1', set $REV\_SCH\_START\_TIME_s[REV\_SCH\_ID_r] = REV\_SCH\_START\_TIME_r$
  - $REV\_SCH\_DURATION_s[REV\_SCH\_ID_r] = REV\_SCH\_DURATION_r$
  - $REV\_SCH\_NUM\_BITS\_IDX_s[REV\_SCH\_ID_r] = REV\_SCH\_NUM\_BITS\_IDX_r$
- If $NUM\_FOR\_SCH_r$ is not equal to '00', then the mobile station shall set PILOT_GATING_USE_RATE to '0' and store the following information for each occurrence of the record and process the Forward Supplemental Burst as specified in 2.6.6.2.5.1.1:
  - $FOR\_SCH\_START\_TIME\_INCL_s[FOR\_SCH\_ID_r] = FOR\_SCH\_START\_TIME\_INCL_r$
  - If $FOR\_SCH\_START\_TIME\_INCL_s[FOR\_SCH\_ID_r]$ is set to '1', set $FOR\_SCH\_START\_TIME_s[FOR\_SCH\_ID_r] = FOR\_SCH\_START\_TIME_r$
  - $FOR\_SCH\_DURATION_s[FOR\_SCH\_ID_r] = FOR\_SCH\_DURATION_r$
  - $FOR\_SCH\_FER\_REP_s[FOR\_SCH\_ID_r] = FOR\_SCH\_FER\_REP_r$
  - $SCCL\_INDEX_s[FOR\_SCH\_ID_r] = SCCL\_INDEX_r$
- If FOR_CFG_INCLUDED is equal to '1', the mobile station shall store NUM_FOR_CFG_RECS occurrences of Forward Supplemental Channel Configuration associated with the identification of Forward Supplemental Channel.
- For each record of the Forward Supplemental Channel Code list the mobile station shall store the Forward Supplemental Channel Code list associated with the $FOR\_SCH\_ID_r$ as follows:
  - $NUM\_SUP\_SHO_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r] = NUM\_SUP\_SHO_r$.

– 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:

    o If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ is equal to ‘0000’, then the mobile station shall set the number of information bits per frame, $N\_FSCH\_BITS\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$ and number of CRC bits per frame, $FSCH\_CRC\_LEN\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$, according to Table 3.7.3.3.2.37-2 using $FOR\_SCH\_NUM\_BITS\_IDX_r$ as the index to the table.

    o 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:

    o 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, …, $FOR\_SCH\_NUM\_BITS\_IDX_r$ 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 $N\_FSCH\_BITS\_IDX\_SET_s[FOR\_SCH\_ID_r]$

- o If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $FSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ 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 ith 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 ith member of the set $N\_FSCH\_BITS\_IDX\_SET_s[FOR\_SCH\_ID_r]$ as the index to the table.

- o 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 $N\_FSCH\_BITS\_SET_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r]$, the set of number of information bits per frame as follows. The ith 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 ith 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 ith 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 ith member of the set $N\_FSCH\_BITS\_IDX\_SET_s[FOR\_SCH\_ID_r]$.

– For the ith record of the Forward Supplemental Channel Active Set (for all values of i between 1 and NUM_SUP_SHO+1) specified in this message, the mobile station shall store the following three entries corresponding to the $SCCL\_INDEX_r$ as follows:

+ $PILOT\_PN_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i] = PILOT\_PN_r$,

+ Set the ADD_PILOT_REC_INCL field to $ADD\_PILOT\_REC\_INCL_r$. If $ADD\_PILOT\_REC\_INCL_r$ equals ‘1’, the mobile station shall store the following:

  o Set the PILOT_REC_TYPE field of PILOT_REC to $PILOT\_REC\_TYPE_r$.

  o 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.

  o 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 $WALSH\_LENGTH_r$.

  o If $NGHBR\_PILOT\_REC\_TYPE_r$ 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 NGHBR_PILOT_REC to TD_MODE_r.

o 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 $SR3\_PILOT\_POWER2_r$.

o 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 $WALSH\_LENGTH_r$.

+ $QOF\_MASK\_ID\_SCH_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i] = QOF\_MASK\_ID\_SCH_r$,

+ $FOR\_SCH\_CC\_INDEX_s[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i] = CODE\_CHAN\_SCH_r$.

- The mobile station may soft-combine the Forward Supplemental Channel frames received on the Forward Supplemental Channels in the same Forward Supplemental Channel Active Set.
- If the mobile station supports any Radio Configuration greater than 2, the mobile station shall perform the following:
  - If FPC_INCL_r is equal to ‘1’, the mobile station shall:
    + Set $FPC\_MODE\_SCH_s$ to $FPC\_MODE\_SCH_r$.
  - If FPC_INCL is equal to ‘1’ and FPC_MODE is equal to '001', '010', ‘101’, or ‘110’, the mobile station shall:
    + Set $FPC\_SEC\_CHAN_s$ to $FPC\_SEC\_CHAN_r$.
  - If NUM_SUP_r is included and not equal to ‘00’, for each Supplemental Channel included in the message, the mobile station shall:
    + Set SCH_ID_s to SCH_ID_r.
    + Set $FPC\_SCH\_FER_s$ to $FPC\_SCH\_FER_r$.
    + Set $FPC\_SCH\_INIT\_SETPT_s$ as follows:
      - If $FPC\_SCH\_INIT\_SETPT\_OP_r$ is set to ‘0’, set $FPC\_SCH\_INIT\_SETPT_s$ to $FPC\_SCH\_INIT\_SETPT_r$.
      - If $FPC\_SCH\_INIT\_SETPT\_OP_r$ is set to ‘1’:
        - If $FPC\_PRI\_CHAN_r$ is equal to ‘0’, set $FPC\_SCH\_INIT\_SETPT_s$ to ($FPC\_FCH\_CURR\_SETPT_s$ + $FPC\_SCH\_INIT\_SETPT_r$).
        - Otherwise, set $FPC\_SCH\_INIT\_SETPT_s$ to ($FPC\_DCCH\_CURR\_SETPT_s$ + $FPC\_SCH\_INIT\_SETPT_r$).
    + Set $FPC\_SCH\_MIN\_SETPT_s$ to $FPC\_SCH\_MIN\_SETPT_r$.
    + Set $FPC\_SCH\_MAX\_SETPT_s$ to $FPC\_SCH\_MAX\_SETPT_r$.

– If FPC_THRESH_SCH_INCL is included and equal to '1', the mobile station shall set $FPC\_SETPT\_THRESH\_SCH_s$ to $SETPT\_THRESH\_SCH_r$.

- If RPC_INCL is equal to '1', the mobile station shall set $RLGAIN\_SCH\_PILOT_s$ to $RLGAIN\_SCH\_PILOT_r$.
- If $NUM\_3X\_CFG_r$ is not equal to '00', the mobile station shall store the Forward 3X Supplemental Channel Configuration associated with the identification of Forward Supplemental Channel ($NUM\_3X\_CFG_s$ = $NUM\_3X\_CFG_r$).
- For each 3X SCH record included in this message, the mobile station shall update the Forward Supplemental Channel Code list associated with the $FOR\_SCH\_ID_r$ as follows:

  – For the ith record of the Forward Supplemental Channel Active Set (for all values of i between 1 and NUM_SUP_SHO+1) specified in this message, the mobile station shall store the following three entries corresponding to the $SCCL\_INDEX_r$ as follows:

    + If $3X\_SCH\_LOW\_INCL_r$ equals '1', set $QOF\_MASK\_ID\_SCH\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $QOF\_MASK\_ID\_SCH\_LOW_r$ and $FOR\_SCH\_CC\_INDEX\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $CODE\_CHAN\_SCH\_LOW_r$. Otherwise, set $QOF\_MASK\_ID\_SCH\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $QOF\_MASK\_ID\_SCH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ and $FOR\_SCH\_CC\_INDEX\_LOW[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $CODE\_CHAN\_SCH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$.

    + If $3X\_SCH\_HIGH\_INCL_r$ equals '1', set $QOF\_MASK\_ID\_SCH\_HIGH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $QOF\_MASK\_ID\_SCH\_HIGH_r$ and $FOR\_SCH\_CC\_INDEX\_HIGH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $CODE\_CHAN\_SCH\_HIGH_r$. Otherwise, set $QOF\_MASK\_ID\_SCH\_HIGH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $QOF\_MASK\_ID\_SCH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ and $FOR\_SCH\_CC\_INDEX\_HIGH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$ to $CODE\_CHAN\_SCH[FOR\_SCH\_ID_r][SCCL\_INDEX_r][i]$.

14. *Forward 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 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

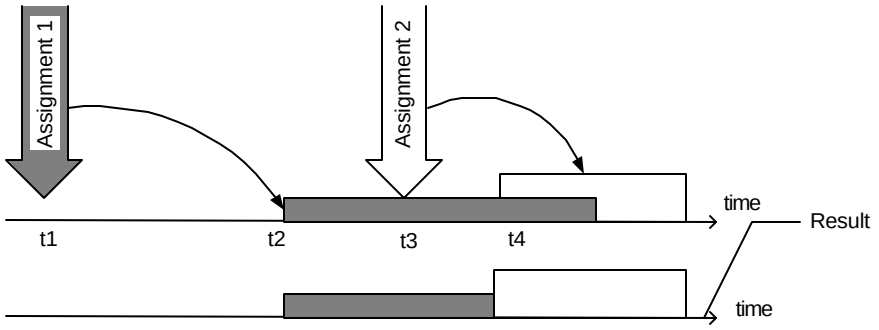
variable $SCCL\_INDEX_S$[FOR_SCH_ID] specifies the rate, QOF index and the Active Set for the Forward Supplemental Channel identified by FOR_SCH_ID for a given Forward Supplemental Assignment. A value of FOR_SCH_DURATION equal to '0000' indicates that the mobile station should stop processing the forward 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:

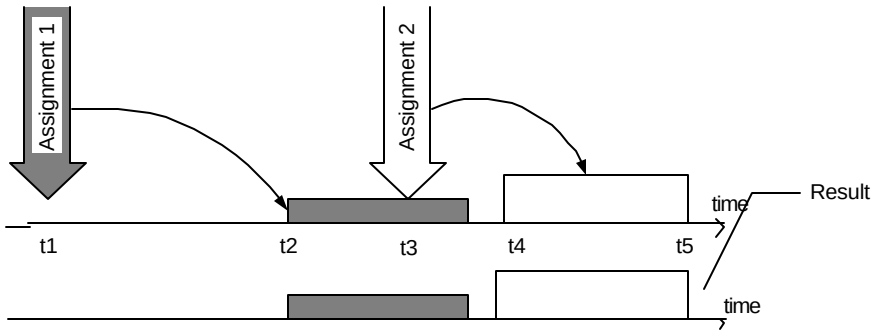
$$(\lfloor t/(START\_TIME\_UNIT_S+1)\rfloor - FOR\_SCH\_START\_TIME_r) \bmod 32 = 0,$$

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.

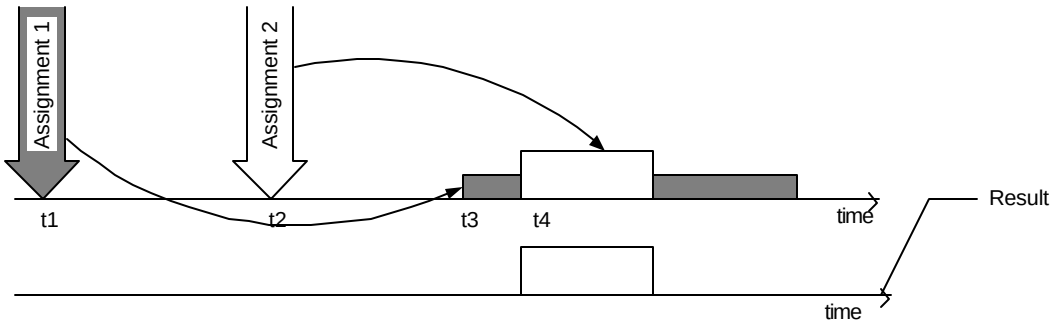


Figure 2.6.6.2.5.1.1-2. New Supplemental Channel Assignment Received before a Previous Supplemental Channel Assignment starts

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:
      - If $REV\_SCH\_NUM\_BITS\_IDX_r$ is equal to ‘0000’, then $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r]$ = **{**$REV\_SCH\_NUM\_BITS\_IDX_r$**},**

- o otherwise, the mobile station shall set (initialize) $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r]$ = **{** $REV\_SCH\_NUM\_BITS\_IDX_r$ **}**, and for i=1, …, $REV\_SCH\_NUM\_BITS\_IDX_r$ the mobile station shall add $REV\_SCH\_NUM\_BITS\_IDX_r$ - $VAR\_RSCH\_RATE\_OFFSET_s[REV\_SCH\_ID_r][REV\_SCH\_NUM\_BITS\_IDX_r][i]$ to the set specified by $N\_RSCH\_BITS\_IDX\_SET_s[FOR\_SCH\_ID_r]$

+ If $USE\_FLEX\_NUM\_BITS_s$ is equal to '0' or if $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $RSCH\_NBIT\_TABLE\_ID_s[REV\_SCH\_ID_r]$ is equal to ‘0000’, then the mobile station shall determine $N\_RSCH\_BITS\_SET_s[REV\_SCH\_ID_r]$, the set of number of information bits per frame as follows. The ith member of the set $N\_RSCH\_BITS\_SET_s[REV\_SCH\_ID_r]$ is obtained using Table 3.7.3.3.2.37-1 and the ith member of the set $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r]$ as the index to the table.

+ If $USE\_FLEX\_NUM\_BITS_s$ is equal to '1' and $RSCH\_NBIT\_TABLE\_ID_s[FOR\_SCH\_ID_r]$ is not equal to ‘0000’, then

  - o the mobile station shall set $N\_RSCH\_BITS\_SET_s[REV\_SCH\_ID_r]$, the set of number of information bits per frame as follows. The ith member of the set $N\_RSCH\_BITS\_SET_s[REV\_SCH\_ID_r]$ is equal to $NUM\_BITS_s[SCH\_NBIT\_TABLE\_ID_s[REV\_SCH\_ID_r]][N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r][i]]$, where $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r][i]$ denotes the ith member of the set $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r]$.

  - o the mobile station shall set $RSCH\_CRC\_LEN\_SET_s[REV\_SCH\_ID_r]$, the set of number of information bits per frame as follows. The ith member of the set $RSCH\_CRC\_LEN\_IDX\_SET_s[REV\_SCH\_ID_r]$ is equal to $CRC\_LEN\_IDX_s[RSCH\_NBIT\_TABLE\_ID_s[REV\_SCH\_ID_r]][N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r][i]]$, where $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r][i]$ denotes the ith member of the set $N\_RSCH\_BITS\_IDX\_SET_s[REV\_SCH\_ID_r]$.

- 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 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:

+ 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 $REV\_SCH\_DURATION_s[REV\_SCH\_ID_r]$ is equal to '0000', the mobile station shall perform the followings:
  - If $REV\_START\_TIME\_INCL_s$ is equal to '1', the mobile station shall stop transmitting on the Reverse Supplemental Channel identified by $REV\_SCH\_ID_r$ at the time specified by $REV\_SCH\_START\_TIME_s[REV\_SCH\_ID_r]$.
  - If $REV\_START\_TIME\_INCL_s$ is equal to '0', the mobile station shall stop transmitting on the Reverse Supplemental Channel identified by $REV\_SCH\_ID_r$ 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.

2.6.6.2.5.2 Processing of Reverse Traffic Channel Handoff Messages

The mobile station sends the following messages on the Reverse Traffic Channel in support of handoff when its transmitter is enabled, following the receipt of a *forward dedicated channel acquired* indication from Layer 2 (see 2.2.2.1.2 of [4]):

1. *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message:* The mobile station shall send an autonomous *Pilot Strength Measurement Message* if P_REV_IN_USE is less than seven or *Extended Pilot Strength Measurement Message* if P_REV_IN_USE is equal to or greater than seven in assured mode. The mobile station shall send either *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* containing measurements consistent with the event whenever any of the following events occur:
   - $P\_REV\_IN\_USE_s$ is less than or equal to three or $SOFT\_SLOPE_s$ is equal to '000000' and the strength of a Neighbor Set or Remaining Set pilot is found to be above T_ADD_s.
   - $P\_REV\_IN\_USE_s$ 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 Candidate Set pilot is found to satisfy the following inequality:

$$10 \times \log_{10} PS > \frac{SOFT\_SLOPE_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD\_INTERCEPT_s}{2}$$

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:

$$10 \times \log_{10} PS > \max\left(\frac{SOFT\_SLOPE_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD\_INTERCEPT_s}{2}, -\frac{T\_ADD_s}{2} \right)$$

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 $T\_COMP_S \times 0.5$ 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 $T\_COMP_S \times 0.5$ dB and satisfies the following inequality:

$$10 \times \log_{10} PS > \frac{SOFT\_SLOPE_S}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD\_INTERCEPT_S}{2}$$

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.

- 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:

- If the handoff message (*Extended Handoff Direction Message, General Handoff Direction Message* or *Universal Handoff Direction Message*) specifies a soft handoff, the mobile station shall send the *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 within T_{56m} seconds after the action time of the received handoff message.
- If the handoff message (*Extended Handoff Direction Message, General Handoff Direction Message* or *Universal Handoff Direction Message*) specifies a hard handoff without return on failure (see 2.6.6.2.8.1), the mobile station shall send the *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 within T_{73m} seconds after the action time of the received handoff message.
- If the handoff message (*General Handoff Direction Message* or *Universal Handoff Direction Message*) specifies a hard handoff with return on failure (see 2.6.6.2.8.2), the mobile station shall send the *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 within T_{56m} seconds after mobile station declares the handoff to be successful (see 2.6.6.2.8.2).

3. *Candidate Frequency Search Report Message:* The mobile station shall send a *Candidate Frequency Search Report Message* in assured mode, whenever any of the following events occur:

- RETURN_IF_HANDOFF_FAIL$_S$ is equal to '1', and a handoff attempt is unsuccessful (see 2.6.6.2.8.2). In this case, the mobile station shall send a *Candidate Frequency Search Report Message* within T_{56m} seconds after completing a search of all pilots in the Candidate Frequency Search Set and resuming the use of the Serving Frequency Active Set (see 2.6.6.2.8.2.1).
- RETURN_IF_HANDOFF_FAIL$_S$ is equal to '1', an inter-frequency handoff attempt is unsuccessful (see 2.6.6.2.8.2), and PERIODIC_SEARCH$_S$ is equal to '1'. In this case, the mobile station shall send a *Candidate Frequency Search Report Message* in a search period if the conditions specified in 2.6.6.2.8.3.2 are met.
- The mobile station receives a *Candidate Frequency Search Request Message* or a *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '01'. If none of the conditions requiring the mobile station to send a *Mobile Station Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall send a *Candidate Frequency Search Report Message,* as described in 2.6.6.2.8.3.1 and 2.6.6.2.10.1.

- The mobile station receives a *Candidate Frequency Search Request Message* or *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '11', $SEARCH\_MODE_S$ is equal to '0000' and the Candidate Frequency Search Set is not empty. If none of the conditions requiring the mobile station to send a *Mobile Station Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall send a *Candidate Frequency Search Report Message* in a search period if the conditions specified in 2.6.6.2.8.3.2 are met.
- The mobile station receives a *Candidate Frequency Search Request Message* or *Candidate Frequency Search Control Message* with SEARCH_TYPE set to '11', $SEARCH\_MODE_S$ is equal to '0001' and the Candidate Frequency Analog Search Set is not empty. If none of the conditions requiring the mobile station to send a *Mobile Station Reject Order* is true (see 2.6.6.2.5.1), the mobile station shall send a *Candidate Frequency Search Report Message* in a search period if the conditions specified in 2.6.6.2.10.2 are met.

4. *Periodic Pilot Strength Measurement Message:* The mobile station shall send a *Periodic Pilot Strength Measurement Message* in unassured mode, as specified in 2.6.6.2.5.1 and 2.6.6.2.12.

5. *Pilot Strength Measurement Mini Message*: If the mobile station supports the Mobile Assisted Burst operation capability, the mobile station shall send this message while processing any Supplemental Channel, according to the following:

   - The mobile station shall transmit a *Pilot Strength Measurement Mini Message* for a pilot *p* in the Active Set on the r-dsch logical channel whenever all of the following conditions are true:
     - $ORDER\_FLAG_S$ is equal to '1'.
     - The pilot *p* in the Active Set has a received signal strength that is greater than the signal strength of another pilot in the Active Set by $(PS\_MIN\_DELTA_S + 1) / 2$ dB at the current time and has been for $ORDER\_INTERVAL_S$ successive 20 ms frame intervals.
   - If $PERIODIC\_FLAG_S$ is equal to '1', the mobile station shall transmit *n* = (min (NUM_PILOTS, the number of pilots in the Active Set)) *Pilot Strength Measurements Mini Messages* on the r-dsch logical channel for each of the *n* pilots in the Active Set with the largest signal strengths whenever the following condition is true:
     - The mobile station has not transmitted another *Pilot Strength Measurement Mini Message* during the last $PERIODIC\_INTERVAL_S$ 20 ms frame intervals.
   - If $THRESHOLD\_FLAG_S$ is equal to '1', the mobile station shall transmit a *Pilot Strength Measurement Mini Message* for pilot *p* on the r-dsch logical channel whenever all of the following conditions are true:

– The mobile station has not transmitted a previous *Pilot Strength Measurement Mini Message* for pilot *p* within the most recent $THRESHOLD\_INTERVAL_s$ 20 ms frames intervals.

– Pilot *p* is in the Active Set for some SCH Physical Channel that is currently being processed by the mobile station.

– The signal strength of pilot *p* is greater than $PS\_CEILING\_HIGH_s$ and the signal strength of pilot *p* was less than or equal to $PS\_CEILING\_LOW_s$ at any time since the mobile station last sent a *Pilot Strength Measurement Mini Message* for pilot *p*; or the signal strength of pilot *p* is less than $PS\_FLOOR\_LOW_s$ and the signal strength for pilot *p* was greater than or equal to $PS\_FLOOR\_HIGH_s$ at any time since the last time that the mobile station sent a *Pilot Strength Measurement Mini Message* for pilot *p*.

2.6.6.2.6 Set Maintenance

2.6.6.2.6.1 Maintenance of the Active Set

The mobile station shall support a maximum Active Set size of N_{6m} pilots. The mobile station shall track the pilot strengths of all pilots in the Active Set.

When the mobile station is first assigned Forward Traffic Channels, the mobile station shall initialize the Active Set to contain the pilots associated with the assigned Forward Traffic Channels. When the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or *Universal Handoff Direction Message*, then at the action time of the message the mobile station shall replace the pilots in the Active Set with the pilots listed in the message.

2.6.6.2.6.2 Maintenance of the Candidate Set

The mobile station shall support a maximum Candidate Set size of N_{7m} pilots.

When the mobile station is first assigned a Forward Traffic Channel, the mobile station shall initialize the Candidate Set to contain no pilots. The mobile station shall adjust the Candidate Set whenever any of the following events occur:

- If the mobile station detects that the strength of a Neighbor Set pilot or a Remaining Set pilot exceeds T_ADD_s, the mobile station shall add the pilot to the Candidate Set.
- If the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or a *Universal Handoff Direction Message* which does not list a pilot in the current Active Set, and the handoff drop timer corresponding to that pilot has not expired at the action time of the message, the mobile station shall add the pilot to the Candidate Set at the action time of the message.

- 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: If the mobile station processes a *General Handoff Direction Message* or a *Universal Handoff Direction Message* which does not list a pilot in the current Active Set, the handoff drop timer corresponding to that pilot has expired at the action time of the message, and that pilot is found to be above T_DROP_S, the mobile station shall add the pilot to the Candidate Set at the action time of the message.
- If the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or *Universal Handoff Direction Message*, which lists a pilot in the current Candidate Set, the mobile station shall delete the pilot from the Candidate Set at the action time of the message.
- If the handoff drop timer corresponding to a Candidate Set pilot expires, the mobile station shall delete the pilot from the Candidate Set.
- If the mobile station adds a pilot to the Candidate Set, and the resulting Candidate Set size exceeds N_{7m}, the mobile station shall delete from the Candidate Set the pilot whose handoff drop timer is closest to expiration. If more than one such pilot exists, the mobile station shall delete one such pilot that has the lowest strength. If no pilot in the Candidate Set has an enabled handoff drop timer, the mobile station shall delete from the Candidate Set the pilot that has the lowest strength.

2.6.6.2.6.3 Maintenance of the Neighbor Set

The mobile station shall support a Neighbor Set size of at least N_{8m} pilots.

When the mobile station is first assigned a Forward Traffic Channel, the mobile station shall initialize the Neighbor Set to contain all the pilots specified in the most recently received *Neighbor List Message, Extended Neighbor List Message* or *General Neighbor List Message.*

The mobile station shall maintain a counter, AGE_S, for each pilot in the Neighbor Set. The mobile station shall initialize this counter to zero when it moves the pilot from the Active Set or the Candidate Set to the Neighbor Set. The mobile station shall initialize this counter to $NGHBR\_MAX\_AGE_S$ when it moves the pilot from the Remaining Set to the Neighbor Set. The mobile station shall increment AGE_S for each pilot in the Neighbor Set upon receipt of a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*. When the mobile station is first assigned to a Forward Traffic Channel, the mobile station shall set AGE_S for each pilot in the Neighbor Set to $NGHBR\_MAX\_AGE_S$.

The mobile station shall adjust the Neighbor Set whenever any of the following events occur:

- If the mobile station receives a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*, it shall perform the following:
  - Increment AGE_S for each pilot in the Neighbor Set.

- Delete from the Neighbor Set all pilots whose AGE_S exceeds $NGHBR\_MAX\_AGE_S$.
- Add to the Neighbor Set each pilot named in the message, if it is not already a pilot of the Active Set, Candidate Set, or Neighbor Set. If the mobile station can store in the Neighbor Set only k additional pilots, and more than k new pilots were sent in the *Neighbor List Update Message* or the *Extended Neighbor List Update Message*, the mobile station shall store the first k new pilots listed in the message.

- If the handoff drop timer of a pilot in the Candidate Set expires, the mobile station shall add the pilot to the Neighbor 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: If the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or *a Universal Handoff Direction Message* in which a pilot in the Active Set is not listed, and the handoff drop timer corresponding to the pilot has expired, the mobile station shall add the pilot to the Neighbor Set.
- 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: If the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or a *Universal Handoff Direction Message* which does not list a pilot in the current Active Set, the handoff drop timer corresponding to that pilot has expired, and that pilot is found to be below T_DROP_S, the mobile station shall add the pilot to the Neighbor Set.
- If the mobile station adds a pilot to the Candidate Set, and the resulting Candidate Set size exceeds the size supported by the mobile station, the mobile station shall add the deleted Candidate Set pilot to the Neighbor Set (see 2.6.6.2.6.2).
- If the mobile station detects that the strength of a Neighbor Set pilot exceeds T_ADD_S, the mobile station shall delete the pilot from the Neighbor Set.
- If the mobile station processes an *Extended Handoff Direction Message*, a *General Handoff Direction Message* or *a Universal Handoff Direction Message* which lists a pilot in the current Neighbor Set, the mobile station shall delete the pilot from the Neighbor Set.
- If the mobile station adds a pilot to the Neighbor Set, and the resulting Neighbor Set size exceeds the size supported by the mobile station, the mobile station shall delete from the Neighbor Set the pilot whose AGE_S is the largest. If more than one such pilot exists, the mobile station shall delete one such pilot that has the lowest 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 μs.

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 ($N_{11m} \times 20$) 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 ($N_{3m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_S$, the mobile station shall 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:

- If the Target Frequency is different from the Serving Frequency ($TF\_CDMABAND_S$ is not equal to $SF\_CDMABAND_S$, or TF_CDMACH_S is not equal to SF_CDMACH_S), the mobile station shall measure the mean input power on the Target Frequency (*target_freq_pwr*, in dBm/1.23 MHz) and may use *target_freq_pwr* along with the measurement of the average input power on the Serving Frequency (*avg_serving_freq_pwr*, in dBm/1.23 MHz) in the handoff procedure. The mobile station may declare the handoff attempt to be unsuccessful if all of the following conditions are true:
  - $DIFF\_RX\_PWR\_THRESH_S$ is not equal to '00000',
  - the mobile station has been measuring the received power on the Serving Frequency for at least the last N_{12m} frames, and
  - (*target_freq_pwr* - *avg_serving_freq_pwr*) is less than (-30 + 2 × $DIFF\_RX\_PWR\_THRESH_S$) dB.

  If the mobile station declares the handoff attempt to be unsuccessful, it shall restore the configuration to what it was before the handoff attempt (see 2.6.6.2.5.1) and send a *Candidate Frequency Search Report Message* as described in 2.6.6.2.8.2.1.
- The mobile station shall measure E_c/I_o for each pilot in the Active Set using the procedures specified in 2.6.6.2.2, if any of the following conditions is true:
  - the Target Frequency is the same as the Serving Frequency ($TF\_CDMABAND_S$ is equal to $SF\_CDMABAND_S$, and TF_CDMACH_S is equal to SF_CDMACH_S),
  - the mobile station does not use the power measurements in the handoff procedure,
  - $DIFF\_RX\_PWR\_THRESH_S$ is equal to '00000',
  - the mobile station has not been measuring the received power on the Serving Frequency for at least the last N_{12m} frames, or
  - (*target_freq_pwr* - *avg_servng_freq_pwr*) is not less than (-30 + 2 × $DIFF\_RX\_PWR\_THRESH_S$) dB.

  If the mobile station measures E_c/I_o for pilots in the Active Set, it shall compare the sum of the measured E_c/I_o for all pilots with the minimum total pilot E_c/I_o threshold ($MIN\_TOTAL\_PILOT\_EC\_IO_S$).
  - If $MIN\_TOTAL\_PILOT\_EC\_IO_S$ is not equal to '00000', and ($-20 \times \log_{10} (E_c/I_o)_{total}$) is less than $MIN\_TOTAL\_PILOT\_EC\_IO_S$, where $(E_c/I_o)_{total}$ is the sum of the measured E_c/I_o for the pilots in the Active Set, the mobile station shall declare the handoff attempt to be unsuccessful, and shall do the following:

+ If $COMPLETE\_SEARCH_S$ is equal to '1', and 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), the mobile station shall measure the strength of each pilot in its Candidate Frequency Search Set using the procedures specified in 2.6.6.2.2.

+ Otherwise, the mobile station shall end the search.

– The mobile station shall then restore its configuration to what it was before the handoff attempt (see 2.6.6.2.5.1) and send a *Candidate Frequency Search Report Message* as described in 2.6.6.2.8.2.1.

– If $MIN\_TOTAL\_PILOT\_EC\_IO_S$ is equal to '00000', or ($-20 \times \log_{10} (E_c/I_o)_{total}$) is not less than $MIN\_TOTAL\_PILOT\_EC\_IO_S$, where $(E_c/I_o)_{total}$ is the sum of the measured E_c/I_o for the pilots in the Active Set, the mobile station shall attempt to demodulate the Forward Traffic Channel(s). If the Active Set contains more than one pilot, the mobile station shall perform the actions specified in 2.6.6.2.7. 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), and is different for the Serving Frequency ($TF\_CDMABAND_S$ is not equal to $SF\_CDMABAND_S$, or TF_CDMACH_S is not equal to SF_CDMACH_S), the mobile station shall measure the strength of each pilot in its Candidate Frequency Search Set using the procedures specified in 2.6.6.2.2, while waiting for good frames on the Forward Traffic Channel(s). The mobile station shall wait for the first of the following events to occur:

+ The handoff timer expires and the mobile station has not received a period of ($N_{11m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_S$. In this case, the mobile station shall declare the handoff attempt to be unsuccessful, and do the following:

  o If $COMPLETE\_SEARCH_S$ is equal to '1', and 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), and the mobile station has not completed the search of all pilots in its Candidate Frequency Search Set, then it shall complete the search, i.e., it shall obtain at least one measurement of the strength of each pilot in its Candidate Frequency Search Set, using the search procedures specified in 2.6.6.2.8.3.

  o Otherwise, the mobile station shall end the search.

  The mobile station shall then restore its configuration to what it was before the handoff attempt (see 2.6.6.2.5.1) and send a *Candidate Frequency Search Report Message* as described in 2.6.6.2.8.2.1.

+ The mobile station receives a period of (N_{11m} × 20) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_S$. In this case, the mobile station shall declare the handoff attempt to be successful, and do the following:

  - The mobile station shall disable the handoff timer.
  - If $TF\_RESET\_L2_S$ is equal to '1', Layer 3 shall send a L2-Supervision.Request primitive to Layer 2 to reset the acknowledgment procedures as specified in 2.2.1.1 and 2.2.2.1 of [4].
  - If $TF\_RESET\_FPC_S$ is equal to '1', the mobile station shall initialize the Forward Traffic Channel power control counters as specified in 2.6.4.1.1.1.
  - 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) and is different from the Serving Frequency ($TF\_CDMABAND_S$ is not equal to $SF\_CDMABAND_S$, or TF_CDMACH_S is not equal to SF_CDMACH_S), the mobile station shall do the following:
    - The mobile station shall replace its Neighbor Set with its Candidate Frequency Neighbor Set, excluding the pilots in its Active Set. When the mobile station adds a pilot from its Candidate Frequency Neighbor Set to its Active Set, it shall maintain $SEARCH\_PRIORITY_S$, $SRCH\_WIN\_NGHBR_S$, and $SRCH\_OFFSET\_NGHBR_S$ associated with the pilot.
    - The mobile station shall set $PILOT\_INC_S$ to $CF\_PILOT\_INC_S$, $SRCH\_WIN\_N_S$ to $CF\_SRCH\_WIN\_N_S$, and $SRCH\_WIN\_R_S$ to $CF\_SRCH\_WIN\_R_S$.
    - The mobile station shall set $SEARCH\_PRIORITY\_INCL_S$ to $CF\_SEARCH\_PRIORITY\_INCL_S$, $SRCH\_OFFSET\_INCL_S$ to $CF\_SRCH\_OFFSET\_INCL_S$, and $SRCH\_WIN\_NGHBR\_INCL_S$ to $CF\_SRCH\_WIN\_NGHBR\_INCL_S$.
  - The mobile station shall re-enable its transmitter. Then, 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* 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.
  - 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 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'.
- 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.
- 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.
- 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.

- Search window size for the Active Set and Candidate Set ($SRCH\_WIN\_A_S = SF\_SRCH\_WIN\_A_S$)
- Search window size for the Neighbor Set ($SRCH\_WIN\_N_S = SF\_SRCH\_WIN\_N_S$)
- Search window size for the Remaining Set ($SRCH\_WIN\_R_S = SF\_SRCH\_WIN\_R_S$)
- Pilot detection threshold ($T\_ADD_S = SF\_T\_ADD_S$)
- Pilot drop threshold ($T\_DROP_S = SF\_T\_DROP_S$)
- Soft slope for the dynamic add and drop threshold ($SOFT\_SLOPE_S = SF\_SOFT\_SLOPE_S$)
- Intercept for the dynamic add threshold ($ADD\_INTERCEPT_S = SF\_ADD\_INTERCEPT_S$)
- Intercept for the dynamic drop threshold ($DROP\_INTERCEPT_S = SF\_DROP\_INTERCEPT_S$)
- Active Set versus Candidate Set comparison threshold ($T\_COMP_S = SF\_T\_COMP_S$)
- Drop timer value ($T\_TDROP_S = SF\_T\_TDROP_S$)
- Frame offset ($FRAME\_OFFSET_S = SF\_FRAME\_OFFSET_S$)
- Nominal power setting ($NOM\_PWR_S = SF\_NOM\_PWR_S$)
- Extended nominal power setting ($NOM\_PWR\_EXT_S = SF\_NOM\_PWR\_EXT_S$)
- Power control step ($PWR\_CNTL\_STEP_S = SF\_PWR\_CNTL\_STEP_S$)
- CDMA band class ($CDMABAND_S = SF\_CDMABAND_S$)
- Frequency assignment ($CDMACH_S = SF\_CDMACH_S$)
- Active Set (For each pilot in the Serving Frequency Active Set: (PILOT_REC, PWR_COMB_IND))
- Code channel list ($CODE\_CHAN\_LIST_S = SF\_CODE\_CHAN\_LIST_S$)

• The mobile station shall tune to the Serving Frequency and resume using the Serving Frequency Active Set as follows:

  - If the mobile station was processing the Forward Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Fundamental Channel. If the mobile station was transmitting on the Reverse Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Fundamental Channel.

- If the mobile station was processing the Forward Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Dedicated Control Channel. If the mobile station was transmitting on the Reverse Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Dedicated Control Channel.
- The mobile station shall not resume transmitting on the Reverse Supplemental Code Channels and Reverse Supplemental Channels (if any). The mobile station shall not process on the Forward Supplemental Code Channels and Forward Supplemental Channels (if any).
- When the mobile station resumes transmission on the Reverse Traffic Channel, it shall use the following rules to re-enable its transmitter:
  - If the interval between the time that the mobile station disables its transmitter and the time that it resumes using the Serving Frequency Active Set is equal to or greater than ($N_{2m} \times 20$) ms, then the mobile station shall wait to receive a period of ($N_{3m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_S$ 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 of [2] 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:
    - within 6 dB of the actual mean input power, or
    - 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 2.6.4.1.1.
- The mobile station shall send a *Candidate Frequency Search Report Message* within T_{56m} seconds. 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 Target Frequency and on the Serving Frequency in the CF_TOTAL_RX_PWR and SF_TOTAL_RX_PWR fields, respectively.
- For each pilot in the Target Frequency Active Set that measures above $TF\_T\_ADD_S$, the mobile station shall report its phase and strength in the fields PILOT_PN_PHASE and PILOT_STRENGTH, respectively.
- 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), and is different form the Serving Frequency ($TF\_CDMABAND_S$ is not equal to $SF\_CDMABAND_S$ or TF_CDMACH_S is not equal to SF_CDMACH_S), the mobile station shall also report the strength of each pilot in the Candidate Frequency Search Set that measures above $CF\_T\_ADD_S$.

- 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.
- If $PERIODIC\_SEARCH_S$ is equal to '1' and the Candidate Frequency Search Set is not empty, 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 carry out the periodic search procedures described in 2.6.6.2.8.3.2.

2.6.6.2.8.3 Search of Pilots on the CDMA Candidate Frequency

If $SEARCH\_MODE_S$ is equal to '0000', the mobile station shall do the following: If $PERIODIC\_SEARCH_S$ is equal to '0', the mobile station shall search the Candidate Frequency Search Set once, as described in 2.6.6.2.8.3.1; otherwise, the mobile station shall search the Candidate Frequency Search Set periodically, as described in 2.6.6.2.8.3.2.

2.6.6.2.8.3.1 CDMA Candidate Frequency Single Search

The mobile station does a single search of the Candidate Frequency 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 pilots in the Candidate Frequency Search Set 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 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 to the Candidate 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:
  - If the value of the TOTAL_OFF_TIME_FWD field or of the 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 $\lceil (T_{70m} - T_{71m}) / SEARCH\_TIME\_RESOLUTION_S \rceil$, then

    $$freshness\_interval = (\max(fwd\_time, rev\_time) + T_{71m}) \text{ seconds,}$$

    where

    $$fwd\_time = SEARCH\_TIME\_RESOLUTION_S \times (\text{value of the TOTAL\_OFF\_TIME\_FWD field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}),$$

    and

    $$rev\_time = SEARCH\_TIME\_RESOLUTION_S \times (\text{value of the TOTAL\_OFF\_TIME\_REV field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}).$$
  - Otherwise,

    $$freshness\_interval = T_{70m} \text{ seconds.}$$

  The mobile station shall set the fields 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 may stop maintaining the average of the Serving Frequency received power that is used in the handoff and search procedures.

2.6.6.2.8.3.2 Candidate Frequency Periodic Search

When the mobile station performs a periodic search, it periodically searches the Candidate Frequency Search Set and reports the results to the base station in the *Candidate Frequency Search Report Message*, as described in this section. The mobile station may measure all pilots in the Candidate Frequency Search Set in one visit to the Candidate Frequency, or it may visit the Candidate Frequency several times in a search period, each time measuring all or some of the pilots in the Candidate Frequency Search Set, as described in 2.6.6.2.8.3.3.

If $SF\_TOTAL\_EC\_THRESH_S$ is not equal to '11111', while tuned to the Serving Frequency, the mobile station shall measure the total received power spectral density, in mW/1.23 MHz, on the Serving Frequency at least once every frame (0.02 second) and shall maintain the average of the spectral density (*spec_density*) over the last N_{12m} frames.

(In the following, $(E_c/I_o)_{total}$ is the total E_c/I_o of the pilots in the Active Set, measured as specified in 2.6.6.2.2, and *total_ec* is defined as $(10 \times \log_{10}((E_c/I_o)_{total} \times spec\_density))$.)

The mobile station shall maintain a periodic search timer as follows:

- When the mobile station starts a periodic search, it shall set the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$ and shall enable the timer. If $ALIGN\_TIMING\_USED_S$ is set to '1', then the mobile station shall begin the first search ($0.00125 \times SEARCH\_OFFSET_S$) seconds after the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that started the search; otherwise, the mobile station shall begin the first search at the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that started the search.

- When the periodic search timer expires, the mobile station shall reset the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$ and shall re-enable the timer.

- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is not equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is equal to '11111', the mobile station shall perform the following actions once per frame:

  - Disable the periodic search timer if *total_ec* is not less than $(-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S)$.

- Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:
  - the periodic search timer is disabled, and
  - *total_ec* is less than $(-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S)$.

- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:
  - Disable the periodic search timer if $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.
  - Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:
    - the periodic search timer is disabled, and
    - $(-20 \times \log_{10} (E_c/I_o)_{total})$ is greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.

- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is not equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:
  - Disable the periodic search timer if the following conditions are true:
    - *total_ec* is not less than $(-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S)$, and
    - $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.
  - Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:
    - the periodic search timer is disabled, and
    - *total_ec* is less than $(-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S)$, or $(-20 \times \log_{10} (E_c/I_o)_{total})$ is greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.

- The mobile station shall maintain the periodic search timer independent of the total E_c and the total E_c/I_o of the pilots in the Serving Frequency Active Set, if any of the following conditions is true:
  - $ALIGN\_TIMING\_USED_S$ is set to '1, or
  - $SF\_TOTAL\_EC\_THRESH_S$ is equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is 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 ($SEARCH\_TIME\_RESOLUTION_S \times$ *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 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 ($-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S$), or
    + $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111' and ($-20 \times \log_{10} (E_c/I_o)_{total}$) 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 MIN_TOTAL_PILOT_EC_IO$_S$ is equal to '00000' or if $(-20 \times \log_{10} (E_c/I_o)_{total})$ is not less than MIN_TOTAL_PILOT_EC_IO$_S$, where $(E_c/I_o)_{total}$ 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 TOTAL_OFF_TIME_FWD field or of the 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

  $$\textit{freshness\_interval} = (\max(\textit{fwd\_time}, \textit{rev\_time}) + T_{71m}) \text{ seconds,}$$

  where

  $$\textit{fwd\_time} = \text{SEARCH\_TIME\_RESOLUTION}_S \times (\text{value of the TOTAL\_OFF\_TIME\_FWD field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}),$$

  and

  $$\textit{rev\_time} = \text{SEARCH\_TIME\_RESOLUTION}_S \times (\text{value of the TOTAL\_OFF\_TIME\_REV field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}).$$

  – Otherwise,

  $$\textit{freshness\_interval} = T_{70m} \text{ seconds.}$$

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 $(-30 + 2 \times DIFF\_RX\_PWR\_THRESH_S)$ dB, the mobile station may terminate the search for pilots in the current visit to the Candidate Frequency.

- If $DIFF\_RX\_PWR\_THRESH_S$ is equal to '00000', the mobile station does not use the power measurements in the search procedure, or *(cand_freq_pwr - avg_serving_freq_pwr)* is not less than (-30 + 2 × $DIFF\_RX\_PWR\_THRESH_S$) dB, the mobile station shall measure E_C/I_O for all or some of the pilots in its Candidate Frequency Search Set, using the search procedures specified in 2.6.6.2.2.

- The mobile station shall restore the following parameters:
  - Pilot detection threshold ($T\_ADD_S = SF\_T\_ADD_S$)
  - CDMA band class ($CDMABAND_S = SF\_CDMABAND_S$)
  - Frequency assignment ($CDMACH_S = SF\_CDMACH_S$)
- The mobile station shall tune to the Serving Frequency and shall resume using the Serving Frequency Active Set as follows:
  - If the mobile station was processing the Forward Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Fundamental Channel. If the mobile station was transmitting on the Reverse Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Fundamental Channel.
  - If the mobile station was processing the Forward Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Dedicated Control Channel. If the mobile station was transmitting on the Reverse Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Dedicated Control Channel.
  - If the Forward Supplemental Code Channels and Forward Supplemental Channels assignment has not expired, the mobile station shall resume processing the Forward Supplemental Code Channels and Forward Supplemental Channels (if any). If the Reverse Supplemental Code Channel and Reverse Supplemental Channels assignment has not expired, the mobile station may resume transmitting on the Reverse Supplemental Code Channels and Reverse Supplemental Channels (if any).
  - When the mobile station resumes transmission on the Reverse Traffic Channel, it shall use the following rules to re-enable its transmitter:
    - If the interval between the time that the mobile station disables its transmitter and the time that it resumes using the Serving Frequency Active Set is equal to or greater than (N_{2m} × 20) ms, then the mobile station shall wait to receive a period of (N_{3m} × 20) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_S$ 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 ($SID_s = SID_r$)
- Voice mobile station attenuation code ($VMAC_s = VMAC_r$)
- Analog voice channel number ($ANALOG\_CHAN_s = ANALOG\_CHAN_r$)
- SAT color code ($SCC_s = SCC_r$)
- Message encryption mode indicator ($MEM_s = MEM_r$)
- Analog voice channel type ($AN\_CHAN\_TYPE_s = AN\_CHAN\_TYPE_r$)

- 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:

– If the value of the TOTAL_OFF_TIME_FWD field or of the 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

$$\textit{freshness\_interval} = (\max(\textit{fwd\_time}, \textit{rev\_time}) + T_{71m}) \text{ seconds,}$$

where

$\textit{fwd\_time}$ = SEARCH_TIME_RESOLUTION$_S$ × (value of the TOTAL_OFF_TIME_FWD field of the last *Candidate Frequency Search Response Message* sent by the mobile station),

and

$\textit{rev\_time}$ = SEARCH_TIME_RESOLUTION$_S$ × (value of the TOTAL_OFF_TIME_REV field of the last *Candidate Frequency Search Response Message* sent by the mobile station).

– Otherwise,

$\textit{freshness\_interval} = T_{70m}$ seconds.

- The mobile station may stop maintaining the average of the Serving Frequency received power that is used in the handoff and search procedures.

2.6.6.2.10.2 Analog Frequencies Periodic Search

When the mobile station performs a periodic search, it periodically searches the Candidate Frequency Analog Search Set, and reports the results to the base station in the *Candidate Frequency Search Report Message*, as described in this section. The mobile station may measure all analog frequencies in the Candidate Frequency Analog Search Set in one visit away from the Serving Frequency, or it may make multiple visits in a search period, each time measuring all or some of the analog frequencies in the Candidate Frequency Analog Search Set, as described in 2.6.6.2.10.3.

If SF_TOTAL_EC_THRESH$_S$ is not equal to '11111', while tuned to the Serving Frequency, the mobile station shall measure the total received power spectral density, in mW/1.23 MHz, on the Serving Frequency at least once every frame (0.02 second) and shall maintain the average of the spectral density (*spec_density*) over the last N_{12m} frames.

(In the following, $(E_c/I_o)_{total}$ is the total E_c/I_o of the pilots in the Active Set, measured as specified in 2.6.6.2.2, and *total_ec* is defined as $(10 \times \log_{10}((E_c/I_o)_{total} \times \textit{spec\_density}))$.)

The mobile station shall maintain a periodic search timer as follows:

- When the mobile station starts a periodic search, it shall set the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$ and shall enable the timer. If $ALIGN\_TIMING\_USED_S$ is set to '1', then the mobile station shall begin the first search ($0.00125 \times SEARCH\_OFFSET_S$) seconds after the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that started the search; otherwise, the mobile station shall begin the first search at the action time of the *Candidate Frequency Search Request Message* or the *Candidate Frequency Search Control Message* that started the search.
- When the periodic search timer expires, the mobile station shall reset the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$ and shall re-enable the timer.
- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is not equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is equal to '11111', the mobile station shall perform the following actions once per frame:
  - Disable the periodic search timer if *total_ec* is not less than ($-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S$).
  - Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:
    - the periodic search timer is disabled, and
    - *total_ec* is less than ($-120 + 2 \times SF\_TOTAL\_EC\_THRESH_S$).
- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:
  - Disable the periodic search timer if ($-20 \times \log_{10} (E_c/I_o)_{total}$) is not greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.
  - Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:
    - the periodic search timer is disabled, and
    - ($-20 \times \log_{10} (E_c/I_o)_{total}$) is greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.
- If $ALIGN\_TIMING\_USED_S$ is set to '0', $SF\_TOTAL\_EC\_THRESH_S$ is not equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:
  - Disable the periodic search timer if the following conditions are true:

+ *total_ec* is not less than (-120 + 2 × $SF\_TOTAL\_EC\_THRESH_S$), and

+ (-20 × $\log_{10}$ $(E_c/I_o)_{total}$) is not greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.

– Reset the expiration time of the periodic search timer to the value in Table 2.6.6.2.8.3.2-1 corresponding to $SEARCH\_PERIOD_S$, and re-enable the timer if the following conditions are true:

+ the periodic search timer is disabled, and

+ *total_ec* is less than (-120 + 2 × $SF\_TOTAL\_EC\_THRESH_S$), or (-20 × $\log_{10}$ $(E_c/I_o)_{total}$) is greater than $SF\_TOTAL\_EC\_IO\_THRESH_S$.

• The mobile station shall maintain the periodic search timer independent of the total E_c and the total E_c/I_o of the pilots in the Serving Frequency Active Set, if any of the following conditions is true:

– $ALIGN\_TIMING\_USED_S$ is set to '1, or

– $SF\_TOTAL\_EC\_THRESH_S$ is equal to '11111' and $SF\_TOTAL\_EC\_IO\_THRESH_S$ is equal to '11111'.

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 analog frequencies in the Candidate Frequency Analog Search Set at least once 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 away from the Serving Frequency as follows:

– The mobile station shall make the first visit away from the Serving Frequency when the search period begins, i.e., when the periodic search timer is reset.

– If the mobile station makes multiple visits away from the Serving Frequency during a search period, it shall schedule the second and each subsequent visit within the same search period to occur ($SEARCH\_TIME\_RESOLUTION_S$ × *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 away from the Serving 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 × $SF\_TOTAL\_EC\_THRESH_S$), or

+ $SF\_TOTAL\_EC\_IO\_THRESH_S$ is not equal to '11111' and (-20 × $\log_{10}$ $(E_c/I_o)_{total}$) 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 set the fields of the *Candidate Frequency Search Report Message* as follows: The mobile station shall report the received power on the Serving Frequency in the TOTAL_RX_PWR_SF field. For each frequency in the Candidate Frequency Analog Search Set, the mobile station shall report its frequency and strength in the fields ANALOG_FREQ and SIGNAL_STRENGTH, respectively.

- The mobile station shall ensure that the strength measurements for all analog frequencies in the Candidate Frequency Analog 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 TOTAL_OFF_TIME_FWD field or of the 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

  $$\textit{freshness\_interval} = (\max(\textit{fwd\_time}, \textit{rev\_time}) + T_{71m}) \text{ seconds,}$$

  where

  $$\textit{fwd\_time} = \text{SEARCH\_TIME\_RESOLUTION}_S \times (\text{value of the TOTAL\_OFF\_TIME\_FWD field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}),$$

  and

  $$\textit{rev\_time} = \text{SEARCH\_TIME\_RESOLUTION}_S \times (\text{value of the TOTAL\_OFF\_TIME\_REV field of the last } \textit{Candidate Frequency Search Response Message} \text{ sent by the mobile station}).$$

  – Otherwise,

  $$\textit{freshness\_interval} = T_{70m} \text{ seconds.}$$

2.6.6.2.10.3 Analog Frequency Measurements

The mobile station measures the strength of all analog frequencies in the Candidate Frequency Analog Search Set in one or more visits away from the Serving Frequency. The mobile station shall perform the following actions during each visit away from the Serving Frequency to measure analog frequency signal strengths:

- If the mobile station is processing the Forward Fundamental Channel, the mobile station shall stop processing the Forward Fundamental Channel. If the mobile station is transmitting on the Reverse Fundamental Channel, the mobile station shall stop transmitting on Reverse Fundamental Channel.

- If the mobile station is processing the Forward Dedicated Control Channel, the mobile station shall stop processing Forward Dedicated Control Channel. If the mobile station is transmitting on the Reverse Dedicated Control Channel, the mobile station shall stop transmitting on Reverse Dedicated Control Channel.
- The mobile station shall stop processing 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]).
- The mobile station shall tune to one of the analog frequencies in the Candidate Frequency Analog Search Set, and shall measure the mean input power on the analog frequency.
- The mobile station may tune to other frequencies in the Candidate Frequency Analog Search Set and make power measurements during this visit away from the Serving 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 tune to the Serving Frequency and resume using the Serving Frequency Active Set as follows:
  - If the mobile station was processing the Forward Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Fundamental Channel. If the mobile station was transmitting on the Reverse Fundamental Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Fundamental Channel.
  - If the mobile station was processing the Forward Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume processing the Forward Dedicated Control Channel. If the mobile station was transmitting on the Reverse Dedicated Control Channel prior to tuning to the Candidate Frequency, the mobile station shall resume transmitting on the Reverse Dedicated Control Channel.
  - If the Forward Supplemental Code Channels or Forward Supplemental Channels assignment has not expired, the mobile station shall resume processing the Forward Supplemental Code Channels or Forward Supplemental Channels respectively (if any).

- If the Reverse Supplemental Code Channel or Reverse Supplemental Channels assignment has not expired, the mobile station may resume transmitting on the Reverse Supplemental Code Channels or Reverse Supplemental Channels respectively (if any).
- When the mobile station resumes transmission on the Reverse Traffic Channel, it shall use the following rules to re-enable its transmitter:
  - If the interval between the time that the mobile station disables its transmitter and the time that it resumes using the Serving Frequency Active Set is equal to or greater than ($N_{2m} \times 20$) ms, then the mobile station shall wait to receive a period of ($N_{3m} \times 20$) ms with sufficient signal quality (e.g. good frames) on the physical channel corresponding to $FPC\_PRI\_CHAN_s$ 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 of [2] 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 2.6.4.1.1.

2.6.6.2.10.4 Aborting Analog Frequencies Periodic Search

When the mobile station aborts a periodic search, it shall do the following:

- The mobile station shall cancel any remaining visits away from the Serving 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.

2.6.6.2.11 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) mod 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:

- Disable the PPSMM timer if the received total energy per PN chip, E_C, of the pilots in the Active Set is not less than (-120 + 2 ? MIN_PILOT_PWR_THRESH$_S$), where the value of E_C is computed as $10 \times \log_{10}$ (PS $\times$ *spec_density)* and PS is the total E_C/I_O of the pilots in the Active Set measured as specified in 2.6.6.2.2.
- Reset the expiration time of the PPSMM timer to PPSMM_PERIOD$_S$ $\times$ 0.08 seconds and re-enable the timer if the following conditions are true:
  - the PPSMM timer is disabled, and
  - the received total energy per PN chip, E_C, of the pilots in the Active Set is less than (-120 + 2 $\times$ MIN_PILOT_PWR_THRESH$_S$).

• If MIN_PILOT_PWR_THRESH$_S$ is equal to '11111' and MIN_PILOT_EC_IO_THRESH$_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:

- Disable the PPSMM timer if the total pilot strength of the pilots in the Active Set, PS, satisfies the condition that (-20 $\times \log_{10}$(PS)) is not greater than MIN_PILOT_EC_IO_THRESH$_S$.
- Reset the expiration time of the PPSMM timer to PPSMM_PERIOD$_S$ $\times$ 0.08 seconds and re-enable the timer if the following conditions are true:
  - the PPSMM timer is disabled, and
  - the total pilot strength of the pilots in the Active Set, PS, satisfies the condition that (-20 $\times \log_{10}$(PS)) is greater than MIN_PILOT_EC_IO_THRESH$_S$.

• If MIN_PILOT_PWR_THRESH$_S$ is not equal to '11111' and MIN_PILOT_EC_IO_THRESH$_S$ is not equal to '11111', the mobile station shall perform the following actions once per frame:

- Disable the PPSMM timer if the following conditions are true:
  - the received total energy per PN chip, E_C, of the pilots in the Active Set is not less than (-120 + 2 $\times$ MIN_PILOT_PWR_THRESH$_S$), and
  - the total pilot strength of the pilots in the Active Set, PS, satisfies the condition that (-20 $\times \log_{10}$(PS)) is not greater than MIN_PILOT_EC_IO_THRESH$_S$.
- Reset the expiration time of the PPSMM timer to PPSMM_PERIOD$_S$ $\times$ 0.08 seconds and re-enable the timer if the following conditions are true:
  - 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 × $MIN\_PILOT\_PWR\_THRESH_S$), or the total pilot strength of the pilots in the Active Set, PS, satisfies the condition that (-20 × $\log_{10}(PS)$) is greater than $MIN\_PILOT\_EC\_IO\_THRESH_S$.

- If $MIN\_PILOT\_PWR\_THRESH_S$ is equal to '11111' and $MIN\_PILOT\_EC\_IO\_THRESH_S$ is equal to '11111', the mobile station shall maintain the PPSMM timer independent of the received power and the total E_C/I_O of the pilots.

2.6.6.3 Examples

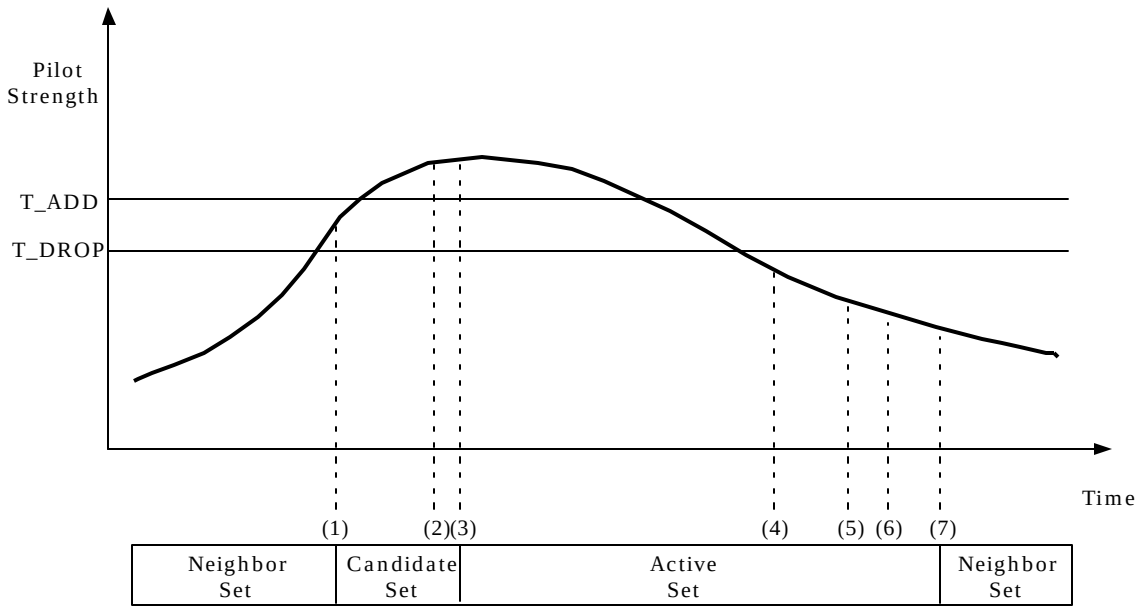
The following examples illustrate typical message exchanges between the mobile station and the base station during handoff. Refer to Annex B for examples of call processing during handoff.

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 × 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 × 0.5 dB and Pilot P_0 strength exceeds $[(SOFT\_SLOPE/8) \times 10 \times \log_{10}(PS_1 + PS_2) + ADD\_INTERCEPT/2]$.



(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.*

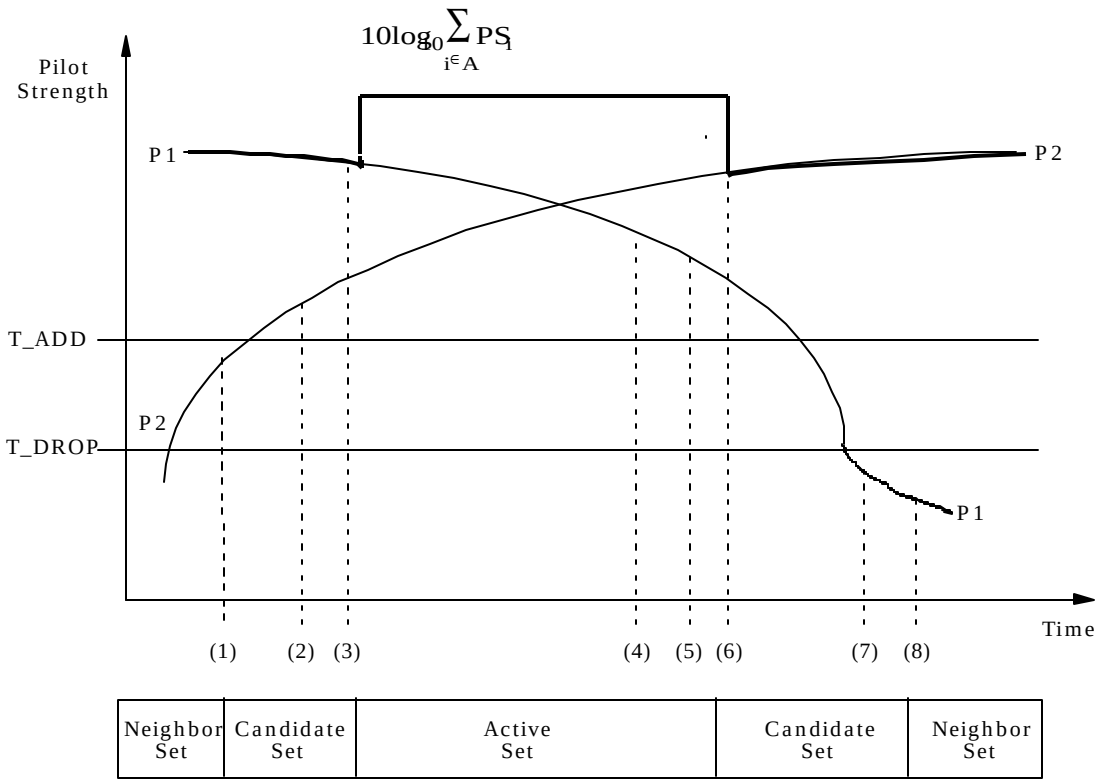
(4) Pilot strength drops below T_DROP. Mobile station starts the handoff drop timer.

(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 P_2 strength exceeds T_ADD. Mobile station transfers the pilot to the Candidate Set.

(2) Pilot P_2 strength exceeds $[(\text{SOFT\_SLOPE}/8) \times 10 \times \log_{10}(PS_1) + \text{ADD\_INTERCEPT}/2]$. 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 P_2 to the Active Set, and sends a *Handoff Completion Message.*

(4) Pilot P_1 strength drops below $[(\text{SOFT\_SLOPE}/8) \times 10 \times \log_{10}(PS_2) + \text{DROP\_INTERCEPT}/2]$. Mobile station starts the handoff drop timer.

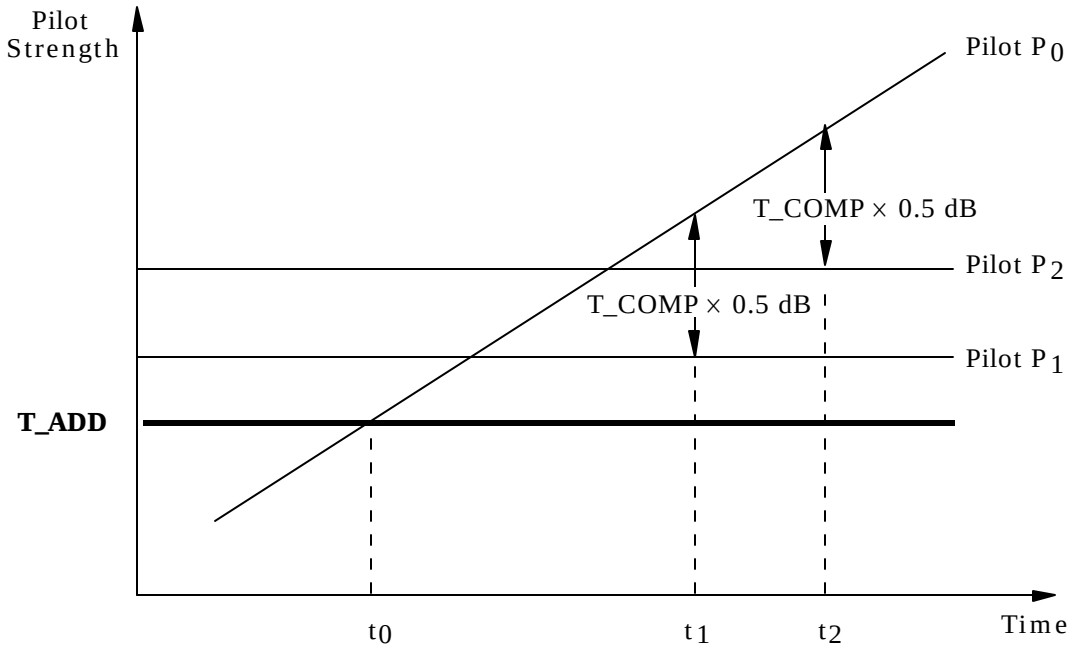
(5) Handoff drop timer expires. Mobile station sends a *Pilot Strength Measurement Message.*

(6) Mobile station receives an *Extended Handoff Direction Message,* a *General Handoff Direction Message or a Universal Handoff Direction Message,* transfers the pilot P_1 to the Candidate Set and sends a *Handoff Completion Message.*

(7) Pilot P_1 strength drops below T_DROP. Mobile station starts the handoff drop timer.

(8) Handoff drop timer expires. Mobile station moves the pilot P_1 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

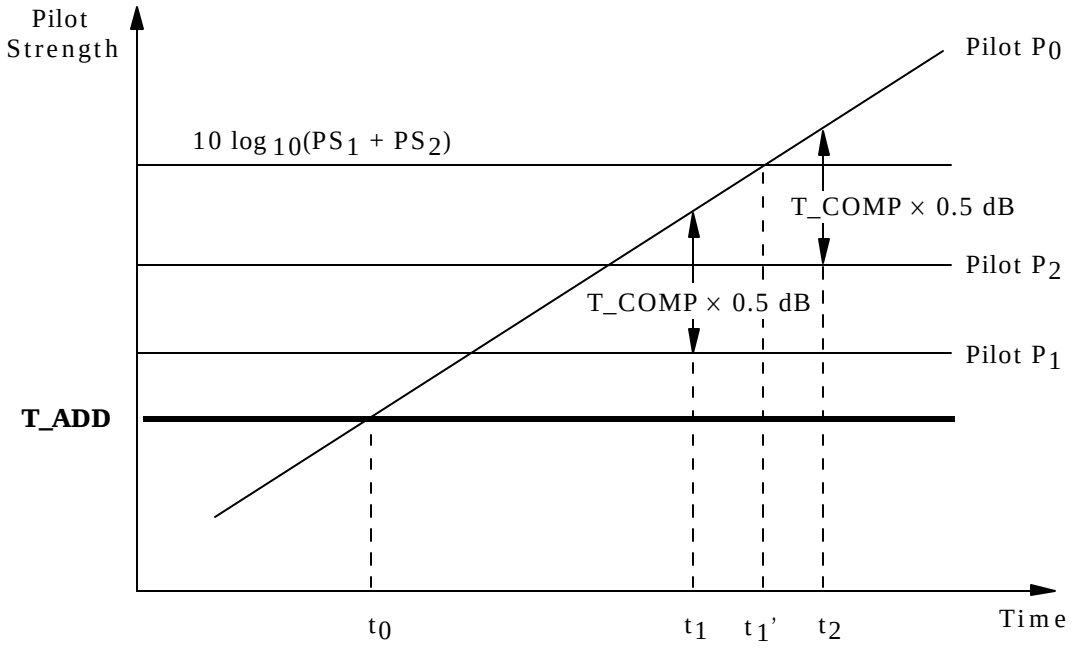
Active Set: Pilots P_1, P_2

t_0 – *Pilot Strength Measurement Message* sent, P_0 > T_ADD

t_1 – *Pilot Strength Measurement Message* sent, $P_0 > P_1$ + T_COMP × 0.5 dB

t_2 – *Pilot Strength Measurement Message* sent, $P_0 > P_2$ + T_COMP × 0.5 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
$P_0 > [P_1 + T\_COMP \times 0.5\ dB]$ 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
$P_0 > [P_2 + T\_COMP \times 0.5\ dB]$ 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 (IMSI_O_S1 + $2^{24} \times$ 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]

$$R = \lfloor N \times ((40503 \times (L \oplus H \oplus DECORR)) \bmod 2^{16}) / 2^{16} \rfloor.$$

For determining a mobile station's assigned paging indicator bit positions, the hash value is computed as follows:

$$R_1 = \lfloor N \times ((40503 \times (L \oplus H \oplus DECORR_1)) \bmod 2^{16}) / 2^{16} \rfloor,$$

and

$R_2 = \lfloor ((1 - \lfloor (2 \times R_1)/(N+4) \rfloor) \times (N+4)/2 + \lfloor (2 \times R_1)/(N+4) \rfloor \times ((N+4)/2 - 4)) \times ((40503 \times (L \oplus H \oplus DECORR_2)) \bmod 2^{16}) / 2^{16} \rfloor + N + 4 + \lfloor (2 \times R_1)/(N+4) \rfloor \times ((N+4)/2)$ for Quick Paging Channel data rate of 4800 bps, or

$R_2 = \lfloor ((1 - \lfloor (2 \times R_1)/(N+8) \rfloor) \times (N+8)/2 + \lfloor (2 \times R_1)/(N+8) \rfloor \times ((N+8)/2 - 8)) \times ((40503 \times (L \oplus H \oplus DECORR_2)) \bmod 2^{16}) / 2^{16} \rfloor + N + 8 + \lfloor (2 \times R_1)/(N+8) \rfloor \times ((N+8)/2)$ for Quick Paging Channel data rate of 9600 bps.

The mobile station shall choose the range N and the modifiers DECORR, $DECORR_1$, and $DECORR_2$ 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.

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[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 *CDMA Channel List Message* or the number of qualified channels in the last *Extended Channel List Message*	0	R + 1
Paging Channel Number	$PAGE\_CHAN_S$ from *System Parameters Message* (up to 7)	$2 \times$ HASH_KEY [0…11]	R + 1
Quick Paging Channel Number	NUM_QPCH_S from *Extended System Parameters Message* or *MC-RR Parameters Message* (up to 3)	$2 \times$ HASH_KEY [0…11]	R + 1
Paging Slot Number	2048	$6 \times$ 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 *MC-RR Parameters Message* (up to 7)	$2 \times$ 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

$$z_0 = (ESN \oplus RANDOM\_TIME) \bmod m$$

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, $0 \le k_n \le N - 1$.

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 ith entry in every array (of code channels associated with a member of the Active Set) corresponds to the ith 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.

- The mobile station shall delete all information in the $CODE\_CHAN\_LIST_S$ associated with a pilot that is not included in the *Extended Handoff Direction Message*.

- When the mobile station processes the *General Handoff Direction Message*, the mobile station shall update the $CODE\_CHAN\_LIST_S$ to contain the Forward Fundamental Code Channel associated with each pilot included in the *General Handoff Direction Message*. The first code channel occurrence associated with each pilot included in the *General Handoff Direction Message* corresponds to the Forward Fundamental Code Channel. The mobile station shall do the following:
  - If $FOR\_SUP\_CONFIG_r$ is included and $FOR\_SUP\_CONFIG_r$ is equal to '10' or '11', the mobile station shall perform the following actions:
    - For each pilot listed in the *General Handoff Direction Message*, 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 *General Handoff Direction Message*.
    - The mobile station shall delete all information in the $CODE\_CHAN\_LIST_S$ associated with a pilot that is not included in the *General Handoff Direction Message*.
  - If $FOR\_SUP\_CONFIG_r$ is equal to '00' or '01' or if $FOR\_SUP\_CONFIG_r$ is not included in the *General Handoff Direction Message*, the mobile station shall not update Supplemental Code Channels associated with the pilots included in the *General Handoff Direction Message*. The mobile station shall perform the following actions:
    - For each pilot listed in the *General 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.
    - The mobile station shall delete all information in the $CODE\_CHAN\_LIST_S$ associated with a pilot that is not included in the *General Handoff Direction Message*.

- When the mobile station processes the *Supplemental Channel Assignment Message* it shall follow the following rules:
  - If $FOR\_SUP\_CONFIG_r$ is equal to '10' or '11', the mobile station shall update the Forward Supplemental Code Channels for each pilot in the Active Set.
  - If the pilot is not listed in the *Supplemental Channel Assignment Message*, the mobile station shall delete all occurrences of Forward Supplemental Code 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 $REJECT\_ACTION\_INDI_r$.

- If $UZID\_ASSIGN\_INCL_r$ = 0, the mobile station shall set $UZID_s$ to '0', otherwise; the mobile station shall set $UZID_s$ to $ASSIGN\_UZID_r$.

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.

2.6.10 Call Control Processing

As illustrated in Figure 2.6.10-1, the Call Control consists of the following states:

- *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*.

- *Waiting for Mobile Station Answer Substate* - In this substate, the Call Control instance waits for the user to answer the call.

- *Conversation Substate* - In this substate, the parties involved in this call communicate.

- *Call Release Substate* - In this substate, the Call Control instance waits for the call to be disconnected.

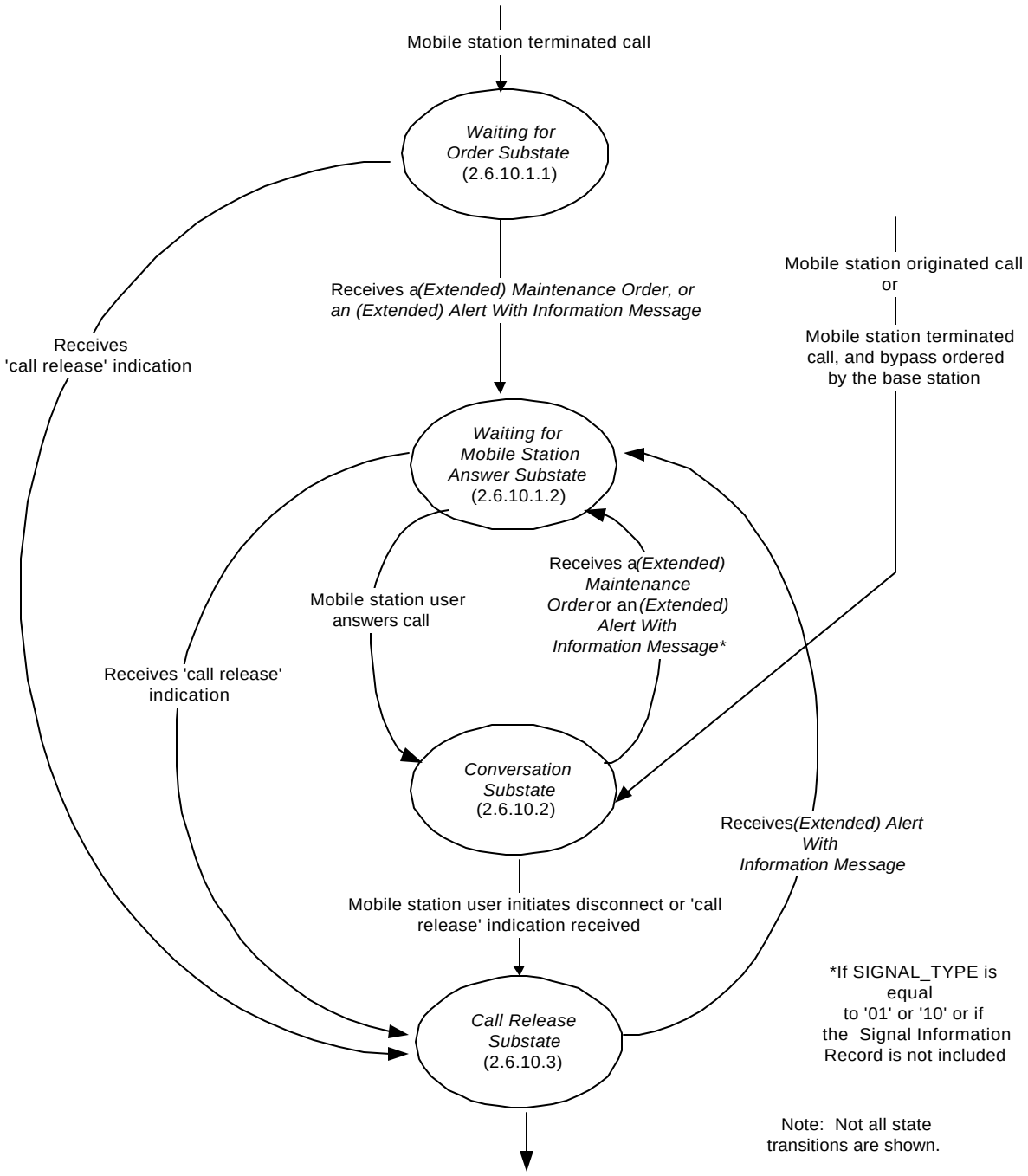

Figure 2.6.10-1. Call Control

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.

- If the Call Control instance receives a "reset waiting for order substate timer indication" from the layer 3, the Call Control instance shall reset the substate timer for T_{52m} seconds.

- 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 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 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:* If the message contains a Signal information record, the mobile station should alert the user in accordance with the Signal information record; otherwise, the mobile station should use standard alert as defined in 3.7.5.5. The Call Control instance shall enter the *Waiting for Mobile Station Answer Substate* (see 2.6.10.1.2).

  2. *Extended Alert with Information Message:* If the message contains a Signal information record, the mobile station should alert the user in accordance with the Signal information record; otherwise, the mobile station should use standard alert as defined in 3.7.5.5. The Call Control instance shall enter the *Waiting for Mobile Station Answer Substate* (see 2.6.10.1.2).

  3. *Maintenance Order:* The Call Control instance shall enter the *Waiting for Mobile 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*.

- 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 is directed by user to forward the incoming call to a number stored in the mobile station, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode with a Feature Indicator information record (see 2.7.4.1) with a *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to the following:

  - a pre-programmed feature code which indicates User Selective Call Forwarding to a number stored in the mobile station as the first digits in the field and
  - the forwarding to number immediately following the pre-programmed feature code.

  The mobile station shall send the message 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 is directed by the user to forward the incoming call to network-based voice mail, 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 to voice mail, 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 is directed by the user to activate answer holding, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode requiring confirmation of delivery with a *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-programmed feature code which indicates Answer Holding:

- 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.

After receiving confirmation of delivery of the *Flash With Information Message* or the *Extended Flash With Information Message*, 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 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.

3. *Maintenance Order:* The mobile station shall reset the substate timer for T_{53m} seconds.

2.6.10.2 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*.

- The mobile station shall send an *Origination Continuation Message* in assured mode, within T_{54m} seconds after the Call Control instance entering *the Conversation Substate* if any of the following conditions occur:

  – The mobile station originated the call, and did not send all the dialed digits in the *Origination Message*.

  – There is more than one calling party number associated with the mobile station.

  – A calling party subaddress is used in the call.

  – A called party subaddress is used in the call.

  If more than one calling party number is associated with the mobile station, the mobile station shall include the calling party number being used in the calling party number information record in the *Origination Continuation Message*. If only one calling party number is associated with the mobile station, the mobile station shall not include the calling party number information record in the *Origination Continuation Message*. If a calling party subaddress is used, the mobile station shall include the calling party subaddress information record in the *Origination Continuation Message*: otherwise, the mobile station shall omit the calling party subaddress information record. If a called party subaddress is used, the mobile station shall include the called party subaddress information record in the *Origination Continuation Message*: otherwise, the mobile station shall omit the calling party subaddress information record.

- If the Call Control instance is directed by the user to issue a flash, the mobile station shall build a *Flash With Information Message* or an *Extended Flash With Information Message* with the collected digits or characters contained in a *Keypad Facility* information record, if needed, and shall send the message in assured mode, 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 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*.

- 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 is directed by the user to forward the incoming call to a number stored in the mobile station, 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 the following:

  - a pre-programmed feature code which indicates User Selective Call Forwarding to a number stored in the mobile station as the first digits in the field and
  - the forwarding to number immediately following the pre-programmed feature code.

The mobile station shall send the message 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 and 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 is directed by the user to forward the incoming call to network-based voice mail, 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 to voice mail, 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 and 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 is directed by the user to activate answer holding, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode requiring confirmation of delivery with a *Keypad Facility* information record (see 2.7.4.2) with the CHARi field set to a pre-programmed feature code which indicates Answer Holding, 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 answer holding is activated and the Call Control instance is directed by the user to deactivate answer holding, the mobile station shall send a *Flash With Information Message* or an *Extended Flash With Information Message* in assured mode with a *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 Answer Holding, 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 is directed by the user to send burst DTMF digits, the mobile station shall build the *Send Burst DTMF Message* with the dialed digits and shall send the message in assured mode requiring confirmation of delivery.

  - 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 set the CON_REF_INCL field of the message to '0'; 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 mobile station sending multiple *Send Burst DTMF Messages* shall preserve relative ordering of these messages (see 1.6 of [4]). The mobile station should attempt to preserve the user timing as much as possible, using recommended values of DTMF_ON_LENGTH (see Table 2.7.2.3.2.7-1) and DTMF_OFF_LENGTH (see Table 2.7.2.3.2.7-2).

- If the Call Control instance is directed by the user to send a continuous DTMF digit, the mobile station shall build the *Continuous DTMF Tone Order* with the dialed digit and shall send the order in assured mode requiring confirmation of delivery, as follows:

  - 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.

When the Call Control instance is directed by the user to cease sending the continuous DTMF digit, the mobile station shall send the *Continuous DTMF Tone Order* (ORDQ = '11111111') in assured mode requiring confirmation of delivery, as follows:

  - 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 mobile station sending multiple *Continuous DTMF Tone Orders* shall preserve relative ordering of these messages (see [2]). The mobile station shall send the *Continuous DTMF Tone Order* with the ORDQ set to '11111111' indicating the completion of the current continuous DTMF digit before sending the *Continuous DTMF Tone Order* for another digit or the *Send Burst DTMF Message*.

- If the Call Control instance is directed by the user to disconnect the call, the Call Control instance shall send a 'call release request' to the layer 3 and shall enter the *Call Release Substate*.

- If the Call Control instance receives an indication that this packet data service instance has been inactivated, the Call Control instance shall send a "call inactive indication" to the layer 3 and shall enter the *Call Release Substate*.

- If the Call Control instance 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 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:* 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 Mobile Station Answer Substate*. The mobile station should alert the user in accordance with the Signal information record. 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:* 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 Mobile Station Answer Substate*. The mobile station should alert the user in accordance with the Signal information record. If this message does not contain a Signal information record, the mobile station should use standard alert as defined in 3.7.5.5.

  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.

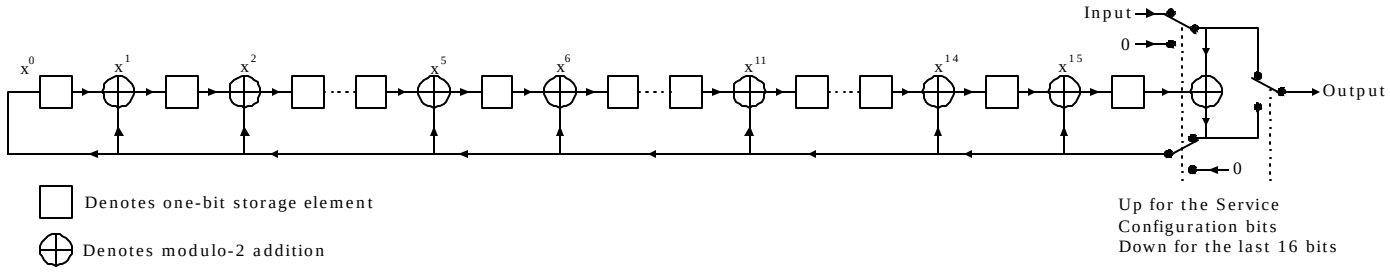

Figure 2.6.11-1. SYNC_ID Calculation

2.7 PDU Formats for Mobile Stations

This section describes the formats of the PDUs corresponding to the messages sent by the mobile station.

Some bits in the PDUs are marked as RESERVED. These bits allow extension of the PDUs for future features and capabilities. The mobile station sets all reserved bits to '0'.

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
Registration Message	RGM	2.7.1.3.2.1
Order Message	ORDM	2.7.1.3.2.2
Data Burst Message	DBM	2.7.1.3.2.3
Origination Message	ORM	2.7.1.3.2.4
Page Response Message	PRM	2.7.1.3.2.5
Authentication Challenge Response Message	AUCRM	2.7.1.3.2.6
Status Response Message	STRPM	2.7.1.3.2.7
TMSI Assignment Completion Message	TACM	2.7.1.3.2.8
PACA Cancel Message	PACNM	2.7.1.3.2.9
Extended Status Response Message	ESTRPM	2.7.1.3.2.10
Device Information Message	DIM	2.7.1.3.2.13
Security Mode Request Message	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.

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 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.

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, 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.

OTD_SUPPORTED – Orthogonal Transmit Diversity 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 Orthogonal Transmit Diversity is supported; otherwise, the mobile station shall set this field to '0'.

STS_SUPPORTED – Space Time Spreading Transmit Diversity 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 Space Time Spreading Transmit Diversity is supported; 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.

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

If the ENC_SEQ_H field is included in the message, the mobile station shall set this field to the digital signature of the ENC_SEQ_H computed as described in 2.3.12.4.5; otherwise, the mobile station shall omit this field.

UI_ENCRYPT_SUP - User information Encryption supported indicator.

The mobile station shall include this field only ENC_INFO_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’.

2.7.1.3.2.2 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 mobile station shall set this field to the ORDER code (see 2.7.3) for this type of *Order Message*.

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.

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:	
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 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 × (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 × (NUM_FIELDS - 2)

2.7.1.3.2.4 Origination Message

MSG_TAG: ORM

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:

CHARi	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)

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)

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’.

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 the station class mark of the mobile station. See 2.3.3.

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.

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

SPECIAL_SERVICE – Special service option indicator.

To request a special service option, the mobile station shall set this field to '1'. To request the default service option (Service Option 1), the mobile station shall set this field to '0'.

SERVICE_OPTION – Requested service option for this origination.

If the SPECIAL_SERVICE field is set to '1', the mobile station shall set this field to the value specified in [30], corresponding to the requested service option. If the SPECIAL_SERVICE field is set to '0', the mobile station shall omit this field.

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-_SUPPORTED – Encryption algorithms supported by the mobile station.

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.

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 this field as follows.

The mobile station shall set this field to its preferred Radio Configuration for the Forward Traffic Channel.

REV_RC_PREF – Reverse FCH 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 Reverse Traffic Channel.

FCH_SUPPORTED – Fundamental 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.

The mobile station shall set this field to '1' if the mobile station supports Fundamental Channel; otherwise, the mobile station shall set this field to '0'.

FCH Capability

Type-specific fields – Fundamental Channel capability information.

If the FCH_SUPPORTED field is set to '1', the mobile station shall include this field and set it as defined in 2.7.4.27.1; otherwise, the mobile station shall omit this field.

DCCH_SUPPORTED – Dedicated Control 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.

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 ORIGI_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.

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_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.

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 2.7.1.3.2.1-4.

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 ENC_INFO_INCL is equal to ‘1’ and the new Algorithm 1 is supported by the mobile station. If this field is 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

If the ENC_SEQ_H field is included in the message, the mobile station shall set this field to the digital signature of the ENC_SEQ_H computed using the session encryption key as described in (TBD); otherwise, the mobile station shall omit this field.

UI_ENCRYPT_REQ – Request for user information encryption on the traffic channel indicator.

The mobile station shall include this field only if ENC_INFO_INCL is equal to ‘1’. If this field is included, the mobile station shall set this field to ‘1’ to request user information encryption. 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 only ENC_INFO_INCL is equal to ‘1’. If this field is 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.

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:

If the mobile station determines SID has been changed after a packet data dormant handoff, the mobile station shall set this field to the previous SID.

PREV_NID_INCL - Previous Network Identification (NID) 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 NID has been changed after a packet data dormant handoff and the PREV_NID field is included in this message; otherwise, the mobile station shall set this field to '0'.

PREV_NID - Previous Network Identification.

If PREV_NID_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 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.

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 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.

SO_BITMAP_IND - Service option bitmap indicator.

If $P\_REV\_IN\_USE_S$ is less than 7, the mobile station shall omit this field; otherwise, the mobile station shall set this field as 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 × 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 × 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.

2.7.1.3.2.5 Page Response Message

MSG_TAG: PRM

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)

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)

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

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'.

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 the station class mark of the mobile station. See 2.3.3.

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.

SERVICE_OPTION – Service option.

If the mobile station accepts the service option specified by the mobile-station-addressed page, it shall set this field as follows:

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

in the SERVICE OPTION field of the page record to which the mobile station is responding.

If the page record to which the mobile station is responding did not contain a SERVICE OPTION field, the mobile station shall set this field to the default option number '0000000000000001'.

If the mobile station does not accept the service option specified by the mobile-station-addressed page to which the mobile station is responding and the mobile station has an alternative service option to request, the mobile station shall set this field to the service option code specified in [30] corresponding to the alternative service option.

If the mobile station does not accept the service option specified by the mobile-station-addressed page to which the mobile station is responding and the mobile station does not have an alternative service option to request, the mobile station shall set this field to '0000000000000000' to reject the service option specified by the page record of the *General Page Message* to which the mobile station is responding.

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'.

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'.

ENCRYPTION-_SUPPORTED – Encryption algorithms supported by the mobile station.

If P_REV_IN_USE is greater than or equal to 7 or AUTH_MODE is equal to '00', the mobile station shall omit this field. If P_REV_IN_USE is less than 7 and AUTH_MODE is not equal to '00', then the mobile station shall set this field as specified in table 2.7.1.3.2.4-5.

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.

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.

REV_RC_PREF – Reverse 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 Reverse Traffic Channel.

FCH_SUPPORTED – Fundamental 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.

The mobile station shall set this field to '1' if the mobile station supports Fundamental Channel; otherwise, the mobile station shall set this field to '0'.

FCH Capability Type-specific fields – Fundamental Channel 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.

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 '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 DCCH_SUPPORTED 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.

REV_FCH-_GATING_REQ – Reverse eighth 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'.

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.

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.

ENC_INFO_INCL – Encryption fields included.

The mobile station shall set this field to ‘1’ in 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 ENC_INFO_INCL is equal to ‘1’. If this field is included, this field indicates which signaling encryption algorithms are supported by the mobile station.

This field consists of the subfields shown in Table 2.7.1.3.2.1-4.

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 this field is 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 this field is 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

If the ENC_SEQ_H field is included in the message, the mobile station shall set this field to the digital signature of the ENC_SEQ_H computed using the session encryption key as described in (TBD); otherwise, the mobile station shall omit this field.

UI_ENCRYPT_REQ – Request for user information encryption on the traffic channel indicator.

The mobile station shall include this field only if ENC_INFO_INCL is equal to '1'. If this field is included, the mobile station shall set this field to '1' to request user information encryption. 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 only if ENC_INFO_INCL is equal to '1'. If this field is 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'.

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.

SO_BITMAP_IND - SO bitmap indicator.

If $P\_REV\_IN\_USE_S$ is less than 7, the mobile station shall omit this field; otherwise, the mobile station shall include this field and set this field as defined in Table 2.7.1.3.2.4-10.

SO_GROUP_NUM - The 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 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 field 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 × SO_BITMAP_IND) service options defined for the service option group, the mobile station shall include the bitmap containing the least significant bits (4 × SO_BITMAP_IND) of 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.

2.7.1.3.2.6 Authentication Challenge Response Message

MSG_TAG: AUCRM

Field	Length (bits)
AUTHU	18

AUTHU – Authentication challenge response.

The mobile station shall set this field as specified in 2.3.12.1.4.

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 × QUAL_INFO_LEN

One or more occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × 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.

Type-specific fields – 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.

2.7.1.3.2.8 TMSI Assignment Completion Message

MSG_TAG: TACM

There are no Layer 3 fields associated with this message.

2.7.1.3.2.9 PACA Cancel Message

MSG_TAG: PACNM

There are no Layer 3 fields associated with this message.

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 × 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 × 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.

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 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.

This field consists of the subfields shown in Table 2.7.1.3.2.1-4.

SIG_ENCRYPT_REQ – Signaling Message encryption request indicator.

The mobile station shall include this field if SIG_ENC_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.

RESERVED – Reserved bits.

The mobile 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 mobile station shall set these bits to ‘0’.

2.7.2 r-dsch

During Traffic Channel operation, the mobile station sends signaling messages to the base station using the r-dsch.

2.7.2.1 Reserved

2.7.2.2 Reserved

2.7.2.3 PDU Formats for Messages on r-dsch

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
Order Message	ORDM	2.7.2.3.2.1
Authentication Challenge Response Message	AUCRM	2.7.2.3.2.2
Flash With Information Message	FWIM	2.7.2.3.2.3
Data Burst Message	DBM	2.7.2.3.2.4
Pilot Strength Measurement Message	PSMM	2.7.2.3.2.5
Power Measurement Report Message	PMRM	2.7.2.3.2.6
Send Burst DTMF Message	BDTMFM	2.7.2.3.2.7
Status Message	STM	2.7.2.3.2.8
Origination Continuation Message	ORCM	2.7.2.3.2.9
Handoff Completion Message	HOCM	2.7.2.3.2.10
Parameters Response Message	PRSM	2.7.2.3.2.11
Service Request Message	SRQM	2.7.2.3.2.12
Service Response Message	SRPM	2.7.2.3.2.13
Service Connect Completion Message	SCCM	2.7.2.3.2.14
Service Option Control Message	SOCM	2.7.2.3.2.15
Status Response Message	STRPM	2.7.2.3.2.16
TMSI Assignment Completion Message	TACM	2.7.2.3.2.17
Supplemental Channel Request Message	SCRM	2.7.2.3.2.18
Candidate Frequency Search Response Message	CFSRSM	2.7.2.3.2.19
Candidate Frequency Search Report Message	CFSRPM	2.7.2.3.2.20
Periodic Pilot Strength Measurement Message	PPSMM	2.7.2.3.2.21
Outer Loop Report Message	OLRM	2.7.2.3.2.22
Resource Request Message	RRM	2.7.2.3.2.23
Resource Request Mini Message	RRMM	2.7.2.3.2.24
Extended Release Response Message	ERRM	2.7.2.3.2.25
Extended Release Response Mini Message	ERRMM	2.7.2.3.2.26
Pilot Strength Measurement Mini Message	PSMMM	2.7.2.3.2.27
Supplemental Channel Request Mini Message	SCRMM	2.7.2.3.2.28
Resource Release Request Message	RRRM	2.7.2.3.2.29
Resource Release Request Mini Message	RRRMM	2.7.2.3.2.30

User Zone Update Request Message	UZURM	2.7.2.3.2.31
Enhanced Origination Message	EOM	2.7.2.3.2.32
Extended Flash With Information Message	EFWIM	2.7.2.3.2.33
Extended Pilot Strength Measurement Message	EPSMM	2.7.2.3.2.34
Extended Handoff Completion Message	EHOCM	2.7.2.3.2.35
Security Mode Request Message	SMRM	2.7.2.3.2.36
Call Cancel Message	CLCM	2.7.2.3.2.37
Device Information Message	DIM	2.7.1.3.2.38

2.7.2.3.1 Reserved

2.7.2.3.2 Message Body Contents

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 × 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.

2.7.2.3.2.2 Authentication Challenge Response Message

MSG_TAG: AUCRM

Field	Length (bits)
AUTHU	18

AUTHU – Authentication challenge response.

The mobile station shall set this field as specified in 2.3.12.1.4.

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 × 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 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 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 × (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 × (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:

$$10 \times \log_{10} PS > \frac{SOFT\_SLOPE_S}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD\_INTERCEPT_S}{2}$$

where the summation is performed over all pilots currently in the Active Set. 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’.

PWR_MEAS_FRAMES – Number of power measurement frames.

When the Forward Fundamental Channel is assigned, the mobile station shall set this field to the number of frames received on the Forward Fundamental Channel within the measurement period (TOT_FRAMES_S, see 2.6.4.1.1).

If P_REV_IN_USE is greater than or equal to six and only the Dedicated Control Channel is assigned, the mobile station shall set this field to the number of frames received on the Dedicated Control Channel ($DCCH\_TOT\_FRAMES_S$, see 2.6.4.1.1).

LAST_HDM_SEQ – *Extended Handoff Direction Message* or a *General Handoff Direction Message*, or *Universal Handoff Direction Message* sequence number.

If an *Extended Handoff Direction Message*, a *General Handoff Direction Message*, or *Universal Handoff Direction Message* has been received during this call, the mobile station shall set this field to the value of the HDM_SEQ field from the *Extended Handoff Direction Message*, the *General Handoff Direction Message* or the *Universal Handoff Direction Message* that determined the current Active Set. If no *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message* has been received during this call, the mobile station shall set this field to '11'.

NUM_PILOTS – Number of pilots reported.

The mobile station shall set this field to the number of pilots in the current Active Set.

PILOT_STRENGTH – Pilot strength.

The mobile station shall include one occurrence of this field for each pilot in the Active Set. If the Active Set contains more than one pilot, the mobile station shall include the pilot strengths in the same order as in the *Extended Channel Assignment Message*, *Extended Handoff Direction Message*, *General Handoff Direction Message* or the *Universal Handoff Direction Message* that determined the current Active Set.

The mobile station shall set each occurrence of this field to

$$\lfloor -2 \times 10 \log_{10} PS \rfloor,$$

where PS is the strength of the 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'.

DCCH_PWR_MEAS_INCL - Forward Dedicated Control Channel power measurement included.

If both Forward Fundamental Channel and Forward Dedicated Control Channel are assigned, the mobile station shall set this field equal to '1'; otherwise, the mobile shall set this field to '0'.

DCCH_PWR-_MEAS_FRAMES - Number of received Dedicated Control Channel frames.

If DCCH_PWR_MEAS_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of frames received on the Dedicated Control Channel within the measurement period (DCCH_TOT_FRAMESs, see 2.6.4.1.1).

DCCH_ERRORS-_DETECTED - Number of detected bad Dedicated Control Channel frames.

If DCCH_PWR_MEAS_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of bad frames ($DCCH\_BAD\_FRAMES_S$] detected on the Forward Dedicated Control Channel.

If $DCCH\_BAD\_FRAMES_S$ exceeds 31, the mobile station shall set this field to '11111'; otherwise, the mobile station shall set this field to $DCCH\_BAD\_FRAMES_S$ [see 2.6.4.1.1).

SCH_PWR_MEAS_INCL - Supplemental Channel power measurement included indicator.

If $FOR\_SCH\_FER\_REP_S$ is set to '1' and this message is to report the frame counts at the end of the burst on an assigned Supplemental Channel, the mobile station shall set this field to '1'; otherwise, the mobile station shall set this field to

SCH_ID - Forward Supplemental Channel identifier.

If the SCH_PWR_MEAS_INCL is set to '0', the mobile station shall omit this field; otherwise, the mobile shall set this field to the Identifier of the Forward Supplemental Channel of which the frame counts are being reported in this message.

SCH_PWR-
_MEAS_FRAMES - Number of received Supplemental Channel frames.

If SCH_PWR_MEAS_INCL is set to ‘0’, the mobile station shall omit this field; otherwise, the mobile station shall set this field to the total number of frames ($SCH\_TOT\_FRAMES_S$] received during the burst duration on the Supplemental Channel specified by SCH_ID. If this measurement is greater than or equal to 2^{16} - 1, the mobile station shall set this field to ‘1111111111111111’.

SCH_ERRORS-
_DETECTED - Number of detected bad Supplemental Channel frames.

If SCH_PWR_MEAS_INCL is set to ‘0’, the mobile station shall omit this field; otherwise, the mobile station shall set this field to the number of bad frame detected on the Forward Supplemental Channel of the SCH_ID for the duration of the forward burst on this channel.

If the number of bad frames ($SCH\_BAD\_FRAMES_S$) detected on the SCH_ID Supplemental Channel during the burst is greater than 1023, the mobile station shall set this field to ‘1111111111’.

2.7.2.3.2.7 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:

DIGITi	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.	

DIGITi – 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 × 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:

CHARi	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.

CHARi – 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.

RECORD_TYPE	–	Information record type. The mobile station shall set this field to the record type value shown in Table 2.7.4-1.
RECORD_LEN	–	Information record length. The mobile 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 mobile station shall include type-specific fields as specified in 2.7.4.

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 '1111111111'.

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.	

If the REQ_PURPOSE code is set to '0010', the mobile station shall include one occurrence of the following three-field record to specify the proposed service configuration; otherwise, the mobile station shall not include the following record:

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 Service Configuration 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 the Service Configuration information record.
Type-specific fields	–	Type-specific fields. The mobile station shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

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.	

If the RESP_PURPOSE field is set to '0010', the mobile station shall include one occurrence of the following record to specify the proposed service configuration; otherwise, the mobile station shall not include the following record:

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 Service Configuration 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 the Service Configuration information record.
Type-specific fields	–	Type-specific fields. The mobile station shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

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 × 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 × QUAL_INFO_LEN

One or more occurrences of the following record:

RECORD_TYPE	8
RECORD_LEN	8
Type-specific fields	8 × 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.

Type-specific fields – Type-specific fields.

The mobile station shall set these fields as specified in 2.7.4 for this type of record, according to the mobile station's capabilities under the qualification information included in this message.

2.7.2.3.2.17 TMSI Assignment Completion Message

MSG_TAG: TACM

There are no Layer 3 fields associated with this message.

2.7.2.3.2.18 Supplemental Channel Request Message

MSG_TAG: SCRM

Field	Length (bits)
SIZE_OF_REQ_BLOB	4
REQ_BLOB	8 × 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)

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_NGHBR_PN is included, the mobile station shall include NUM_NGHBR_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

SIZE_OF_REQ_BLOB – Size of the request information block of bytes (REQ_BLOB).

The mobile station shall set this field to the number of bytes in the Reverse Supplemental Code Channel or the Reverse Supplemental Channel request block of bytes (REQ_BLOB).

REQ_BLOB – Reverse Supplemental Code Channel request block of bytes.

The mobile station shall include information in this field containing the parameters that specify the characteristics of the Reverse Supplemental Code Channels or the Reverse Supplemental Channel request. The mobile station shall set this field in accordance with the connected Service Option.

USE_SCRM_SEQ_NUM – Use *Supplemental Channel Request Message* sequence number indicator.

The mobile station shall set this field to '1' if the *Supplemental Channel Request Message* sequence number is included in this message; otherwise, the mobile station shall set this field to '0'.

SCRM_SEQ_NUM – *Supplemental Channel Request Message* sequence number.

If USE_SCRM_SEQ_NUM is set to '1', the mobile station shall set this field to the *Supplemental Channel Request Message* sequence number that the base station is to include in a *Supplemental Channel Assignment Message* which is in response to this message; otherwise, the mobile station shall omit this field.

REF_PN – Time reference PN sequence offset.

If SIZE_OF_REQ_BLOB is set to ‘0000’, the mobile station shall omit this field; otherwise, 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 – Reference pilot strength.

If SIZE_OF_REQ_BLOB is set to ‘0000’, the mobile station shall omit this field; otherwise, 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 2.1.5 of [2]), 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’.

NUM_ACT_PN – Number of reported pilots in the Active 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 to the number of reported pilots in the Active Set other than the pilot identified by the REF_PN field.

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 pilot in the Active Set other than the pilot identified by the REF_PN field:

ACT_PN_PHASE – Active 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.

ACT_PILOT_STRENGTH – Active 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'.

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.

The mobile station shall set this field to the index of the Quasi-orthogonal function of the corresponding Auxiliary Pilot.

WALSH_LENGTH – Length of the Walsh code for the reference pilot.

The mobile station shall set this field to the WALSH_LENGTH value shown in Table 2.7.2.3.2.33-2 corresponding to the length of the Walsh code for the pilot that is used as the Auxiliary Pilot.

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.

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 record for each pilot in the Active Set other than the pilot identified by the REF_PN field:

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.

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 record for each of the NUM_NGHBR_PN reported pilots.

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.

2.7.2.3.2.19 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.

The mobile station shall set this field to the mobile station's estimate of the maximum number of frames (if PCG_OFF_TIME is set to '0') or power control groups (if PCG_OFF_TIME is set to '1') for which the mobile station will need to suspend its current Forward Traffic Channel processing during a visit to the Candidate Frequency, to perform a part of the requested search, and to re-tune to the Serving Frequency.

TOTAL_OFF_TIME_REV – Total time that the mobile station is away from the Reverse 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 Reverse 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 or power control groups for all visits to the Candidate Frequency in a search period.

MAX_OFF_TIME_REV – Maximum time the mobile station is away from the Reverse Traffic Channel.

The mobile station shall set this field to the mobile station's estimate of the maximum number of frames or power control groups for which the mobile station will need to suspend its current Forward Traffic Channel processing during a visit to the Candidate Frequency, to perform a part of the requested search, and to re-tune to the Serving Frequency.

PCG_OFF_TIMES – Indicator if off times are expressed in units of power control groups.

If $P\_REV\_IN\_USE_S$ is less than six, the mobile station shall set this field to '0'; otherwise, the mobile station shall set this field as follows:

The mobile station shall set this field to '1' if it expresses TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_REV, and MAX_OFF_TIME_REV in units of power control groups; otherwise, the mobile station shall set this field to '0' so that TOTAL_OFF_TIME_FWD, MAX_OFF_TIME_FWD, TOTAL_OFF_TIME_REV, and MAX_OFF_TIME_REV are expressed in units of frames.

ALIGN_TIMING_USED – Alignment timing used indicator.

The mobile station shall set this field to '1' if it will align the times of its visits away from the Serving Frequency, as requested by the base station; otherwise, the mobile station shall set this field to '0'.

NUM_VISITS – Number of visits per search period.

If the ALIGN_TIMING_USED 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 number of visits per search period minus one.

INTER_VISIT_TIME – Inter-visit time.

If the mobile station includes the NUM_VISITS field and sets it to a value other than 0, the mobile station shall include this field and set it as described below; otherwise, the mobile station shall omit this field.

The mobile station shall set INTER_VISIT_TIME to

$$\min(63, \lceil inter\_visit\_time \,/\, search\_time\_resolution \rceil)$$

where

search_time_resolution is equal to 0.02 if the mobile station sets PCG_OFF_TIMES to '0'; otherwise, *search_time_resolution* is equal to 0.00125,

and

inter_visit_time is the mobile station's estimate of the time, in seconds, between the beginning of consecutive visits away from the Serving Frequency.

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 × 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.

If this message is being sent to report an unsuccessful hard handoff attempt, the mobile station shall set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA Frequency Assignment for the Target Frequency, as specified in 3.1.1.1 of [2]. If this message is being sent to report measurements on a Candidate Frequency, the mobile station shall set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA Frequency Assignment for the Candidate Frequency, as specified in 3.1.1.1 of [2].

SF_TOTAL_RX_PWR – 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.

CF_TOTAL_RX_PWR – Indicates the total received power on the Target Frequency or the Candidate Frequency.

If this message is being sent to report an unsuccessful hard handoff attempt, the mobile station shall include the total received power on the Target Frequency; if this message is being sent to report measurements on a Candidate Frequency, the mobile station shall include the total received power on the Candidate 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 Target Frequency or the Candidate Frequency, in dBm/1.23 MHz.

NUM_PILOTS – Number of pilots.

The mobile station shall set this field to the number of pilots included in this message. The mobile station shall set this field to a value from 0 to N_{8m}, inclusive.

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.

ANALOG_FREQ – Analog frequency channel number.

The base station shall set this field analog frequency channel number to search.

SIGNAL_STRENGTH – Signal strength.

The mobile station shall set this field to

$$\lfloor -0.5 \times SS \rfloor,$$

where SS is the strength of this signal, measured in dBm as specified in 2.6.6.2.10.3. If this value ($\lfloor -0.5 \times SS \rfloor$) 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_3 – The mobile 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 mobile station shall set each of these bits to '0'.

2.7.2.3.2.21 Periodic Pilot Strength Measurement Message

MSG_TAG: PPSMM

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 × 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

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

$$\lceil (10 \times \log_{10}(spec\_density) + 120) / 2 \rceil$$

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.

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 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'.

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.

SETPT_INCL - Setpoint information included indicator.

The mobile station shall set this field to '1' if setpoint information is included in this message; otherwise, the mobile station shall set this field to '0'.

FCH_INCL - Fundamental Channel included indicator.

If SETPT_INCL is equal to '1', the mobile station shall include this field and set it as follows; otherwise, the mobile station shall omit this field.

The mobile station shall set this field to '1' if $FPC\_PRI\_CHAN_s$ is equal to '0'; 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 SETPT_INCL is equal to '1' and 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.

If SETPT_INCL is equal to '1', the mobile station shall include this field and set it as follows; otherwise, the mobile station shall omit this field.

The mobile station shall set this field to '1' if $FPC\_PRI\_CHAN_s$ is equal to '1'; otherwise, the mobile station shall set this field to '0'.

FPC_DCCH-_CURR_SETPT - The outer loop E_b/N_t setpoint of the Forward Dedicated Channel.

If SETPT_INCL is equal to '1', and if DCCH_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 Dedicated Channel power control outer loop estimation; otherwise, the mobile station shall omit this field.

NUM_SUP - The number of Supplemental Channels.

If SETPT_INCL is equal to '1', the mobile station shall include this field and set it as follows; otherwise, the mobile station shall omit this field.

The mobile station shall set this field to the total number of the Supplemental Channels reported by this message.

The mobile station shall include NUM_SUP occurrences of the following two fields:

SCH_ID - The Supplemental Channel index.

The mobile station shall set this field to the Supplemental Channel index to indicate the Forward Supplemental Channel that is to be reported.

FPC_SCH-

_CURR _SETPT - The supplemental channel outer loop E_b/N_t setpoint.

The mobile station shall set this field to the value of the power control outer loop E_b/N_t setpoint, in units of 0.125 dB, currently in use in the Channel specified by SCH_ID.

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'.

FPC_DCCH-
_CURR_SETPT – The outer loop E_b/N_t setpoint of the Forward Dedicated Channel.

If DCCH_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 Dedicated Channel power control outer loop estimation; otherwise, the mobile station shall omit this field.

NUM_SUP – The number of Supplemental Channels.

The mobile station shall set this field to the total number of the Supplemental Channels reported by this message.

The mobile station shall in NUM_SUP occurrences of the following two fields:

SCH_ID – The Supplemental Channel index.

The mobile station shall set this field to the Supplemental Channel index to indicate the Forward Supplemental Channel that to be reported

FPC_SCH-
_CURR _SETPT – The supplemental outer loop E_b/N_t setpoint.

The mobile station shall set this field to the value of the power control outer loop E_b/N_t setpoint, in units of 0.125 dB, currently in use in the Channel specified by SCH_ID.

2.7.2.3.2.23 Resource Request Message

MSG_TAG: RRM

There are no Layer 3 fields associated with this message.

2.7.2.3.2.24 Resource Request Mini Message

MSG_TAG: RRMM

There are no Layer 3 fields associated with this message.

2.7.2.3.2.25 Extended Release Response Message

MSG_TAG: ERRM

There are no Layer 3 fields associated with this message.

2.7.2.3.2.26 Extended Release Response Mini Message

MSG_TAG: ERRMM

There are no Layer 3 fields associated with this message.

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 nth 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

$$\lfloor -2 \times 10 \times \log10\ PS \rfloor,$$

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.

2.7.2.3.2.28 Supplemental Channel Request Mini Message

MSG_TAG: SCRMM

Field	Length (bits)
REQ_BLOB	16

REQ_BLOB – Reverse Supplemental Channel request block of bytes.

The mobile station shall include information in this field containing the parameters that specify the characteristics of the Reverse Supplemental Channels request. The mobile station shall set this field in accordance with the connected Service Options.

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’.

2.7.2.3.2.31 User Zone Update Request Message

MSG_TAG: UZURM

Field	Length (bits)
UZID	16

UZID - User Zone identifiers.

The mobile station shall set this field to the $UZID_S$.

2.7.2.3.2.32 Enhanced Origination Message

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:

CHARi	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

TAG – Transaction identifier.

The mobile station shall set this field to the identifier for this transaction.

CH_IND – Channel indicator.

The mobile station shall set this field as shown in Table 2.7.2.3.2.32-1, to request physical resources.

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_BITAMP_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.

If the field SO_BITMAP_IND is included and not set to ‘00’, the mobile station shall include the bitmap of size 4 × SO_BITMAP_IND bits of the service option group number (SO_GROUP_NUM); otherwise, the mobile station shall omit this field;

When the service option bitmap is included, if there are more than (4 × SO_BITMAP_IND) service options defined for the service option group, the mobile station shall include the bitmap containing the least significant bits (4 × SO_BITMAP_IND) of the service option group.

A bit in this bitmap is set to ‘1’, if the mobile station is capable of supporting the SO for which this bit represents.

DRS – Data ready to send indicator.

The mobile station shall set this field to ‘1’ if it is requesting a packet data service option and it has data to send; otherwise, the mobile station shall set this field to ‘0’.

PREV_SID_INCL - Previous System Identification (SID) included indicator.

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:

If the mobile station determines SID has been changed after a packet data dormant handoff, the mobile station shall set this field to the previous SID.

PREV_NID_INCL - Previous Network Identification (NID) included indicator.

The mobile station shall set this field to ‘1’ if the mobile station determines that NID has been changed after a packet data dormant handoff and the PREV_NID field is included in this message; otherwise, the mobile station shall set this field to ‘0’.

PREV_NID - Previous Network Identification.

If PREV_NID_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 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:

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.

NUMBER_PLAN – Numbering plan.

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:

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.

NUM_FIELDS – Number of dialed digits in this message.

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:

The mobile station shall set this field to the number of dialed digits included in this message.

The mobile station shall include NUM_FIELDS occurrences of the following field:

CHARi – A dialed digit or character.

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’.

NUM_RECS – 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_RECS occurrences of the following three-field record.

RECORD_TYPE – Information record type.

The mobile station shall set this field to the record type value shown in Table 2.7.4-1.

RECORD_LEN – Information record length.

The mobile 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 mobile station shall include type-specific fields as specified in 2.7.4.

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:

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.

2.7.2.3.2.34 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.

If REF_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.

If REF_PILOT_REC_INCL is set to '0', the mobile station shall omit this field.

Type-specific fields - Pilot record type-specific fields.

If REF_PILOT_REC_INCL is 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_INCL is set to '0', the mobile station shall omit this field.

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.

The mobile station shall set this field to the index of the Quasi-orthogonal function of the corresponding Auxiliary Pilot.

WALSH_LENGTH - Length of the Walsh code for the reference pilot.

The mobile station shall set this field to the WALSH_LENGTH value shown in Table 2.7.2.3.2.34-2 corresponding to the length of the Walsh code for the pilot that is used as the 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

$\lceil (10 \times \log_{10}(spec\_density) + 120) / 2 \rceil$

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:

$$10 \times \log_{10} PS > \frac{SOFT\_SLOPE_s}{8} \times 10 \times \log_{10} \sum_{i \in A} PS_i + \frac{ADD\_INTERCEPT_s}{2}$$

where the summation is performed over all pilots currently in the Active Set. 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.

		If PILOT_REC_INCL is set to ‘0’, the mobile station shall omit this field.
Type-specific fields	-	Pilot record type-specific fields.
		If PILOT_REC_INCL is set to ‘1’, 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 PILOT_REC_INCL is set to ‘0’, the mobile station shall omit this field.

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 × 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.

This field consists of the subfields shown in Table 2.7.1.3.2.1-4.

SIG_ENCRYPT_REQ – Signaling Message encryption request indicator.

The mobile station shall include this field if SIG_ENC_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.

RESERVED – Reserved bits.

The mobile 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 mobile station shall set these bits to ‘0’.

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.

Table 2.7.3-1. Order and Order Qualification Codes Used on the r-dsch and the r-csch (Part 1 of 4)

r-csch Order	r-dsch Order	Order Code, ORDER (binary)	Order Qualification Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
Y	Y	000010	00000000	Y	Y	*Base Station Challenge Order* (see 2.7.3.1)
Y	Y	000011	00000000	N	Y	*SSD Update Confirmation Order*
Y	Y	000011	00000001	N	Y	*SSD Update Rejection Order*
N	Y	000101	0000nnnn	N	Y	*Parameter Update Confirmation Order* (where 'nnnn' is the Request Number)
N	Y	001011	00000000	N	N	*Request Wide Analog Service Order*
N	Y	001011	00000001	N	N	*Request Narrow Analog Service Order*
N	Y	001011	00000010	N	N	*Request Analog Service Order*
Y	Y	010000	00000000	N	Y	*Mobile Station Acknowledgment Order* (see [4])
N	Y	010011	00000000	Y	N	*Service Option Request Order* (Band Class 0 only) (see 2.7.3.2)
N	Y	010100	00000000	Y	Y	*Service Option Response Order* (Band Class 0 only) (see 2.7.3.3)
Y	Y	010101	00000000	N	Y	*Release Order* (normal release)
Y	Y	010101	00000001	N	Y	*Release Order* (with power-down indication)
N	Y	010101	00000010	N	Y	*Release Order* (with service inactive indication)
N	Y	010111	00000000	N	N	*Long Code Transition Request Order* (request public)

N	Y	010111	00000001	N	N	*Long Code Transition Request Order* (request private)

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 Qualification Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
N	Y	010111	00000010	N	Y	*Long Code Transition Response Order* (use public)
N	Y	010111	00000011	N	N	*Long Code Transition Response Order* (use private)
N	Y	011000	00000000	N	Y	*Connect Order*
N	Y	011001	0000nnnn	N	Y	*Continuous DTMF Tone Order* (where 'nnnn' is the tone per Table 2.7.1.3.2.4-4).
N	Y	011001	11111111	N	Y	*Continuous DTMF Tone Order* (Stop continuous DTMF tone)
N	Y	011101	nnnnnnnn	N	Y	*Service Option Control Order* (Band Class 0 only) (the specific control is designated by 'nnnnnnnn' as determined by each service option)
Y	Y	011110	nnnnnnnn	N	N	*Local Control Response Order* (specific response as designated by 'nnnnnnnn' as determined by each system)
Y	Y	011111	00000001	Y	Y	*Mobile Station Reject Order* (unspecified reason; see 2.7.3.4)
Y	Y	011111	00000010	Y	Y	*Mobile Station Reject Order* (message not accepted in this state; see 2.7.3.4)
Y	Y	011111	00000011	Y	Y	*Mobile Station Reject Order* (message structure not acceptable; see 2.7.3.4)

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 Qualification Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
Y	Y	011111	00000100	Y	Y	*Mobile Station Reject Order* (message field not in valid range; see 2.7.3.4)
N	Y	011111	00000101	Y	Y	*Mobile Station Reject Order* (message type or order code not understood; see 2.7.3.4)
Y	Y	011111	00000110	Y	Y	*Mobile Station Reject Order* (message requires a capability that is not supported by the mobile station; see 2.7.3.4)
Y	Y	011111	00000111	Y	Y	*Mobile Station Reject Order* (message cannot be handled by the current mobile station configuration; see 2.7.3.4)
Y	Y	011111	00001000	Y	Y	*Mobile Station Reject Order* (response message would exceed allowable length; see 2.7.3.4)
Y	Y	011111	00001001	Y	Y	*Mobile Station Reject Order* (information record is not supported for the specified band class and operating mode; see 2.7.3.4)
N	Y	011111	00001010	Y	Y	*Mobile Station Reject Order* (search set not specified; see 2.6.6.2.5.1)
N	Y	011111	00001011	Y	Y	*Mobile Station Reject Order* (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 Qualification Code, ORDQ (binary)	More Fields other than ORDQ	Support Req'd	Name/Function
N	Y	011111	00001100	Y	Y	*Mobile Station Reject Order* (invalid Frequency Assignment; see 2.6.6.2.5.1)
N	Y	011111	00001101	Y	Y	*Mobile Station Reject Order* (search period too short; see 2.6.6.2.5.1)
Y	N	011111	00001110	N	Y	*Mobile Station Reject Order* (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	*Mobile Station Reject Order* (Encryption key with the specified KEY_SEQ not stored)
N	Y	011111	00010000	Y	Y	*Mobile Station Reject Order* (call assignment not accepted)
N	Y	011111	00010001	Y	Y	*Mobile Station Reject Order* (no call control instance present with the specified identifier)
N	Y	011111	00010010	Y	Y	*Mobile Station Reject Order* (a call control instance is already present with the specified identifier)
N	Y	011111	00010011	Y	Y	*Mobile Station Reject Order* (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

ORDQ – Order qualification code.

The mobile station shall set this field to the ORDQ value shown in Table 2.7.3-1 corresponding to the reason for rejecting the message.

REJECTED_TYPE – Message type of rejected message.

The mobile station shall set this field to the value of the MSG_TYPE field of the message being rejected.

If the MSG_TYPE field is not 8 bits, the mobile station shall set the least significant bits of this field to the value of the MSG_TYPE field and set all the remaining bits to '0'.

REJECTED_ORDER – Order type of rejected message.

If the rejected message was an *Order Message*, the mobile station shall set this field to the value of the ORDER field in the rejected message.

If the REJECTED_PDU_TYPE equals '01', the mobile station shall set this field to '00000000'.

Otherwise, the mobile station shall omit this field.

REJECTED_ORDQ – Order qualification code of rejected message.

If the rejected message was an *Order Message* including an ORDQ field, the mobile station shall set this field to the value of the ORDQ field in the rejected message. If the rejected message was an *Order Message* not including an ORDQ field, the mobile station shall set this field to '00000000'.

If the REJECTED_PDU_TYPE equals '01', the mobile station shall set this field to '00000000'.

Otherwise, the mobile station shall omit this field.

REJECTED_PARAM_ID – Parameter identification of the rejected parameter.

If the rejected message was a *Set Parameters Message*, the mobile station shall set this field to the PARAMETER_ID of the first parameter for which the requested operation could not be completed.

If the REJECTED_PDU_TYPE equals '01', the mobile station shall set this field to '00000000'.

Otherwise, the mobile station shall omit this field.

REJECTED_RECORD – Record type of the rejected information record.

If the rejected message was a *Feature Notification Message*, an *Alert With Information Message* or a *Flash With Information Message*, the mobile station shall set this field to the RECORD_TYPE field of the first information record that could not be accepted.

If the REJECTED_PDU_TYPE equals '01', the mobile station shall set this field to '00000000'.

Otherwise, the mobile station shall omit this field.

TAG – Transaction identifier.

The mobile station shall set this field to the transaction identifier (received from the base station) of the call assignment being rejected.

CON_REF – Connection reference.

The mobile station shall set this field to the value of the connection reference of the service option connection corresponding to the call.

REJECTED_PDU_TYPE – PDU type of the rejected message.

If $P\_REV\_IN\_USE_S$ is less than six, the mobile station shall omit this field; otherwise, the mobile station shall set this field to the REJECTED_PDU_TYPE code shown in Table 2.7.3.4-1 corresponding to the PDU type of the message being rejected.

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

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.

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

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*.

2.7.4.1 Reserved

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’.

2.7.4.5 Reserved

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.

MOB_FIRM_REV – Firmware revision number.

This number is assigned by the manufacturer for a particular firmware version.

The mobile station shall set this field to the revision number assigned by the manufacturer for the firmware version running in this mobile station.

SCM – Station class mark.

The mobile station shall set this field to its station class mark. See 2.3.3.

LOCAL_CTRL – Local control indicator.

If local control is enabled, the mobile station shall set this field to '1'. If local control is disabled, the mobile station shall set this field to '0'. See [6].

SLOT_CYCLE_INDEX – Slot cycle index.

If the requested operating mode is CDMA and 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'.

SERVICE_OPTION – Supported service option.

If the requested operating mode is CDMA, the mobile station shall include one occurrence of this field for each service option supported by the mobile station (see [30]); otherwise, the mobile station shall include one occurrence of this field with the value set to '0000000000000000'.

RESERVED – Reserved bits.

The mobile station shall set this field to '0000'.

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.

The mobile station shall include one occurrence of the following two-field record for each home (non-roaming) (SID, NID) pair (see 2.6.5.2):

SID – System identification.

The mobile station shall set this field to the SID value for this (SID, NID) pair.

NID – Network identification.

The mobile station shall set this field to the NID value for this (SID, NID) pair.

RESERVED – Reserved bits.

The mobile station shall add reserved bits as needed in order to make the length of the entire information record equal to an integer number of octets. The mobile station shall set these bits to '0'.

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’.

RESERVED – Reserved bits.

The mobile station shall set this field to '00000'.

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’.

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.

2.7.4.14 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 × 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 Framefor 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’.

2.7.4.18 Service Configuration

The format of the Service Configuration information record is defined in 3.7.5.7.

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:

CHARi	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:	
CHARi	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'.

CHARi – 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.

1

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:	
CHARi	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'.

CHARi – 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.

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.

2.7.4.22 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)

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)

ACCESS_ENTRY_HO – Access Entry Handoff Support.

This field identifies the mobile station's support for access entry handoff (see 2.6.2.3). The mobile station shall set this field to '1' if access entry handoff is supported; otherwise, the mobile station shall set this field to '0'.

ACCESS_PROBE_HO – Access Probe Handoff Support.

This field identifies the mobile station's support for access probe handoff (see 2.6.3.1.3.3). The mobile station shall set this field to '1' if access probe handoff is supported; otherwise, the mobile station shall set this field to '0'.

ANALOG_SEARCH – Analog Search Support.

This field identifies the mobile station's support for analog searching (see 2.6.6.2.10). The mobile station shall set this field to '1' if analog searching is supported; otherwise, the mobile station shall set this field to '0'.

HOPPING_BEACON – Hopping Beacon Support.

This field identifies the mobile station's support for hopping pilot beacons. The mobile station shall set this field to '1' if hopping pilot beacons are supported; otherwise, this field shall be set to '0'.

MAHHO – Mobile Assisted Hard Handoff Support.

This field identifies the mobile station's support for mobile assisted hard handoff. The mobile station shall set this field to '1'.

PUF – Location Power Up Function Support.

This field identifies the mobile station's support for location power up function (see 2.6.4.1.7).

If $MOB\_P\_REV_p$ is equal to '00000101', the mobile station shall set this field to '1'; otherwise the mobile station shall set this field as follows:

If the mobile station supports location power up function, the mobile station shall set this field to '1', otherwise, the mobile station shall set this field to '0'.

ANALOG_553A – Analog Support.

This field identifies the mobile station's compatibility with [12]. The mobile station shall set this field to '1'.

QPCH – Quick Paging Channel Support.

This field identifies the mobile station's support for the Quick Paging Channel. The mobile station shall set this field to '1' if the Quick Paging Channel is supported; otherwise, the mobile station shall set this field to '0'.

SLOTTED_TIMER – Slotted Timer Support.

This field identifies the mobile station's support for the Slotted Timer. The mobile station shall set this field to '1' if the Slotted Timer is supported; otherwise, the mobile station shall set this field to '0'.

CHS_SUPPORTED – Control Hold Mode supported indicator.

The mobile station shall set this field to '1' to indicate that the mobile station supports the Control Hold Mode; otherwise, the mobile station shall set this field to '0'.

GATING_RATE_SET – Set of supported Reverse Pilot gating rates.

If CHS_SUPPORTED is included and is set to '1', the mobile station shall set this field to value shown in Table 2.7.4.25-1 corresponding to the set of supported reverse pilot gating rates; otherwise the mobile station shall omit this field.

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 ½
10	Gating rates 1, ½ and ¼
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'.

F_SCH_FLEX-_SUPPORTED – Forward Supplemental 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 Supplemental Channel; otherwise, the mobile station shall set this field to ‘0’.

R_SCH_FLEX-_SUPPORTED – Reverse Supplemental 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 Supplemental Channel; otherwise, the mobile station shall set this field to ‘0’.

VAR_SUPPORTED – Variable rate feature supported indicator.

The mobile station shall set this field to ‘1’ if it supports the variable rate feature (the capability to support rate determination) on any of the forward or reverse Supplemental or Dedicated Control channels; otherwise, the mobile station shall set this field to ‘0’.

F_SCH_VAR-_SUPPORTED – Forward Supplemental Channel Variable Rate 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 rate determination feature on the Forward Supplemental Channels.

R_SCH_VAR-_SUPPORTED – Reverse Supplemental Channel Variable Rate 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 rate determination feature on the Reverse Supplemental Channels.

MAX_SUM-
_NUM_BITS_C – Maximum sum of number of bits corresponding to Convolutional rates in the variable rate set.

The mobile station shall include this field only if F_SCH_VAR_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to the maximum of the sum of possible information bits per 20 ms corresponding to the Convolutional Code rates in the Variable Rate Set for a Forward Supplemental Channel below which the mobile station is capable of performing rate determination on the forward supplemental channel when Convolutional coding is used.

MAX_SUM-
_NUM_BITS_T – Maximum sum of number of bits corresponding to Turbo Code rates in the variable rate set

The mobile station shall include this field only if F_SCH_VAR_SUPPORTED is equal to '1'. If this field is included, the mobile station shall set this field to the maximum of the sum of possible information bits per 20 ms corresponding to the Turbo Code rates in the Variable Rate Set for a Forward Supplemental Channel below which the mobile station is capable of performing rate determination on the forward supplemental channel when Turbo coding is used.

RESERVED – Reserved bits.

The mobile station shall add reserved bits as needed in order to make the length of the entire information record equal to an integer number of octets. The mobile station shall set these bits to '0'.

2.7.4.26 Extended Record Type - International

The use of this record type is country-specific. The first ten bits of the type-specific fields shall include the Mobile Country Code (MCC) associated with the national standards organization administering the use of the record type. Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the first two octets of the type-specific fields shall be used to specify the country-specific record type.

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.

The mobile station shall set this field to ‘1’ if the mobile station supports the Dedicated Control Channel; otherwise, the mobile station shall set this field to ‘0’.

DCCH Type-specific fields – Fundamental Channel configuration capability information.

If the DCCH_SUPPORTED field is set to ‘1’, the mobile station shall include this field and set it as described in 2.7.4.27.2; otherwise the mobile station shall omit this field.

FOR_SCH_SUPPORTED – Forward Supplemental Channel supported indicator.

The mobile station shall set this field to ‘1’ if the mobile station supports the Forward Supplemental Channel; otherwise, the mobile station shall set this field to ‘0’.

FOR_SCH Type-specific fields – Forward Supplemental Channel Configuration Capability Information.

If the FOR_SCH_SUPPORTED field is set to ‘1’, the mobile station shall include this field and set it as described in 2.7.4.27.3; otherwise the mobile station shall omit this field.

REV_SCH_SUPPORTED – Reverse Supplemental Channel supported indicator.

The mobile station shall set this field to ‘1’ if the mobile station supports the Reverse Supplemental Channel; otherwise, the mobile station shall set this field to ‘0’.

REV_SCH Type-specific fields – Reverse Supplemental Channel Configuration capability information.

If the REV_SCH_SUPPORTED field is set to ‘1’, the mobile station shall include this field and set it as described in 2.7.4.27.4; otherwise the mobile station shall omit this field.

NONOCTET_ALIGNED-_DATA – Non-octet Aligned Data Block supported indicator.

If both the FOR_SCH_SUPPORTED and REV_SCH_SUPPORTED fields are set to ‘0’, the mobile station shall omit this field. Otherwise, the mobile station shall set this field to ‘1’ if it supports use of non-octet aligned data blocks on a SCH.

OCTET_ALIGNED_DATA – Octet Aligned Data Block supported indicator.

If both the FOR_SCH_SUPPORTED and REV_SCH_SUPPORTED fields are set to ‘0’, the mobile station shall omit this field. Otherwise, the mobile station shall set this field to ‘1’ if it supports use of octet aligned data blocks on a SCH.

STS_SUPPORTED – STS supported indicator.

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 Channel supported.

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’.

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 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’.

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

2.7.4.27.2 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.

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 Dedicated Control 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'.

REV_DCCH_LEN – Reverse 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 REV_DCCH_RC_MAP field.

REV_DCCH_RC_MAP – Reverse Dedicated Control Channel 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 Dedicated Control 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 Dedicated Control 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'.

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.

The mobile station shall set each indicator to '1' if the corresponding Radio Configuration on the Forward Supplemental 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'.

FOR_SCH_NUM – Number of Forward Supplemental Channels.

The mobile station shall set this field to the number of Forward Supplemental Channels supported by the mobile station.

If the FOR_SCH_NUM field is greater than zero, the mobile station shall include one occurrence of the following 8 fields for each Forward Supplemental Channel supported by the mobile station. The first occurrence is SCH0 related information. The second occurrence (if any) is SCH1 related information.

FOR_TURBO-_SUPPORTED – Forward Turbo Coding supported indicator.

If the mobile station supports Turbo 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_TURBO-_BLOCK_SIZE – Forward maximum Turbo Coding block size.

If the field FOR_TURBO_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 Turbo coding (see Table 2.7.4.27.3-1).

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.

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	

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.

The mobile station shall set each indicator to ‘1’ if the corresponding Radio Configuration on the Reverse Supplemental 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’.

REV_SCH_NUM – Number of Reverse Supplemental Channels

The mobile station shall set this field to the number of Reverse Supplemental Channels supported by the mobile station.

If the REV_SCH_NUM field is greater than zero, the mobile station shall include one occurrence of the following 8 fields for each Reverse Supplemental Channel supported by the mobile station. The first occurrence is SCH0 related information. The second occurrence (if any) is SCH1 related information.

REV_TURBO-_SUPPORTED – Reverse Turbo Coding supported indicator.

If the mobile station supports Turbo Coding on this Reverse Supplemental Channel, it shall set this field to ‘1’; otherwise, the mobile station shall set this field to ‘0’.

REV_MAX_TURBO-_BLOCK_SIZE – Reverse maximum Turbo Coding block size.

If the field REV_TURBO_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 Turbo coding (see Table 2.7.4.27.3-1).

REV_CONV_SUPPORTED – Reverse Convolutional Coding supported indicator.

If the mobile station supports Convolutional Coding on this Reverse Supplemental Channel, it shall set this field to ‘1’; otherwise, the mobile station shall set this field to ‘0’.

REV_MAX_CONV-_BLOCK_SIZE – Reverse maximum Convolutional Coding block size.

If the field REV_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).

REV_FRAME_40-_SUPPORTED – Reverse 40ms frame indicator.

If the mobile station supports 40 ms frames on this Reverse Supplemental Channel, it shall set this field to ‘1’; otherwise, the mobile station shall set this field to ‘0’.

REV_FRAME_80-_SUPPORTED – Reverse 80ms frame indicator.

If the mobile station supports 80 ms frames on this Reverse Supplemental Channel, it shall set this field to ‘1’; otherwise, the mobile station shall set this field to ‘0’.

REV_MAX_RATE – Maximum reverse supplemental channels rate

The mobile station shall set this field according to Table 2.7.4.27.3-2 to indicate the maximum reverse supplemental channel frame rate supported.

2.7.4.28 Extended 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.

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

NUM_MO_FOR_FCH – Number of Forward Fundamental Channel Multiplex Options.

The mobile station shall set this field to the number of the Forward Fundamental Channel Multiplex Options supported by the mobile station.

If NUM_MO_FOR_FCH is not equal to '0000', the mobile station shall include NUM_MO_FOR_FCH occurrences of the following two fields for each supported Forward Fundamental Channel multiplex option:

MO_FOR_FCH – Forward Fundamental Channel multiplex option.

The mobile station shall set this field to the Forward Fundamental Channel multiplex option.

FOR_NUM-

_BITS_FCH – Forward Fundamental Channel number of bits per frame.

The mobile station shall set this field as described below to indicate which number of bits per frameare 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 number of bits per frame. Bit positions of these indicators in the field and corresponding number of bits per frameare specified in Table 2.7.4.28-1 if MO_FOR_FCH is equal to 1, Table 2.7.4.28-2 if MO_FOR_FCH is equal to 2, and Table 2.7.4.28-3 if MO_FOR_FCH is equal to 0x704.

The mobile station shall set each indicator to '1' if the corresponding number of bits per frameon the Forward Fundamental Channel is supported by the mobile station; otherwise, the mobile station shall set the indicator to '0'.

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 frameon 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.

The mobile station shall set this field to the Forward Dedicated Control Channel multiplex option.

NUM_MO_REV_DCCH – Number of Reverse Dedicated Control Channel Multiplex Options.

The mobile station shall set this field to the number of the Reverse Dedicated Control Channel Multiplex Options supported by the mobile station.

If NUM_MO_REV_DCCH is not equal to '0000', the mobile station shall include NUM_MO_REV_DCCH occurrence of the following one field for each supported Reverse Dedicated Control Channel multiplex option:

MO_REV_DCCH – Reverse Dedicated Control Channel multiplex option.

The mobile station shall set this field to the Reverse Dedicated Control Channel multiplex option.

NUM_MO_FER_SCH – Number of Forward Supplemental Channel Multiplex Options.

The mobile station shall set this field to the number of the Reverse Supplemental Channel Multiplex Options supported by the mobile station.

If NUM_MO_FER_SCH is not equal to '0000', the mobile station shall include NUM_MO_FER_SCH occurrence of the following two fields:

FOR_SCH_ID – Forward Supplemental Channel identifier.

The mobile station shall set this field to specify the Forward Supplemental Channel to which the Forward Supplemental multiplex option supported by the mobile station corresponds.

MO_FOR_SCH – Forward Supplemental Channel multiplex option.

The mobile station shall set this field to the Forward Supplemental Channel multiplex option.

NUM_MO_REV_SCH – Number of Reverse Supplemental Channel Multiplex Options.

The mobile station shall set this field to the number of the Reverse Supplemental Channel Multiplex Options supported by the mobile station.

If NUM_MO_REV_SCH is not equal to '0000', the mobile station shall include NUM_MO_REV_SCH occurrence of the following two fields:

REV_SCH_ID – Reverse Supplemental Channel identifier.

The mobile station shall set this field to specify the Reverse Supplemental Channel to which the Reverse Supplemental multiplex option supported by the mobile station corresponds.

MO_REV_SCH – Reverse Supplemental Channel multiplex option.

The mobile station shall set this field to the Reverse Supplemental Channel multiplex option.

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 × 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

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 4-bit 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.

NUMBER_PLAN – Numbering plan.

If NUM_INCL 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 numbering plan used for the called number, as defined in [7], Section 4.5.9; otherwise, the mobile station shall omit this field.

NUM_CHAR – Number of characters.

If NUM_INCL is set to ‘1’, the mobile station shall set this field to the number of characters included in this record; otherwise, the mobile station shall omit this field.

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 bits.

The mobile station shall add reserved bits as needed in order to make the length of the entire information record equal to an integer number of octets. The mobile station shall set these bits to ‘0’.

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 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’.

REQUIREMENTS FOR BASE STATION CDMA OPERATION

This section defines requirements that are specific to CDMA base station equipment and operation.

3.1 Reserved

3.2 Reserved

3.3 Security and Identification

3.3.1 Authentication

The base station may be equipped with a database that includes unique mobile station authentication keys, shared secret data, or both for each registered mobile station in the system. This database is used for authentication of mobile stations that are equipped for authentication operation.

If the base station supports mobile station authentication, it shall provide the following capabilities: The base station shall send and receive authentication messages and perform the authentication calculations described in 2.3.12.1. If the base station supports 800 MHz analog operation, the base station should set the RAND parameter of the *Access Parameters Message* to the same value transmitted on the forward analog control channel (see [6]).

3.3.2 Encryption

If the base station supports mobile station authentication (see 3.3.1), it may also support message encryption by providing the capability to send encryption control messages and the ability to perform the operations of encryption and decryption as specified in 2.3.12.2.

3.3.3 Voice Privacy

If the base station supports mobile station authentication (see 3.3.1), it may also support voice privacy using the private long code mask, as specified in 2.3.12.3.

3.4 Supervision

3.4.1 Access Channel or Enhanced Access Channel

The base station shall continually monitor each active Access Channel or Enhanced Access Channel or both. The base station should provide control in cases of overload by using either the *Access Parameters Message* or the *Enhanced Access Parameters Message*.

3.4.2 Reverse Traffic Channel

The base station shall continually monitor each active Reverse Traffic Channel to determine if the call is active. If the base station detects that the call is no longer active, 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

[23] See, 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 M*essage 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:

ANSI-41 System Parameters Message

User Zone Identification Message

Private Neighbor List Message

Extended Global Service Redirection Message

Extended CDMA Channel List Message

MC-RR Parameters Message

Universal Neighbor List Message

Enhanced Access Parameters Message

ANSI-41 RAND Message

The overhead messages on the Paging Channel are:

System Parameters Message

Neighbor List Message (Band Class 0 only)

Access Parameter Message

CDMA Channel List Message

Extended System Parameters Message

Extended Neighbor List Message (Band Class 1 only)

General Neighbor List Message

Global Service Redirection Message

User Zone Identification Message

Private Neighbor List Message

Extended Global Service Redirection Message

Extended CDMA Channel List Message

The base station shall maintain a configuration sequence number (CONFIG_SEQ) for configuration messages transmitted on the Paging Channel, and shall increment CONFIG_SEQ modulo 64 whenever the base station modifies the following messages:

System Parameters Message

Neighbor List Message (Band Class 0 only)

CDMA Channel List Message

Extended System Parameters Message

Extended Neighbor List Message (Band Class 1 only)

General Neighbor List Message

Global Service Redirection Message

User Zone Identification Message

Private Neighbor List Message

Extended Global Service Redirection Message

Extended CDMA Channel List Message

The base station shall maintain a configuration sequence number (CONFIG_SEQ) for configuration messages transmitted on the Broadcast Control Channel, and shall increment CONFIG_SEQ modulo 64 whenever the base station modifies the following messages:

ANSI-41 System Parameters Message

User Zone Identification Message

Private Neighbor List Message

Extended Global Service Redirection Message

Extended CDMA Channel List Message

MC-RR Parameters Message

Universal Neighbor List Message

The base station shall maintain an access configuration sequence number (ACC_CONFIG_SEQ) for the Access Channel, and shall increment ACC_CONFIG_SEQ modulo 64 whenever the base station modifies the *Access Parameters Message*.

The base station shall maintain an access configuration sequence number (ACC_CONFIG_SEQ) for the Enhanced Access Channel, and shall increment ACC_CONFIG_SEQ modulo 64 whenever the base station modifies the *Enhanced Access Parameters Message*.

On each Broadcast Control Channel which the base station transmits, the base station shall send each of the following system overhead messages at least once per T_{1b} seconds:

Extended CDMA Channel List Message

ANSI-41 System Parameters Message

MC-RR Parameters Message

Enhanced Access Parameters Message

Universal Neighbor List Message

If the base station supports Broadcast Control Channels, and the base station is sending the *ANSI-41 RAND Message*, it shall send it at least once per T_{1b} seconds.

On each of the Paging Channels the base station transmits, the base station shall send each of the following system overhead messages at least once per T_{1b} seconds:

1. *Access Parameters Message*
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 then 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.

The base station may send an *Extended CDMA Channel List*. If the message is sent, the base station shall send it at least once per T_{1b} seconds.

3.6.2.3 Mobile Station Directed Messages

The base station may send the following messages directed to a mobile station on the f-csch. If the base station sends a message, the base station shall comply with the specified requirements for sending the message, if any:

Abbreviated Alert Order

Audit Order

Authentication Challenge Message

Base Station Challenge Confirmation Order

Channel Assignment Message

Data Burst Message

Extended Channel Assignment Message

Feature Notification Message

General Page Message

Intercept Order

Local Control Order

Lock Until Power-Cycled Order

Maintenance Required Order

PACA Message

Registration Accepted Order

Registration Rejected Order

Registration Request Order

Release Order

Reorder Order

Retry Order

Security Mode Command Message

Service Redirection Message

Service Release Message

Slotted Mode Order

SSD Update Message

Status Request Message

TMSI Assignment Message

Universal Page Message (Forward Common Control Channel Only)

Unlock Order

User Zone Reject Message

The base station should send at least one *General Page Message* in each Paging Channel slot. The base station shall not omit a *General Page Message* in two adjacent Paging Channel slots.

The base station should send at least one *General Page Message* or *Universal Page Message* in each Forward Common Control Channel slot. The base station shall not omit both a *General Page Message* and a *Universal Page Message* in two adjacent slots.

3.6.2.3.1 Processing when the General Page Message is Used

The base station shall use the following rules for selecting the Paging Channel or 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 Paging Channel or Forward Common Control Channel slot.
- If 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 slot cycle index (see 2.6.2.1.1.3), 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.

- 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:

- The base station shall not send the message later in the slot than a *Universal Page Message* which lacks a mobile station-directed message announcement and which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that mobile station.

- If the base station is able to determine that the mobile station is operating in the slotted mode and that the mobile station is not waiting for a priority access channel assignment and that the slotted timer in the mobile station is not active and the base station is able to determine the mobile station's slot cycle index (see 2.6.2.1.1.3.3), the base station shall send the message at least once in an assigned Forward Common Control Channel slot for the mobile station (see 3.6.2.1.3) or in the following slot, with the position within these two slots subject to the following limitation:

  - The base station shall not send the message later in the slot than a *Universal Page Message* that lacks a mobile station-directed message announcement and which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that mobile station.

- 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 Forward Common Control Channel slot for the mobile station (see 3.6.2.1.3), or in the following slot, with the position within these two slots subject to the following limitation:

  - The base station shall not send the message later in the slot than a *Universal Page Message* that lacks a mobile station-directed message announcement and which lacks a mobile station-addressed page (see 3.7.2.3.2.25) for that mobile station.

The base station should send messages directed to both mobile stations operating in the slotted mode and mobile stations operating in the non-slotted mode later in the slot than 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. ($\mathbf{B} + 3$ 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 × (**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,...). The base station shall send the broadcast message announced by broadcast page n in the paging slot that occurs n × 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 (**B** + 7) Forward Common Control Channel slots, where **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.

3.6.2.4.2.1.2.1.2 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 $4 \times$ (**B** + 7) slots of the slot in which the enhanced broadcast page was first sent. (**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 $4 \times$ (**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 ms × (1 + 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 ms × (1 + 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

$$(\lfloor (t+5)/4 \rfloor - \mathrm{PGSLOT}) \bmod (16 \times T) = 0,$$

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:

- 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 [2].
- 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].
- The base station shall raise a *mobile station inactive on common channel* indication for the mobile station.

If the base station sends a *Channel Assignment Message*, the base station shall not set RESPOND equal to '0' when ASSIGN_MODE = '001', ASSIGN_MODE = '010', or ASSIGN_MODE = '101'. If the base station sends an *Extended Channel Assignment Message*, the base station shall not set RESPOND equal to '0' when ASSIGN_MODE = '001' or ASSIGN_MODE = '010'

3.6.3.6 Response to Registration Message

If the base station receives a *Registration Message*, the base station may send a *Registration Accepted Order*, a *Registration Rejected Order*, or a *Service Redirection Message*. The base station may also start authentication procedures (see 2.3.12), may start TMSI assignment procedures (see 2.3.15), or may 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 a *Status Request Order*.

If the *Registration Message* specifies a power-down registration, Layer 3 shall send a *mobile station inactive on common channel* indication to Layer 2 (see 3.1.1.2.2 of [4]).

3.6.3.7 Response to Data Burst Message

No requirements.

3.6.3.8 Reserved

3.6.3.9 Reserved

3.6.3.10 Service Redirection

If the base station sends a *Service Redirection Message* to the mobile station, Layer 3 shall send a *mobile station inactive on common channel* indication to Layer 2 (see 3.1.1.2.2 of [4]).

3.6.4 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*.

Traffic Channel processing consists of the following substates:

- *Traffic Channel Initialization Substate* - In this substate, the base station begins transmitting on the Forward Traffic Channel and receiving on the Reverse Traffic Channel.
- *Traffic Channel Substate* - In this substate, the base station exchanges Traffic Channel frames with the mobile station in accordance with the current service configuration. While in this substate, one or more Call Control instances can be activated (see 3.6.8).
- *Release Substate* - In this substate, the base station disconnects the calls and the physical channels.

3.6.4.1 Special Functions and Actions

The base station performs the following special functions and actions in one or more of the Traffic Channel processing substates:

3.6.4.1.1 Forward Traffic Channel Power Control

When the base station enables Forward Traffic Channel power control, the mobile station reports frame error rate statistics to the base station using the *Power Measurement Report Message*.

The base station may enable Forward Traffic Channel power control using the *System Parameters Message* sent on the Paging Channel and the *Power Control Parameters Message* sent on the Forward Traffic Channel. The base station may enable Forward Traffic Channel power control using the *MC-RR Parameters Message* sent on the Broadcast Control Channel and the *Power Control Parameters Message* sent on the Forward Traffic Channel. The base station may enable periodic reporting which causes the mobile station to report frame error rate statistics at specified intervals. The base station may also enable threshold reporting which causes the mobile station to report frame error rate statistics when the frame error rate reaches a specified threshold.[24]

The base station may use the reported frame error rate statistics to adjust the transmit power of the Forward Traffic Channel.

3.6.4.1.2 Service Configuration and Negotiation

During Traffic Channel operation, the mobile station and base station communicate through the exchange of Forward and Reverse Traffic Channel Configurations. The mobile station and base station use a common set of attributes for building and interpreting Traffic Channel frames. This set of attributes, referred to as a service configuration, consists of both negotiable and non-negotiable parameters.

The set of negotiable service configuration parameters consists of the following:

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[24] In 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

to acknowledge the transition to a new service configuration.

Service Option Control Message: The mobile station and base station can use this message to invoke service option specific functions.

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:

Service Option Request Order: The mobile station and base station can use this message either to request a service option or suggest an alternative service option.

Service Option Response Order: The mobile station and base station can use this message to accept or reject a service option request.

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:

Origination Message: The mobile station can use this message to propose an initial service configuration.

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*, and to indicate which type of negotiation, either service negotiation or service option negotiation, is to be used during the call.

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.

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.

General Page Message or *Universal Page Message:* The base station can use a mobile-station-addressed page in a *General Page Message* or *Universal Page Message* to propose an initial service configuration.

Page Response Message: The mobile station can use this message to accept or reject the initial service configuration proposed by the base station in a mobile-station-addressed page, or to propose an alternative initial service 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.

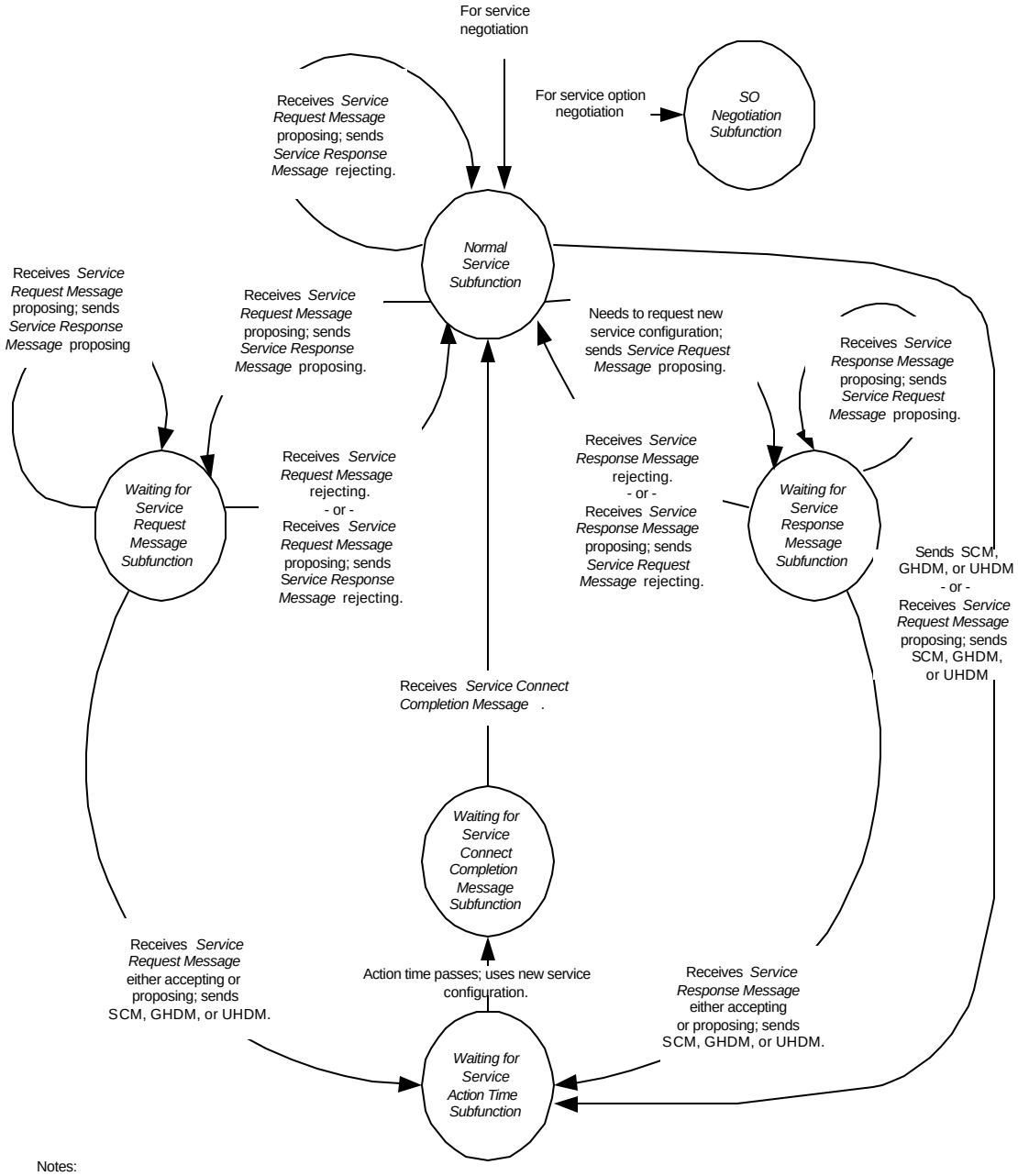
3.6.4.1.2.2 Service Subfunctions

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 S*ervice 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.

At any given time during Traffic Channel processing, only one of the service subfunctions is active. For example, when the base station first begins Traffic Channel processing, either the *Normal Service Subfunction* or the *SO Negotiation Subfunction* is active. Each of the other service subfunctions may become active in response to various events which occur during the Traffic Channel substates. Typically, the base station processes events pertaining to service configuration and negotiation in accordance with the requirements for the active service subfunction. However, some Traffic Channel substates do not allow for the processing of certain events pertaining to service configuration and negotiation, or specify requirements for processing such events which supersede the requirements of the active service subfunction.



Notes:

- SCM stands for *Service Connect Message* .
- GHDM stands for *General Handoff Direction Message* .
- UHDM stands for *Universal Handoff Direction Message* .
- Processing for special cases, such as timeouts and errors, is not shown in this diagram.

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.

- 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 accept a proposed service configuration, the base station shall perform one of the following actions:
       - The base station shall send a *Service Connect Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message* and shall activate the *Waiting for Service Action Time Subfunction*.
       - The base station shall send a *Service Request Message* to propose an alternative service configuration and shall activate the *Waiting for Service Response Message Subfunction*.
     - If the purpose of the message is to reject a proposed service configuration, the base station shall activate the *Normal Service Subfunction*.
     - 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. The base station shall activate the *Normal Service Subfunction*.
       - 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.
  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:

- If the service request sequence number (SERV_REQ_SEQ) from the message does not match the sequence number of the *Service Request Message* for which the base station is expecting a response, the base station shall not process the layer 3 fields of the message.
- If the purpose of the message is to accept a proposed service configuration, the base station shall perform one of the following actions:
  - 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*. Or
  - The base station shall send a *Service Request Message* to propose an alternative service configuration.
- If the purpose of the message is to reject a proposed service configuration, the base station shall activate the *Normal Service Subfunction*.
- 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 Request Message* to reject the proposed service configuration. The base station shall activate the *Normal Service Subfunction*.
  - 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 Request Message* to propose the alternative service configuration.

- 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*

3.6.4.1.2.2.4 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.

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.

- If the base station does not accept the requested service option and has an alternative service option to request, the base station shall set SO_REQ to the alternative service option number and shall send a *Service Option Request Order* requesting the alternative service option within T_{4b} seconds.
- If the base station does not accept the requested service option and does not have an alternative service option to request, the base station shall set SO_REQ to NULL and shall send a *Service Option Response Order* to reject the request within T_{4b} seconds. The base station shall continue to use the current service configuration.

• If the base station receives a *Service Option Response Order*, it shall process the order as follows:

- If the service option number specified in the order is equal to SO_REQ, the base station shall set SO_REQ to NULL and shall begin using the service configuration implied by the specified service option in accordance with the requirements for the service option. The implied service configuration shall include the default Forward and Reverse Multiplex Options and 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.
- If the order indicates a service option rejection, the base station shall set SO_REQ to NULL. The base station shall continue to use the current service configuration.
- If the order does not indicate a service option rejection and the service option specified in the order is not equal to SO_REQ, the base station shall set SO_REQ to NULL, should send a *Release Order* (ORDQ = '00000010'), and should enter the *Release Substate*.

• If the base station receives a *Service Option Control Order*, the base station shall process the order as follows:

- If the current service configuration includes a service option connection, the base station shall process the received *Service Option Control Order* in accordance with the requirements for the service option associated with the service option connection.

• 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*
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.

- If the base station declares a loss of Reverse Traffic Channel continuity (see 3.4), the base station should send a *Release Order* to the mobile station. If the base station sends a *Release Order*, the layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate*.
- The base station may perform Forward Traffic Channel power control as specified in 3.6.4.1.1.
- The base station may request a new service configuration by initiating service negotiation or service option negotiation in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).
- The base station may send a *Service Option Control Message* or *Service Option Control Order* to invoke a service option specific function in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).
- The base station may request a long code transition, as specified in 3.6.4.1.5, either autonomously or in response to a request for voice privacy specified in the *Origination Message* or *Page Response Message*.
- The base station may perform authentication procedures as specified in 3.3.1.
- The base station may perform TMSI assignment procedures (see 2.3.15).
- For the first call, if the call is mobile-station-originated and the PACA_REORIG field of the *Origination Message* is equal to '1', the layer 3 shall send a "paca reorig indication" to the Call Control instance.
- The base station may control operation of the Forward or Reverse Supplemental Code Channels by including Supplemental Code Channel assignment information in the *Supplemental Channel Assignment Message*, or the *General Handoff Direction Message*.
- The base station may control operation of the Forward or Reverse Supplemental Channels by including Supplemental Channel assignment information in the *Extended Supplemental Channel Assignment Message*, the *Forward Supplemental Channel Assignment Mini Message*, or the *Reverse Supplemental Channel Assignment Mini Message*.
- The base station may assign a new call by sending 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 '0', and the TAG field to the identifier for this transaction.

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 the 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 *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 '0', the TAG field to the identifier for this transaction, and the BYPASS_ALERT_ANSWER field as required.

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.

- If the layer 3 receives a 'call release request' from a Call Control instance, the layer 3 shall perform the following:

If the service option connection corresponding to this call is the only one connected, the base station should send the mobile station a *Release Order* and enter the *Release Substate*.

If the service option connection corresponding to this call is not the only one connected, the base station should release this service option connection. At the action time of the message, the layer 3 shall terminate this Call Control instance.

- The base station may send the following messages. Some of these messages are generated by the Call Control Instance. If the base station sends a message, the base station shall comply with the specified requirements for sending the message, if any:

  Alert With Information Message:

  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

Local Control Order

Lock Until Power-Cycled Order: The base station should send this order in unassured mode.

Long Code Transition Request Order

Maintenance Order:

Maintenance Required Order

Message Encryption Mode Order

Mobile Assisted Burst Operation Parameters Message

Mobile Station Registered Message

Neighbor List Update Message

Parameter Update Order (see 2.3.12.1.3).

Periodic Pilot Measurement Request Order

Pilot Measurement Request Order

Power Control Message

Power Control Parameters Message

Power Up Function Message

Power Up Function Completion Message

Resource Allocation Message

Resource Allocation Mini Message

Release Order: The layer 3 shall send a "release indication" to all Call Control instances, and shall enter the *Release Substate*.

Retrieve Parameters Message

Retry Order

Reverse Supplemental Channel Assignment Mini Message

Security Mode Command Message

Send Burst DTMF Message

Service Connect Message: The base station shall send 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 send the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Control Order

Service Option Request Order

Service Option Response Order

Service Redirection Message: The layer 3 shall send a “release indication” to all Call Control instances, and shall enter the *Release Substate*.

Service Request Message: The base station shall send 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 send the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Set Parameters Message

SSD Update Message

Status Request Message

Status Request Order

Supplemental Channel Assignment Message

TMSI Assignment Message

Universal Handoff Direction Message

User Zone Reject Message

User Zone Update Message

- If the base station receives one of the following messages from the mobile station, the base station shall process the message according to the specified requirements, if any:

Base Station Challenge Order: The base station shall process the message as described in 2.3.12.1.5.

Call Cancel Message

Candidate Frequency Search Report Message: The base station shall process the message as described in 3.6.6.2.2.6.

Candidate Frequency Search Response Message: The base station shall process the message as described in 3.6.6.2.2.4.

Connect Order: 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.

Continuous DTMF Tone Order: 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.

Data Burst Message

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

SSD Update Rejection Order

Status Response Message

Status Message

Supplemental Channel Request Message: The base station may respond with a *Supplemental Channel Assignment Message*, an *Extended Supplemental Channel Assignment Message*, or a *Retry Order*.

Supplemental Channel Request Mini Message: The base station may respond with a *Forward Supplemental Channel Assignment Mini Message* or a *Reverse Supplemental Channel Assignment Mini Message*, or both. The base station may also respond with a *Retry Order*.

TMSI Assignment Completion Message

User Zone Update Request Message: The base station shall process this message as specified in 3.6.7.2.

3.6.4.4 Release Substate

In this substate, the base station disconnects all calls and physical channels.

While in the *Release 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 transmit on the Forward Traffic Channel for at least T_{3b} seconds. The base station shall transmit null traffic and power control bits on the Forward Fundamental Channel, except when transmitting signaling traffic, if the Fundamental Channel is present or transmit power control bits on the Forward Dedicated Control Channel, if only the dedicated Control Channel is present. After T_{3b} seconds, the base station should stop transmitting on the Forward Traffic Channel.
- The base station shall process Reverse Traffic Channel signaling traffic and may discard other types of Reverse Traffic Channel traffic.
- The base station may perform TMSI assignment procedures (see 2.3.15).
- The base station may perform Forward Traffic Channel power control as specified in 3.6.4.1.1.
- The base station may send a *Service Option Control Message* to invoke a service option specific function in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).
- The base station may send the following messages. Some of these messages are generated by the Call Control Instance. If the base station sends a message, the base station shall comply with the specified requirements for sending the message, if any.

  Alert With Information Message

Audit Order

Candidate Frequency Search Request Message

Candidate Frequency Search Control Message

Data Burst Message

Extended Alert With Information Message

Extended Handoff Direction Message

Extended Neighbor List Update Message

Extended Release Message

Extended Supplemental Channel Assignment Message

Forward Supplemental Channel Assignment Mini Message

General Handoff Direction Message

In-Traffic System Parameters Message

Local Control Order

Lock Until Power-Cycled Order: The base station should send this order in unassured mode.

Maintenance Order

Maintenance Required Order

Mobile Assisted Burst Operation Parameters Message

Mobile Station Registered Message

Neighbor List Update Message

Parameter Update Order (see 2.3.12.1.3 or 3.7.4).

Power Control Message

Power Control Parameters Message

Power Up Function Message

Power Up Function Completion Message

Release Order

Resource Allocation Message

Resource Allocation Mini Message

Resource Release Request Message

Resource Release Request Mini Message

Resource Request Message

Resource Request Mini Message

Retrieve Parameters Message

Reverse Supplemental Channel Assignment Mini Message

Service Option Control Message: The base station shall send the message in accordance with the requirements for the active service subfunction (see 3.6.4.1.2.2).

Service Option Control Order

Status Request Message

Status Request Order

Supplemental Channel Assignment Message

TMSI Assignment Message

Universal Handoff Direction Message

User Zone Reject Message

User Zone Update Message

- If the base station receives one of the following messages from the mobile station, the base station shall process the message according to the specified requirements, if any:

Base Station Challenge Order: The base station shall process the message as described in 2.3.12.1.5.

Call Cancel Message

Candidate Frequency Search Report Message: The base station shall process the message as described in 3.6.6.2.2.6.

Candidate Frequency Search Response Message: The base station shall process the message as described in 3.6.6.2.2.4.

Connect Order: 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.

Continuous DTMF Tone Order: 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.

Data Burst Message

Enhanced Origination Message

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:

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

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.

Parameter Update Confirmation Order

Parameters Response Message

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.

Power Measurement Report Message

Release Order

Request Analog Service Order

Request Narrow Analog Service Order

Request Wide Analog Service Order

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

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

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:

- *Soft Handoff:* A handoff in which a new base station commences communications with the mobile station without interrupting the communications with the old base station. The base station[25] can direct the mobile station to perform a soft handoff only when all Forward Traffic Channels assigned to the mobile station have identical band classes, frequency assignments and frame offsets. 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 base station directs the mobile station to transition between disjoint sets of base stations, different band classes, different frequency assignments, different radio configuration, or different frame offsets.
- *CDMA-to-Analog Handoff:* A handoff in which the base station directs the mobile station from a Forward Traffic Channel to an analog voice channel.

Base station support of CDMA-to-CDMA hard handoff between different band classes and support of CDMA-to-analog handoff is optional.

Section 2.6.6 describes the mobile station requirements during handoff.

3.6.6.1.2 Active Set

The Active Set contains the pilots (see 2.6.6.1.2) associated with the Forward Traffic Channels assigned to the mobile station. Initially the base station informs the mobile station of the contents of the Active Set using the *Channel Assignment Message* or the *Extended Channel Assignment Message;* subsequent changes to the contents of the Active Set are provided using the *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message*.

3.6.6.2 Requirements

3.6.6.2.1 Overhead Information

The base station sends the following messages governing the pilot search procedures performed by the mobile station:

- *System Parameters Message*
- *In-Traffic System Parameters Message*
- *Neighbor List Message*
- *Extended Neighbor List Message*
- *Neighbor List Update Message*
- *Extended Neighbor List Update Message*

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[25] In this section the term base station may imply multiple cells or sectors.

- *General Neighbor List Message*
- *General Handoff Direction Message*
- *Extended Handoff Direction Message*
- *Candidate Frequency Search Request Message*
- *Candidate Frequency Search Control Message*
- *Universal Handoff Direction Message*
- *Universal Neighbor List Message*
- *MC-RR Parameters Message*

3.6.6.2.1.1 System Parameters

The base station sends handoff related parameters on the Paging Channel in the *System Parameters Message* and the *Extended System Parameters Message*, and on the Broadcast Control Channel in the *MC-RR Parameters Message*.

The base station may revise handoff related parameters for a mobile station operating on the Traffic Channel by sending the *In-Traffic System Parameters Message*.

The base station may modify the values of the parameters SRCH_WIN_A, T_ADD, T_DROP, T_COMP, and T_TDROP through the *Extended Handoff Direction Message*, the *General Handoff Direction Message*, or the *Universal Handoff Direction Message*. In addition, the base station may also modify the values of the parameters SRCH_WIN_N, SRCH_WIN_R, SOFT_SLOPE, ADD_INTERCEPT, and DROP_INTERCEPT through the *General Handoff Direction Message* or the *Universal Handoff Direction Message*.

3.6.6.2.1.2 Neighbor List

The base station sends a Neighbor List on the Paging Channel in the *Neighbor List Message*, the *Extended Neighbor List Message*, or the *General Neighbor List Message*. The base station should list the pilots in the *Neighbor List Message* in descending priority order (see 2.6.6.2.6.3).

The base station may revise the Neighbor List for a mobile station operating on the Traffic Channel by sending a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*.

The base station shall not include a pilot that is a member of the mobile station's Active Set in a *Neighbor List Update Message* or an *Extended Neighbor List Update Message*. The base station shall not specify more than N_{8m} pilots in the *Neighbor List Message*, *Extended Neighbor List Message*, *General Neighbor List Message*, or in the *Extended Neighbor List Update Message*. The base station shall not specify more than 20 pilots in the *Neighbor List Update Message*. The base station should list the pilots in the *Neighbor List Update Message* 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.

- For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the nominal transmit power offset after handoff by setting the NOM_PWR field to the new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band Class 1, the base station may alter the nominal transmit power offset after handoff by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal transmit power offset.
- The base station may specify a different band class by setting the BAND_CLASS and CDMA_FREQ fields to the band class and CDMA frequency assignment respectively. The base station shall not specify a band class not supported by the mobile station.
- If the base station sends the *Extended Handoff Direction Message* in assured mode, the base station should set the action time of the message such that there is sufficient time for the mobile station to transmit a message containing the acknowledgment prior to the action time.
- For CDMA-to-CDMA hard handoffs, the base station may specify whether the mobile station is to use service negotiation or service option negotiation by setting the SERV_NEG_TYPE field of the *Extended Handoff Direction Message*. 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 enabled at the action time of message. If the base station specifies that the mobile station is to use service option negotiation, the base station shall set SERV_NEG to disabled at the action time of the message.

3.6.6.2.2.3 Processing the Candidate Frequency Search Request Message

The base station may send a *Candidate Frequency Search Request Message* to direct the mobile station to perform a single or periodic search on the Candidate Frequency.

The base station shall maintain a search message sequence number. The sequence number shall be initialized to zero prior to the transmission of the first *Candidate Frequency Search Request Message* to the mobile station. Each time the base station sends a new *Candidate Frequency Search Request Message* to the mobile station, it shall set the CFSRM_SEQ field to the current value of the sequence number, and increment the sequence number modulo 4.

3.6.6.2.2.4 Processing the Candidate Frequency Search Response Message

The base station should use the mobile station's search capabilities as reported in the *Candidate Frequency Search Response Message* to determine an appropriate period for the mobile station's periodic search on the Candidate Frequency.

3.6.6.2.2.5 Processing the Candidate Frequency Search Control Message

The base station may send a *Candidate Frequency Search Control Message* to direct the mobile station to perform a single search, or to start or stop a periodic search on the 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:

- The base station may set EXPL_REV_START_TIME to ‘1’ and set REV_START_TIME to the System Time, in units of 80 ms (modulo 64), at which the mobile station is to start transmitting on the Reverse Supplemental Code Channels.
- The base station may set USE_REV_HDM_SEQ to ‘1’ and set REV_LINKED_HDM_SEQ to the sequence number of the *General Handoff Direction Message* (HDM_SEQ) with which this message is linked to indicate that the mobile station is to start processing the Reverse Supplemental Code Channels at the action time of the linked *General Handoff Direction Message*.
- The base station may set EXPL_REV_START_TIME to ‘0’ and USE_REV_HDM_SEQ to ‘0’ to indicate that the mobile station is to start processing Reverse Supplemental Code Channels at the implicit action time of this message.
- The base station shall not set both EXPL_REV_START_TIME and USE_REV_HDM_SEQ to ‘1’.

- The base station may set USE_REV_DURATION to ‘1’ and REV_DURATION to the time interval, in units of 80 ms, after the implicit, explicit, or linked action time for the message (as specified in 2.6.6.2.5.1), during which the mobile station is to transmit on the specified Reverse Supplemental Code Channels. The base station may set USE_REV_DURATION to ‘0’ to indicate an infinite duration for the assignment of Reverse Supplemental Code Channels. If NUM_REV_CODES is ‘000’, then the base station shall set USE_REV_DURATION to ‘0’.
- If Reverse Supplemental Code Channel assignment information is included, the base station shall set NUM_REV_CODES to the number of Reverse Supplemental Code Channels to be usedin this Reverse Supplemental Code Channel assignment. The base station shall not set NUM_REV_CODES to be greater than the number of codes supported by the currently negotiated multiplex option.
- The base station may set USE_T_ADD_ABORT, the Reverse Supplemental Code Channel assignment T_ADD abort indicator, to ‘1’ to indicate that the mobile station is to abort Reverse Supplemental Code Channel assignments implicitly when a T_ADD trigger occurs. Otherwise, the base station shall set USE_T_ADD_ABORT to ‘0’. If NUM_REV_CODES is set to ‘000’, the base station shall set USE_T_ADD_ABORT to ‘0’.
- If the base station is sending this message in response to a *Supplemental Channel Request Message* which includes a *Supplemental Channel Request Message* sequence number, the base station may set USE_SCRM_SEQ_NUM to ‘1’ and include and set SCRM_SEQ_NUM to the sequence number corresponding to the SCRM_SEQ_NUM field in a *Supplemental Channel Request Message* to which the mobile station is to match this message. Otherwise, the base station shall set USE_SCRM_SEQ_NUM to ‘0’ and omit SCRM_SEQ_NUM.

- A *Supplemental Channel Assignment Message* may specify Forward Supplemental Code Channel assignments. If Forward Supplemental Code Channel assignment information is included, the base station shall set FOR_INCLUDED to '1' and include the appropriate Forward Supplemental Code Channel assignment information. Otherwise, the base station shall set FOR_INCLUDED to '0'.
- The base station shall set FOR_SUP_CONFIG to '00' if the mobile station is to stop processing the forward supplemental code after the action time of the *Supplemental Channel Assignment Message*. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels after the message takes effect.
- The base station shall set FOR_SUP_CONFIG to '01' if the mobile station is to start processing the Forward Supplemental Code Channels in the Code Channel List at the implicit, explicit, or linked action time for the message as specified in 2.6.6.2.5.1.
- The base station shall set FOR_SUP_CONFIG to '10' if the Forward Supplemental Code Channels associated with the pilots in the Active set are specified in the *Supplemental Channel Assignment Message* and is to stop processing Forward Supplemental Code Channels at the implicit action time of the message. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels after the message takes effect.
- The base station shall set FOR_SUP_CONFIG to '11' if the Forward Supplemental Code Channels associated with the pilots in the Active set are specified in the *Supplemental Channel Assignment Message* and the mobile station is to start processing the Forward Supplemental Code Channels at the implicit, explicit, or linked action time for the message as specified in 2.6.6.2.5.1.
- The base station shall set FOR_DURATION to the time interval, in units of 80 ms, after the implicit, explicit, or linked action time for the message (as specified in 2.6.6.2.5.1), during which the mobile station is to process the specified Forward Supplemental Code Channels. The base station may set USE_FOR_DURATION to '0' to indicate an infinite duration for the allocation of Forward Supplemental Code Channels. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels outside the time interval specified by FOR_DURATION.
- The base station may set EXPL_FOR_START_TIME to '1' and set FOR_START_TIME 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.
- The base station may set USE_FOR_HDM_SEQ to '1' and set FOR_LINKED_HDM_SEQ to the sequence number of the *General Handoff Direction Message* (HDM_SEQ) with which this message is linked to indicate that the mobile station is to start processing the Forward Supplemental Code Channels at the action time of the linked *General Handoff Direction Message*.

- The base station shall not set both USE_FOR_HDM_SEQ and EXPL_FOR_START_TIME within a *Supplemental Channel Assignment Message* to '1'.
- The number of Supplemental Code Channels assigned by *Supplemental Channel Assignment Message* shall not exceed the maximum number of Supplemental Code Channels for the negotiated Forward Multiplex Option.
- The base station may set EXPL_FOR_START_TIME to '0' and USE_FOR_HDM_SEQ to '0' to indicate that the mobile station is to start processing Forward Supplemental Code Channels at the implicit action time of this message.

3.6.6.2.2.10 Processing the General Handoff Direction Message

The base station shall maintain a handoff message sequence number. The sequence number shall be initialized to zero prior to the transmission of the first *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message* (see 3.6.6.2.2.11) to the mobile station (see 2.6.6.2.2.2). 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* or 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 a *General Handoff Direction Message* according to the following rules:

- A *General 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 *General 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 *General Handoff Direction Message* shall identify the identical power control subchannels (i.e., those carrying identical power control bits).
- A *General 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 *General Handoff Direction Message*. If the implicit action time is used, the base station should gradually apply any change in FPC_SUBCHAN_GAIN.
- A *General 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 *General 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 *General 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 *General 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 *General 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 of the base station that the mobile station is to handoff to shall be reset immediately after the action time of the *General 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 *General 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.
- For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the nominal transmit power offset after handoff by setting the NOM_PWR field to the new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band Class 1, the base station may alter the nominal transmit power offset after handoff by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal transmit power offset.

- The base station may specify a different band class by setting the BAND_CLASS and CDMA_FREQ fields to the band class and CDMA frequency assignment respectively. The base station shall not specify a band class not supported by the mobile station.
- If the base station sends the *General Handoff Direction Message* in assured mode, the base station should set the action time of the message such that there is sufficient time for the mobile station to transmit a message containing the acknowledgment prior to the action time.
- For CDMA-to-CDMA hard handoffs, the base station may specify whether the mobile station is to use service negotiation or service option negotiation by setting the SERV_NEG_TYPE field of the *General Handoff Direction Message*. 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 enabled at the action time of message. If the base station specifies that the mobile station is to use service option negotiation, the base station shall set SERV_NEG to disabled at the action time of the message.
- The base station may specify whether the mobile station is to restore its configuration to what it was before the handoff attempt, if it fails in the handoff attempt using criteria specified in the *Candidate Frequency Search Request Message*, by using the RETURN_IF_HANDOFF_FAIL field of the *General Handoff Direction Message*. The base station may specify whether the mobile station is to periodically search a CDMA Candidate Frequency for useable pilots, using criteria specified in the *Candidate Frequency Search Request Message*, by using the PERIODIC_SEARCH field of the *General Handoff Direction Message*.
- The base station may include Forward Supplemental Code Channel assignment information in the *General Handoff Direction Message* if the Forward Multiplex Option for the currently connected service option is 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or 16. If Forward Supplemental Code Channel assignment information is included, the base station shall include FOR_INCLUDED, set FOR_INCLUDED to ‘1’, and include the appropriate Forward Supplemental Code Channel assignment information.
- The number of Forward Supplemental Code Channels assigned by the *General Handoff Direction Message* shall not exceed the maximum number of Forward Supplemental Code Channels for the negotiated Forward Multiplex Option.
- The base station shall set FOR_SUP_CONFIG to ‘00’ if the mobile station is to stop processing the Forward Supplemental Code Channel after the action time of *General Handoff Direction Message*. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels after the message takes effect.
- The base station shall set FOR_SUP_CONFIG to ‘01’ if the mobile station is to start processing the Forward Supplemental Code Channels in the Code Channel List at the action time of the message.

- The base station shall set FOR_SUP_CONFIG to '10' if the Forward Supplemental Code Channels associated with the pilots in the Active set are specified in the *General Handoff Direction Message* and the mobile station is to stop processing Forward Supplemental Code Channels at the implicit action time of the message. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels after the message takes effect.
- The base station shall set FOR_SUP_CONFIG to '11' if the Forward Supplemental Code Channels associated with the pilots in the Active set are specified in the *General Handoff Direction Message* and the mobile station is to start processing the Forward Supplemental Code Channels at the action time of the message.
- The base station shall set FOR_DURATION to the time interval after the action time of the message, in units of 80 ms, during which the mobile station is to process the specified Forward Supplemental Code Channels. The base station may set USE_FOR_DURATION to '0' to indicate an infinite duration for the allocation of Forward Supplemental Code Channels. The base station should not transmit to the mobile station on the Forward Supplemental Code Channels outside the time interval specified by FOR_DURATION.
- If FOR_INCLUDED is included in the message, the base station shall include EXPL_CODE_CHAN for each pilot included in the message. If EXPL_CODE_CHAN is included and set to '1' for a pilot, the code channels associated with the pilot in the *General Handoff Direction Message* shall be ordered such that the first code channel occurrence is associated with the Forward Fundamental Channel and the successive occurrences are associated with Forward Supplemental Code Channels. If EXPL_CODE_CHAN is included and is set to '0', for each pilot in the new Active Set, the base station shall include BASE_CODE_CHAN and set it to the base code channel index 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 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) for the Forward Supplemental Code Channels associated with this pilot.
- The base station may include Reverse Supplemental Code Channel assignment information in the *General Handoff Direction Message* if the Reverse Multiplex Option is 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, or 16. If Reverse Supplemental Code Channel assignment information is included, the base station shall include REV_INCLUDED, set REV_INCLUDED to '1', and include the appropriate Reverse Supplemental Code Channel assignment information in the additional fields.
- If Reverse Supplemental Code Channel assignment information is included, the base station shall set NUM_REV_CODES to the number of Reverse Supplemental Code Channels to be used by the mobile station. The base station shall not set NUM_REV_CODES to be greater than the number of codes supported by the currently negotiated multiplex option.

- The base station may set USE_T_ADD_ABORT, the Reverse Supplemental Code Channel assignment T_ADD abort indicator, to '1' to indicate that the mobile station is to abort Reverse Supplemental Code Channel assignments implicitly when a T_ADD trigger occurs. Otherwise, the base station shall set USE_T_ADD_ABORT to '0'. If NUM_REV_CODES is set to '000', the base station shall set USE_T_ADD_ABORT to '0'.
- 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. 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.
- The base station may set CLEAR_RETRY_DELAY to '1' to indicate that the mobile station is to cancel any previously stored retry delay. Otherwise, the base station shall set CLEAR_RETRY_DELAY to '0' to indicate that the mobile station is to continue to honor any previously stored retry delay (see 2.6.6.2.5.1).
- The base station may indicate a duration for the Reverse Supplemental Code Channel assignment (in 80 ms superframes) by setting USE_REV_DURATION to '1' and indicating the desired duration in the REV_DURATION field. If USE_REV_DURATION is set to '0', a duration of infinity is indicated, and the base station shall set the REV_DURATION to '00000000'. If NUM_REV_CODES is '000', then the base station shall set USE_REV_DURATION to '0' and shall set REV_DURATION to '00000000'.
- The base station may set USE_REV_DURATION to '1' and REV_DURATION to the time interval after the action time of the message, in units of 80 ms, during which the mobile station may transmit on the assigned Reverse Supplemental Code Channels. The base station may set USE_REV_DURATION to '0' to indicate an infinite duration for the allocation of Forward Supplemental Code Channels.
- The base station may specify a closed loop power control step size by setting USE_PWR_CNTL_STEP to '1' and indicating the desired power control step size in the PWR_CNTL_STEP field (see 2.1.2.3.2). Otherwise, the base station shall set USE_PWR_CNTL_STEP to '0'. The base station shall not specify a power control step size not supported by the mobile station.

3.6.6.2.2.11 Processing the Universal Handoff Direction Message

The base station shall maintain a handoff message sequence number. The sequence number shall be initialized to zero prior to the transmission of the first *Extended Handoff Direction Message* (see 3.6.6.2.2.2), *General Handoff Direction Message* (see 3.6.6.2.2.10), or *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 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.

- 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 *Universal Handoff Direction Message*. The base station may change the contents of this field 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 *Universal 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 *Universal 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 of the base station that the mobile station is to handoff to shall be reset immediately after the action time of the *General 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 *Universal 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.
- For CDMA-to-CDMA hard handoffs to Band Class 0, the base station may alter the nominal transmit power offset after handoff by setting the NOM_PWR field to the new nominal transmit power offset. For CDMA-to-CDMA hard handoffs to Band Class 1, the base station may alter the nominal transmit power offset after handoff by setting both the NOM_PWR and NOM_PWR_EXT fields to the new nominal transmit power offset.
- The base station may specify a different band class by setting the BAND_CLASS and CDMA_FREQ fields to the band class and CDMA frequency assignment respectively. The base station shall not specify a band class not supported by the mobile station.
- If the base station sends the *Universal Handoff Direction Message* in assured mode, the base station should set the action time of the message such that there is sufficient time for the mobile station to transmit a message containing the acknowledgment prior to the action time.

- For CDMA-to-CDMA handoffs, the base station may specify whether the mobile station is to use service negotiation or service option negotiation by setting the SERV_NEG_TYPE field of the *Universal Handoff Direction Message*. 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 enabled at the action time of message. If the base station specifies that the mobile station is to use service option negotiation, the base station shall set SERV_NEG to disabled at the action time of the message.
- The base station may specify whether the mobile station is to restore its configuration to what it was before the handoff attempt, if it fails in the handoff attempt using criteria specified in the *Candidate Frequency Search Request Message*, by using the RETURN_IF_HANDOFF_FAIL field of the *Universal Handoff Direction Message*. The base station may specify whether the mobile station is to periodically search a CDMA Candidate Frequency for useable pilots, using criteria specified in the *Candidate Frequency Search Request Message*, by using the PERIODIC_SEARCH field of the *Universal Handoff Direction Message*.
- The base station specifies Active Set for the Fundamental Channel only, the Dedicated Control Channel only, or both. The Active Set of the Dedicated Control Channel shall be the same as the Active Set of the Fundamental Channel when both the Fundamental Channel and Dedicated Control Channel are assigned.
- The base station shall set RESET_SCH to '1' if the mobile station is to delete the Active Set of Supplemental Channels.
- The base station may specify the Active Set of the Supplemental Channels. The Active Set of the Supplemental Channels shall be a subset of the Active Set of the Fundamental Channel or the Dedicated Control Channel.
- A *Universal Handoff Direction Message* may specify a Reverse Supplemental Channel assignment. If Reverse Supplemental Channel assignment information is included, this message contains information that specifies the start time, duration, and the data transfer rate associated with this Reverse Supplemental Channel assignment.
- A *Universal Handoff Direction Message* may specify a Forward Supplemental Channel assignment. If Forward Supplemental Channel assignment information is included, this message contains the start time, duration, and SCCL_INDEX associated with this Forward Supplemental Channel assignment.
- A *Universal Handoff Direction Message* may update the mapping between a particular SCCL_INDEX and a set of fields that specifies the data transfer rate, QOF index, Forward Supplemental Channel Walsh code for each PILOT_PN, and the active set for the Forward Supplemental Channel associated with FOR_SCH_ID.
- A *Universal Handoff Direction Message* may update REV_WALSH_ID field which specifies the Reverse Supplemental Walsh cover.
- The base station may set CLEAR_RETRY_DELAY to '1' to indicate that the mobile

station is to cancel any previously stored retry delay. Otherwise, the base station shall set CLEAR_RETRY_DELAY to '0' to indicate that the mobile station is to continue to honor any previously stored retry delay (see 2.6.6.2.5.1).

3.6.6.2.2.12 Processing of Extended Supplemental Channel Assignment Message

The base station may use this message to carry Forward Supplemental Channel assignment information or Reverse Supplemental Channel assignment information.

If Forward Supplemental Channel assignment information is included, this message contains the start time, duration, and SCCL_INDEX associated with this Forward Supplemental Channel assignment. If Reverse Supplemental Channel assignment information is included, this message contains information that specifies the start time, duration, and the number of information bits per frame (or set of number of bits per frame if $RSCH\_VAR\_TABLE\_ID_s[REV\_SCH\_ID_r]$ is not equal to '000') associated with this Reverse Supplemental Channel assignment.

This message may specify the mapping between a particular SCCL_INDEX and a set of fields that specifies the 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'), QOF index, Forward Supplemental Channel Walsh code for each PILOT_PN, and the active set for the Forward Supplemental Channel associated with FOR_SCH_ID.

This message may also include REV_WALSH_ID field which specifies the Reverse Supplemental Walsh cover.

This message also includes START_TIME_UNIT for this message, *Forward Supplemental Channel Assignment Mini Messages*, or *Reverse Supplemental Channel Assignment Mini Messages*, or *Universal Handoff Direction Message*.

The base station shall set the contents of an *Extended Supplemental Channel Assignment Message* according to the following rules:

An *Extended Supplemental Channel Assignment Message* may specify a Reverse Supplemental Channel assignment. The base station shall set NUM_REV_SCH to the number of Reverse Supplemental Channels to be assigned.

An *Extended Supplemental Channel Assignment Message* may specify a Forward Supplemental Channel assignment. The base station shall set NUM_FOR_SCH to the number of Forward Supplemental Channels to be assigned..

The base station shall set the START_TIME_UNIT field to indicate the unit of the FOR_SCH_START_TIME included in this message and the *Forward Supplemental Channel Assignment Mini Messages* and REV_SCH_START_TIME included in this message and the *Reverse Supplemental Channel Assignment Mini Messages*. The base station shall set this field to one less than the number of 20 ms intervals that is to be used by the mobile station for calculating the start time included in Forward Supplemental Channel assignments or Reverse Supplemental Channel assignments.

An *Extended Supplemental Channel Assignment Message* may specify Forward Supplemental Channel configuration information. The base station shall set NUM_FOR_SCH_CFG to the number of Forward Supplemental Channel to be configured.

The base station shall set the NUM_REC field to the number of instances of the following record minus one included in this message. The base station shall set the fields within each record as follows:

- The base station shall set the SCCL_INDEX field to the index of the Supplemental Channel Code Information Record in the Supplemental Channel Code List Table.
- The base station shall set the FOR_SCH_NUM_BITS_IDX field to the Forward Supplemental Channel number of information bits index associated with SCCL_INDEX.
- The base station shall set the NUM_SUP_SHO field to the number of Forward Supplemental Channels minus one, corresponding to the FOR_SCH_ID and the SCCL_INDEX, for which the frames are to be soft-combined by the mobile station. The base station shall set the fields within each record as follows:
  - The base station shall set the PILOT_PN field to the pilot PN sequence offset for this pilot in units of 64 PN chips.
  - The base station shall set the QOF_MASK_ID_SCH field to the ID of the Quasi Orthogonal Function mask ID corresponding to the Forward Supplemental Channel Code index.
  - The base station shall set the CODE_CHAN_SCH field to the code channel on the Supplemental Channel corresponding to the PILOT_PN.

REV_DTX_DURATION: 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 Channel before resuming transmission on the Reverse Supplemental 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 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 Channel at any time within the reverse assignment duration.

An *Extended Supplemental Channel Assignment Message* may specify Resource Control information. If Resource Control information is included, the base station shall set RES_INFO_INCL field to ‘1’ and include FPC_PRI_CHAN, CH_IND and BLOB fields; otherwise, the base station shall set the RES_INFO_INCL field to ‘0’.

3.6.6.2.2.13 Processing of Forward Supplemental Channel Assignment Mini Message

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:

$$(\lfloor t/(START\_TIME\_UNIT+1)\rfloor - FOR\_SCH\_START\_TIME) \bmod 32 = 0,$$

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 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 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.

3.6.6.2.2.15 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.

- When the base station sends the *Extended Channel Assignment Message*, it shall initialize the Active Set to contain all pilots included in the message.
- When the base station sends an *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message*, it shall add to the Active Set, before the action time of the message, all pilots included in the message, if they are not already in the Active Set.
- The base station shall delete the pilots that were not included in the most recent *Extended Handoff Direction Message*, *General Handoff Direction Message*, or *Universal Handoff Direction Message*, from the Active Set upon receipt of the *Handoff Completion Message* or *Extended Handoff Completion Message*.

3.6.6.2.4 Soft Handoff

The base station should use soft handoff when directing a mobile station from one Forward Traffic Channel to another Forward Traffic Channel having the same frequency assignment.

3.6.6.2.4.1 Receiving During Soft Handoff

Each base station in the Active Set shall demodulate the Reverse Traffic Channel. The base station should provide diversity combining of the demodulated signals obtained by each base station in the Active Set.

3.6.6.2.4.2 Transmitting During Soft Handoff

The base station shall begin transmitting identical modulation symbols on all Forward Traffic Channels specified in an *Extended Handoff Direction Message* or *General Handoff Direction Message*, or *Universal Handoff Direction Message* (with the possible exception of the power control subchannel) by the action time of the message.

The base station shall transmit identical power control bits on all identical power control subchannels that were identified as such in the last *Extended Handoff Direction Message*, or *General Handoff Direction Message*, or *Universal Handoff Direction Message*.

The base station shall use the same long code mask on all Forward Traffic Channels whose associated pilots are in the Active Set.

3.6.6.2.5 CDMA-to-Analog Hard Handoff

The base station may direct the mobile station to perform a handoff from the CDMA system to an analog system in a band class that the mobile station supports by sending an *Analog Handoff Direction Message*.

3.6.7 CDMA Tiered Services

3.6.7.1 Overview

3.6.7.1.1 Definition

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*

- *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 a mobile station terminated call and the base station set BYPASS_ALERT_ANSWER to '1', the Call Control instance shall enter the *Conversation Substate* (see 3.6.8.2). If the call is a mobile station terminated call and the base station set BYPASS_ALERT_ANSWER to '0', the Call Control instance shall enter the *Waiting for Order Substate* (see 3.6.8.1.1).
- If the call is a mobile-station-originated call, the Call Control instance shall enter the *Conversation Substate* (see 3.6.8.2).

3.6.8.1 Alerting

3.6.8.1.1 Waiting for Order Substate

In this substate, the Call Control instance sends an *Alert With Information Message* or an *Extended Alert With Information Message* to the mobile station.

While in the *Waiting for Order 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: 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

Extended Flash With Information Message

Origination Continuation Message

Send Burst DTMF Message

3.6.8.3 Call Release 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 base station 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 base station shall enter the *Waiting for Answer Substate*.

Maintenance Order: The Call Control instance shall enter the *Waiting for Answer Substate*.

- 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:

Connect Order

Continuous DTMF Tone Order

Flash With Information Message

Extended Flash With Information Message

Origination Continuation Message

Send Burst DTMF Message

No text.

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 f-csch 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
System Parameters Message	SPM	3.7.2.3.2.1	N	N	Y
Access Parameters Message	APM	3.7.2.3.2.2	N	N	Y
Neighbor List Message (Band Class 0 only)	NLM	3.7.2.3.2.3	N	N	Y
CDMA Channel List Message	CCLM	3.7.2.3.2.4	N	N	Y
Order Message	ORDM	3.7.2.3.2.7	N	Y	Y
Channel Assignment Message	CAM	3.7.2.3.2.8	N	N	Y
Data Burst Message	DBM	3.7.2.3.2.9	N	Y	Y
Authentication Challenge Message	AUCM	3.7.2.3.2.10	N	Y	Y
SSD Update Message	SSDUM	3.7.2.3.2.11	N	Y	Y
Feature Notification Message	FNM	3.7.2.3.2.12	N	Y	Y
Extended System Parameters Message	ESPM	3.7.2.3.2.13	N	N	Y
Extended Neighbor List Message (Band Class 1 only)	ENLM	3.7.2.3.2.14	N	N	Y
Status Request Message	STRQM	3.7.2.3.2.15	N	Y	Y
Service Redirection Message	SRDM	3.7.2.3.2.16	N	Y	Y
General Page Message	GPM	3.7.2.3.2.17	N	Y	Y
Global Service Redirection Message	GSRDM	3.7.2.3.2.18	N	N	Y
TMSI Assignment Message	TASM	3.7.2.3.2.19	N	Y	Y
PACA Message	PACAM	3.7.2.3.2.20	N	Y	Y
Extended Channel Assignment Message	ECAM	3.7.2.3.2.21	N	Y	Y
General Neighbor List Message	GNLM	3.7.2.3.2.22	N	N	Y
User Zone Identification Message	UZIM	3.7.2.3.2.23	Y	N	Y
Private Neighbor List Message	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
Sync Channel Message	SCHM	3.7.2.3.2.26	N	N	N
Extended Global Service Redirection Message	EGSRM	3.7.2.3.2.27	Y	N	Y
Extended CDMA Channel List Message	ECCLM	3.7.2.3.2.28	Y	N	Y
User Zone Reject Message	UZRM	3.7.2.3.2.29	N	Y	Y
ANSI-41 System Parameters Message	A41SPM	3.7.2.3.2.30	Y	N	N
MC-RR Parameters Message	MCRRPM	3.7.2.3.2.31	Y	N	N
ANSI-41 RAND Message	A41RANDM	3.7.2.3.2.32	Y	N	N
Enhanced Access Parameters Message	EAPM	3.7.2.3.2.33	Y	N	N
Universal Neighbor List Message	UNLM	3.7.2.3.2.34	Y	N	N
Security Mode Command Message	SMCM	3.7.2.3.2.35	N	Y	Y
Universal Page Message	UPM	3.7.2.3.2.36	N	Y	N

3.7.2.3.1 Reserved

3.7.2.3.2 Message Body Contents

The following sections specify the contents of message body for each message that may be sent on the f-csch.

3.7.2.3.2.1 System Parameters Message

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)

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

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).

SID - System identification.

The base station shall set this field to the system 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-_INDEX - Maximum slot cycle 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.

If mobile stations that are foreign SID roamers (see 2.6.5.3) and have MOB_TERM_FOR_SID equal to ‘1’ are to be enabled for autonomous registration, 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_NID_REG - NID roamer registration indicator.

If mobile stations that are foreign NID roamers (see 2.6.5.3) and have MOB_TERM_FOR_NID equal to ‘1’ are to be enabled for autonomous registration, 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’.

POWER_UP_REG - Power-up registration indicator.

If mobile stations enabled for autonomous registration are to register immediately after powering on and receiving the system overhead messages, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

POWER_DOWN_REG - Power-down registration indicator.

If mobile stations enabled for autonomous registration are to register immediately before powering down, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

PARAMETER_REG - Parameter-change registration indicator.

If mobile stations are to register on parameter change events as specified in 2.6.5.1.6, the base station shall set this field to ‘1’. If not, the base station shall set this field to ‘0’.

REG_PRD - Registration period.

If mobile stations are not to perform timer-based registration, the base station shall set this field to ‘0000000’. If mobile stations are to perform timer-based registration, the base station shall set this field to the value in the range 29 to 85 inclusive, such that the desired timer value is

$$\lfloor 2^{\mathrm{REG\_PRD}/4} \rfloor \times 0.08 \text{ seconds.}$$

BASE_LAT - Base station latitude.

The base station shall set this field to its 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°).

BASE_LONG - Base station longitude.

The base station shall set this field to its 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°).

REG_DIST - Registration distance.

If mobile stations are to perform distance-based registration, the base station shall set this field to the non-zero "distance" beyond which the mobile station is to re-register (see 2.6.5.1.4). If mobile stations are not to perform distance-based registration, the base station shall set this field to 0.

SRCH_WIN_A - Search window size for the Active Set and Candidate Set.

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 Active Set and Candidate Set.

SRCH_WIN_N - Search window size for the Neighbor Set.

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_WIN_R - Search window size for the Remaining Set.

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 Remaining Set.

NGHBR_MAX_AGE - Neighbor Set maximum AGE.

The base station shall set this field to the maximum AGE value beyond which mobile stations are to drop members from the Neighbor Set (see 2.6.6.2.6.3).

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 mobile stations are 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

$$\lfloor 2^{(\mathrm{PWR\_REP\_FRAMES}/2)} \times 5 \rfloor \text{ frames}$$

is the number of frames over which mobile stations are to count frame errors.

PWR_THRESH-_ENABLE - Threshold report mode indicator.

If mobile stations are to generate threshold *Power Measurement Report Messages*, the base station shall set this field to '1'. If mobile stations are 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 mobile stations are to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '1'. If mobile stations are not to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '0'.

PWR_REP_DELAY - Power report delay.

The period that mobile stations wait following a *Power Measurement Report Message* before restarting frame counting for power control purposes.

The base station shall set this field to the power report delay value, in units of 4 frames (see 2.6.4.1.1).

RESCAN - Rescan indicator.

If mobile stations are to re-initialize and re-acquire the system upon receiving this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

The base station shall set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.

T_DROP - Pilot drop threshold.

This value is used by mobile stations to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

The base station shall set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$.

T_COMP - Active Set versus Candidate Set comparison threshold.

Mobile stations transmit a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

The base station shall set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.

T_TDROP - Drop timer value.

Timer value after which an action is taken by mobile stations for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

The base station shall set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by mobile stations.

EXT_SYS_PARAMETER - *Extended System Parameters Message* indicator.

The base station shall set this field to ‘1’.

EXT_NGHBR_LIST - *Extended Neighbor List Message* indicator.

The base station sets this field to ‘1’ when it sends the *Extended Neighbor List Message* on the Paging Channel.

If the base station is operating in Band Class 1 with MIN_P_REV less than six, it shall set this field to '1'. If the base station is operating in Band Class 0, it shall set this field to '0'.

GEN_NGHBR_LIST - *General Neighbor List Message* indicator.

If the base station is sending the *General Neighbor List Message* on the Paging Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

If the base station is operating in Band Class 1 with MIN_P_REV greater than or equal to six, and if EXT_NGHBR_LIST is set to '0', the base station shall set this field to '1'.

GLOBAL_REDIRECT - *Global Service Redirection Message* indicator.

If the base station is sending the *Global Service Redirection Message* on the Paging Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

PRI_NGHBR_LIST - *Private Neighbor List Message* indicator.

If the base station is sending the *Private Neighbor List Message* on the Paging Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

USER_ZONE_ID - *User Zone Identification Message* indicator.

If the base station is sending the *User Zone Identification Message* on the Paging Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

EXT_GLOBAL-_REDIRECT - Extended *Global Service Redirection Message* indicator.

If the base station is sending the *Extended Global Service Redirection Message* on the Paging Channel, it shall set this field to '1'; otherwise, the base station shall set this field to '0'.

EXT_CHAN_LIST - Extended CDMA Channel List Message indicator.

The base station shall set this field to '1', if the *Extended Channel List Message* is sent on the Paging Channel, otherwise, it shall set this field to '0'.

3.7.2.3.2.2 Access Parameters Message

MSG_TAG: APM

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)

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.

The base station shall set this field to one less than the maximum number of access probes mobile stations are to transmit in a single access probe sequence.

MAX_CAP_SZ - Maximum Access Channel message capsule size.

The base station shall set this field to the value in the range 0 to 7, three less than the maximum number of Access Channel frames in an Access Channel message capsule.

PAM_SZ - Access Channel preamble length.

The base station shall set this field to one less than the number of Access Channel frames that mobile stations are to transmit in each Access Channel preamble.

PSIST(0-9) - Persistence value for access overload classes 0 through 9.

If mobile stations in access overload classes 0 through 9 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111111'.

PSIST(10) - Persistence value for access overload class 10 (test mobile stations).

If mobile stations in access overload class 10 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

PSIST(11) - Persistence value for access overload class 11 (emergency mobile stations).

If mobile stations in access overload class 11 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

PSIST(12) - Persistence value for access overload class 12.

If mobile stations in access overload class 12 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

PSIST(13) - Persistence value for access overload class 13.

If mobile stations in access overload class 13 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

PSIST(14) - Persistence value for access overload class 14.

If mobile stations in access overload class 14 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

PSIST(15) - Persistence value for access overload class 15.

If mobile stations in access overload class 15 are permitted to transmit requests on the Access Channel, the base station shall set this field to the persistence value to be used. If such mobile stations are not permitted to transmit requests on the Access Channel, the base station shall set this field to '111'.

MSG_PSIST - Persistence modifier for Access Channel attempts for message transmissions.

A mobile station multiplies its transmission probability by 2^{-MSG_PSIST} for such attempts.

The base station shall set this field to the persistence modifier for Access Channel attempts for message transmissions.

REG_PSIST - Persistence modifier for Access Channel attempts for registrations which are not responses to the *Registration Request Order*.

A mobile station multiplies its transmission probability by 2^{-REG_PSIST} for such attempts.

The base station shall set this field to the persistence modifier for Access Channel attempts for registrations which are not responses to the *Registration Request Order*.

PROBE_PN_RAN - Time randomization for Access Channel probes.

A mobile station delays its transmission from System Time by RN PN chips, where RN is a number determined by hashing between 0 and $2^{PROBE\_PN\_RAN} - 1$ PN chips.

The base station shall set this field to the value in the range 0 to 9 inclusive such that the time randomization range is $2^{PROBE\_PN\_RAN} - 1$ PN chips.

ACC_TMO - Acknowledgment timeout.

The base station shall set this field to two less than the length of time mobile stations are to wait after the end of an Access Channel transmission before determining that the base station did not receive the transmission, in units of 80 ms.

PROBE_BKOFF - Access Channel probe backoff range.

The base station shall set this field to one less than the maximum number of slots mobile stations are to delay due to random backoff between consecutive access probes.

BKOFF - Access Channel probe sequence backoff range.

The base station shall set this field to one less than the maximum number of slots mobile stations are to delay due to random backoff between successive access probe sequences and before the first access probe sequence of a response access.

MAX_REQ_SEQ - Maximum number of access probe sequences for an Access Channel request.

The base station shall set this field to the maximum number of access probe sequences mobile stations are to transmit for an 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 Access Channel response.

The base station shall set this field to the maximum number of access probe sequences mobile stations are to transmit for an Access Channel response. The base station shall set this field to a value greater than 0.

AUTH - Authentication mode.

If mobile stations are to include standard authentication data in Access Channel messages, the base station shall set this field to '01'. If mobile stations are not to include authentication data in Access Channel messages, the base station shall set this field to '00'. All other values are reserved.

RAND - Random challenge value.

If the AUTH field is set to '01', the base station shall set this field to the random challenge value to be used by mobile stations for authentication. If the AUTH field is set to any other value, the base station shall omit this field.

NOM_PWR_EXT - Extended nominal transmit power.

If the base station is operating in Band Class 0, it shall set this field to ‘0’.

If the base station is operating in Band Class 1, then it shall set this field as follows:

If the correction factor to be used by mobile stations in the open loop power estimate is between -24 dB and -9 dB inclusive, the base station shall set this field to ‘1’; otherwise (the correction factor is in the range -8 dB to 7 dB inclusive), the base station shall set this field to ‘0’.

PSIST_EMG_INCL - Emergency persistence included indicator.

If PSIST_EMG is included in this message, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

If the base station does not support Common Channel operation and if the base station includes PSISIT_EMG, which is applicable to mobile stations with MOB_P_REV equal to or greater than 7, the base station shall set this field to ‘1’.

PSIST_EMG - Persistence value for emergency call for access overload classes 0 through 9.

If PSIST_EMG_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload classes 0 through 9 is permitted to transmit emergency requests on the Access Channel, the base station shall set this field to the persistence value to be used for the emergency calls. If such a mobile station is not permitted to transmit emergency requests on the Access Channel, the base station shall set this field to ‘111’.

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.

The base station shall include one occurrence of the following two-field record for each member mobile stations are to place in their Neighbor Sets. The base station may include zero or more occurrences of the following record.

NGHBR_CONFIG - Neighbor configuration.

The base station shall set this field to the value shown in Table 3.7.2.3.2.3-1 corresponding to the configuration of this neighbor.

Table 3.7.2.3.2.3-1. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	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): • 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	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): • 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	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): • 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 *Extended CDMA Channel List Message* is supported and the *Extended CDMA Channel List Message* is being sent by the current base station, use the first CDMA Channel listed in the *Extended CDMA Channel List Message* transmitted by the current base station; otherwise, use the first CDMA Channel listed in the *CDMA Channel List Message* transmitted by the current base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.
011	The base station shall set the neighbor configuration to this value if the mobile station is to enter the *System Determination Substate* of the *Mobile Station Initialization State* with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2).
100-111	Reserved.

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.

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]).

3.7.2.3.2.5 Reserved

No text.

3.7.2.3.2.6 Reserved

No text.

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.

3.7.2.3.2.8 Channel Assignment Message

MSG_TAG: CAM

Field	**Length (bits)**
ASSIGN_MODE	3
ADD_RECORD_LEN	3
Additional record fields	8 × ADD_RECORD_LEN

If ASSIGN_MODE = ‘000’, the additional record fields shall be:

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)

If ASSIGN_MODE = ‘001’, the additional record fields shall be:

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)

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

If ASSIGN_MODE = '100', the additional record fields shall be:

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

If ASSIGN_MODE = '101', the additional record fields shall be:

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

ASSIGN_MODE - Assignment mode.

The base station shall set this field to the value shown in Table 3.7.2.3.2.8-1 corresponding to the assignment mode for 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 FRAME_OFFSET × 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'.

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 Paging Channel the mobile station is to use. If the FREQ_INCL bit is set to ‘0’, the base station shall omit this field.

PILOT_PN - Pilot PN sequence offset index.

The base station shall include one occurrence of this field for each base station whose Paging Channel may be monitored by the mobile station. For each occurrence, the base station shall set this field to the pilot PN sequence offset for a base station, in units of 64 PN chips. The base station having this pilot PN sequence offset should support a Primary Paging Channel with the same Paging Channel rate as the current base station.

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 ‘010’, the base station shall include the following fields:

RESPOND - Respond on analog control channel indicator.

If the mobile station is to retransmit an *Origination Message* or *Page Response Message* on the analog control channel (see [6]) 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*.

ANALOG_SYS - System indicator.

If USE_ANALOG_SYS is equal to ‘0’, the base station shall set this field to ‘0’. Otherwise, the base station shall set this field to ‘0’ if the mobile station is to use analog system A, or to ‘1’ if the mobile station is to use analog system B.

USE_ANALOG_SYS - Use analog system indicator.

The base station shall set this field to ‘1’ to direct the mobile station to the analog system specified by ANALOG_SYS; otherwise, the base station shall set this field to ‘0’.

BAND_CLASS - Band class.

The base station shall set this field according to values defined in [30].

If the ASSIGN_MODE field is set to '011', the base station shall include the following fields:

SID - System identification of the analog system.

The base station shall set this field to the system identification of the analog system supporting the assigned voice channel for this assignment (see [6]).

VMAC - Voice mobile station attenuation code.

The base station shall set this field to the mobile station power level associated with the assigned voice channel for this assignment (see [6]).

ANALOG_CHAN - Voice channel number.

The base station shall set this field to the voice channel number for this assignment (see [6]).

SCC - SAT color code.

The base station shall set this field to the supervisory audio tone color code associated with the assigned voice channel. If the assignment is to a narrow analog channel, the base station shall set this field to the two least significant bits of the DSCC.

MEM - Message encryption mode indicator.

If analog control message encryption is to be enabled on the assigned forward and reverse analog voice channels, the base station shall set this bit to '1'; otherwise, the base station shall set this bit to '0'.

AN_CHAN_TYPE - Analog voice channel type.

The base station shall set this field to the analog channel type as specified in Table 3.7.3.3.2.6-1. If the mobile station does not have narrow analog capability, the base station shall set this field to '00'.

DSCC_MSB - Digital supervisory audio tone color code most significant bit.

The base station shall set this field to '0' when directing handoff to a wide analog channel. The base station shall set this field to the most significant bit of the DSCC when directing handoff to a narrow analog channel.

BAND_CLASS - Band class.

The base station shall set this field according to values defined in [30].

If the ASSIGN_MODE field is set to ‘100’, the base station shall include the following fields:

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’.

RESERVED - Reserved bits.

The base station shall set this field to ‘000’.

BYPASS_ALERT-_ANSWER - Bypass alert indicator.

If the MOB_P_REV of the current band class of the mobile station is less than or equal to three, the base station shall set this field to ‘0’; otherwise, the base station shall set this field as follows.

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’.

DEFAULT_CONFIG - Default Configuration.

If the GRANTED_MODE field is set to ‘00’, the base station shall set this field as specified in Table 3.7.2.3.2.8-3 to indicate an initial multiplex option and radio configuration for 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*.

The base station shall set this field to '10' 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 not to take place before the base station sends the first *Service Connect Message*.

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.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET × 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.

BAND_CLASS - 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 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.

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, in the specified CDMA band class, 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.

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.

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 use. If the FREQ_INCL bit is set to ‘0’, the base station shall omit this field.

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, 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 use. If the FREQ_INCL bit is set to ‘0’, the base station shall omit this field.

PILOT_PN - Pilot PN sequence offset index.

The base station shall include one occurrence of this field for each base station whose Paging Channel may be monitored by the mobile station. For each occurrence, the base station shall set this field to the pilot PN sequence offset for a base station, in units of 64 PN chips. The base station having this pilot PN sequence offset should support a Primary Paging Channel with the same Paging Channel rate as the current base station.

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’.

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:

CHARi	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 CHARi fields of this message equal to EXTENDED_BURST_TYPE_INTERNATIONAL as described in the definition of CHARi below. If the base 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 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 CHARi field included in this message.

CHARi - 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_INTER-NATIONAL 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 x (NUM_FIELDS - 2)

3.7.2.3.2.10 Authentication Challenge Message

MSG_TAG: AUCM

Field	Length (bits)
RANDU	24

RANDU - Random challenge data.

The base station shall set this field to the random challenge data (see 2.3.12.1.4).

3.7.2.3.2.11 SSD Update Message

MSG_TAG: SSDUM

Field	Length (bits)
RANDSSD	56

RANDSSD - Random data for the computation of SSD.

The base station shall set this field as specified in 2.3.12.1.5.

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 × 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.

3.7.2.3.2.13 Extended System Parameters Message

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 × 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)

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)

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

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).

DELETE_FOR_TMSI - Delete foreign TMSI.

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'.

USE_TMSI - Use TMSI indicator.

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.

PREF_MSID_TYPE - Preferred Access Channel Mobile Station Identifier Type.

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.

Table 3.7.2.3.2.13-1. Preferred MSID Types

USE_TMSI (binary)	PREF_MSID_TYPE (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].

P_REV - Protocol revision level.

The base station shall set this field to '00000111'.

MIN_P_REV - Minimum protocol revision level.

The base station sets this field to prevent mobile stations which cannot be supported by the base station from accessing the system.

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.

SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the Active Set, or dropping a pilot from the Active Set (see 2.6.6.2.3 and 2.6.6.2.5.2).

The base station shall set this field as an unsigned binary number.

ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to the Active Set (see 2.6.6.2.5.2).

The base station shall set this field as a two's complement signed binary number, in units of dB.

DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot from the Active Set (see 2.6.6.2.3).

The base station shall set this field as a two's complement signed binary number, in units of dB.

PACKET_ZONE_ID - Packet data services zone identifier.

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.

If the base station does not support a packet data service zone, the base station shall set this field to '00000000'.

MAX_NUM_ALT_SO - Maximum number of alternative service options.

The base station shall set this field to the maximum number of alternative service option numbers that the mobile station is allowed to include in the *Origination Message* or the *Page Response Message*.

For mobile stations with $MOB\_P\_REV_S$ less than seven, the alternative service options are those service options defined in [30] and related to SERVICE_OPTION in *Origination Message* and the *Page Response Message*.

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_O 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_O 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*.

NGHBR_SET-_ENTRY_INFO - Neighbor Set access entry handoff information included indicator.

If the base station is including information on the Neighbor Set access entry handoff, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

ACC_ENT_HO_ORDER - Access entry handoff permitted indicator.

If NGHBR_SET_ENTRY_INFO is 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 '1' if the mobile station is permitted to perform an access entry handoff after receiving a message while performing the *Mobile Station Order and Message Processing Operation* in the *Mobile Station Idle State* (see 2.6.2.4); otherwise, the base station shall set this field to '0'.

NGHBR_SET-_ACCESS_INFO - Neighbor Set access handoff included indicator.

If the base station is including information on the Neighbor Set access handoff or access probe handoff, the base station shall set this field to '1', otherwise, the base station shall set this field to '0'.

ACCESS_HO - Access handoff permitted indicator.

If NGHBR_SET_ACCESS_INFO is 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 '1' if the mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2); otherwise, the base station shall set this field to '0'.

ACCESS_HO_MSG_RSP - Access handoff permitted for message response indicator.

If ACCESS_HO is 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 '1' if the mobile station is permitted to perform an access handoff after receiving a message and before responding to that message in the *System Access State*; otherwise, the base station shall set this field to '0'.

ACCESS_PROBE_HO - Access probe handoff permitted indicator.

If NGHBR_SET_ACCESS_INFO is 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 ‘1’ if the mobile station is permitted to perform an access probe handoff (see 2.6.3.1.3.3); otherwise, the base station shall set this field to ‘0’.

ACC_HO_LIST_UPD - Access handoff list update permitted indicator.

If ACCESS_PROBE_HO is included and is 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 ‘1’ if the mobile station is permitted to update the access handoff list during an access attempt (see 2.6.3.1.7.2); otherwise, the base station shall set this field to ‘0’.

ACC_PROBE_HO-
_OTHER_MSG - Access probe handoff permitted for messages other than the *Origination Message* and the *Page Response Message*.

If ACCESS_PROBE_HO is 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 ‘1’ if the mobile station is permitted to perform an access probe handoff for messages other than the *Origination Message* and the *Page Response Message*. The base station shall set this field to ‘0’ if the mobile station is permitted to perform an access probe handoff only for the *Origination Message* and the *Page Response Message*. See 2.6.3.1.3.3.

MAX_NUM_PROBE_HO - Maximum number of times that the mobile station is permitted to perform an access probe handoff.

If ACCESS_PROBE_HO is 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 maximum number of times the mobile station is allowed to perform an access probe handoff within an access attempt minus one.

NGHBR_SET_SIZE - Size of the Neighbor Set.

If NGHBR_SET_ENTRY_INFO or NGHBR_SET_ACCESS_INFO is equal to '1', the base station shall set this field to the number of pilots included in the *Neighbor List Message, Extended Neighbor List Message,* or *General Neighbor List Message;* otherwise, the base station shall omit this field.

If NGHBR_SET_ENTRY_INFO is equal to '1', the base station shall include NGHBR_SET_SIZE occurrences of the following field:

ACCESS_ENTRY_HO - Access entry handoff permitted when entering the System Access State.

The base station shall set this field to '1' if the mobile station is permitted to perform an access entry handoff to the base station associated with the corresponding pilot between the time it receives a message on the Paging Channel when in the *Mobile Station Idle State* and it enters the *System Access State* to respond to the message; otherwise, the base station shall set this field to '0'. The base station shall use the same order for the ACCESS_ENTRY_HO fields in this message as is used for pilots which are listed in the *Neighbor List Message, Extended Neighbor List Message,* or *General Neighbor List Message.* Specifically, the ith occurrence of the ACCESS_ENTRY_HO field shall correspond the ith pilot in the *Neighbor List Message, Extended Neighbor List Message,* or *General Neighbor List Message.*

If NGHBR_SET_ACCESS_INFO is equal to '1', the base station shall include NGHBR_SET_SIZE occurrences of the following field:

ACCESS_HO_ALLOWED - Access handoff and access probe handoff permitted for the corresponding pilot while in the *System Access State.*

The base station shall set this field to '1' if the mobile station is permitted to perform an access handoff or access probe handoff to the base station associated with the corresponding pilot when the mobile station is in the *System Access State* (see 2.6.3.1.8 and 2.6.3.1.9); otherwise, the base station shall set this field to '0'. The base station shall use the same order for the ACCESS_HO_ALLOWED fields in this message as is used for pilots which are listed in the *Neighbor List Message, Extended Neighbor List Message,* or *General Neighbor List Message.* Specifically, the ith occurrence of the ACCESS_HO_ALLOWED field shall correspond the ith pilot in the *Neighbor List Message, Extended Neighbor List Message,* or *General Neighbor List Message.*

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_CONFIG (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 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 the base station includes the QPCH_CCI_SUPPORTED field and sets it 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 3.7.2.3.2.13-3.

SDB_SUPPORTED - Short Data Burst supported indicator.

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'.

RLGAIN_TRAFFIC_PILOT - Gain adjustment of the Reverse Traffic Channel relative to the Reverse Pilot Channel for Radio Configurations greater than 2.

The base station shall set this field to the correction factor to be used by mobile stations in setting the power of a reverse traffic channel, expressed as a two's complement value in units of 0.125 dB (see 2.1.2.3.3 of [2]).

REV_PWR_CNTL_DELAY_INCL - Reverse Power Control Delay included indicator.

The base station shall set this field to '1' if the base station includes the REV_PWR_CNTL_DELAY field in this message; otherwise, the base station shall set this field to '0'.

REV_PWR_CNTL_DELAY - The reverse power control delay.

If REV_PWR_CNTL_INCL 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 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*.

The base station shall set this field to ‘1’, if the mobile station is allowed to include a QoS record in the *Origination Message*, or to ‘0’, otherwise.

ENC_SUPPORTED – Encryption fields included.

The base station shall set this field to ‘1’ if the encryption related fields are included; otherwise the base station shall set this field to ‘0’.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is 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.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is included, the base station shall set this field to indicate the supported user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-7.

The base station shall set each subfield to ‘1’ if the corresponding user information encryption algorithm is supported by the base station; otherwise, the base station shall set the subfield to ‘0’.

STORE_KEY – Store session key indicator

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is included, the base station shall set this field to ‘1’ to indicate that the mobile station is to store the session key; otherwise the base station shall set this field to ‘0’.

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	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): • 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	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): • 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	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): • 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 *Extended CDMA Channel List Message* is supported and the *Extended CDMA Channel List Message* is being sent by the current base station, use the first CDMA Channel listed in the *Extended CDMA Channel List Message* transmitted by the current base station; otherwise, use the first CDMA Channel listed in the *CDMA Channel List Message* transmitted by the current base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.
011	The base station shall set the neighbor configuration to this value if the mobile station is to enter the *System Determination Substate* of the *Mobile Station Initialization State* with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2). 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.
100-111	Reserved.

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.

SEARCH_PRIORITY - Pilot Channel search priority.

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.

3.7.2.3.2.15 Status Request Message

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

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

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. The base station shall include the required qualification information in this message.

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.	

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_TYPE (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.		

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 as defined in [30] to specify the band class qualification information.

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 if MOB_P_REV of the current band class is less than or equal to three. The base station shall set this field as shown in Table 3.7.2.3.2.15-4 to specify the operating mode qualification information if MOB_P_REV of the 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

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.

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:

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.

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.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the record equal to an integer number of octets. The base station shall set these bits to ‘0’.

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 × 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 × 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’.

ORDERED_TMSIS - TMSIs sent in numerical order.

If all the page records of PAGE_CLASS equal to '10' are sent such that the TMSI code values of the TMSI_CODE_ADDR fields for the mobile stations operating in the slotted mode are in ascending numerical order in all the *General Page Messages* sent within this slot, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

BROADCAST_DONE - Broadcast pages are done.

If all broadcast page records (PAGE_CLASS equal to '11') 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'.

RESERVED - Reserved bits.

The base station shall set this field to '0000'.

ADD_LENGTH - Number of octets in the page message specific fields.

If there are no additional page message specific fields, the base station shall set this field to '000'.

ADD_PFIELD - Additional page message specific fields.

The base station shall not include any additional page message specific fields, if ADD_LENGTH is '000'.

SPECIAL_SERVICE - Special service option indicator.

If this field is included in the page type-specific field, the base station shall set this field to '1' to request a special service option.

SERVICE_OPTION - Service option.

If the SPECIAL_SERVICE field is included in the page type-specific fields, and is set to '1', the base station shall set this field to the service option code shown in [30], corresponding to the requested service option. If the SPECIAL_SERVICE field is not included in the page type-specific fields, or is included and is set to '0', the base station shall omit this field.

BCCH_INDEX - BCCH index.

The base station shall set this field to the index of the BCCH to which the mobile station is being redirected.

TIME_OFFSET - BCCH offset.

The base station shall set this field to one less than the time offset, in units of 40 ms, from the beginning of the slot in which this message began to the beginning of the Broadcast Control Channel slot to which the mobile station is being directed.

REPEAT_TIME-
_OFFSET - BCCH offset of repeat.

The base station shall set this field to one less than the time offset, in units of 40 ms, from the time specified by TIME_OFFSET to the beginning of the Broadcast Control Channel slot to which the mobile station is being directed for a repeat of the broadcast message.

ADD_FIELDS_INCL - Additional Fields Included.

If additional fields are included, 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’.

ADD_LEN - Length of the additional record.

If ADD_FIELDS_INCL is set to ‘1’, the base station shall set ADD_LEN to the length of the additional record in octets; otherwise the base station shall omit this field.

ADD_RECORD - Additional record.

If ADD_FIELDS_INCL is set to ‘1’, the base station shall set this field to all zeroes such that the length is 8 × ADD_LEN bits.

3.7.2.3.2.18 Global Service Redirection Message

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 × 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.

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’.

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, which the corresponding REDIRECT_ACCOLC subfield is set to '1', is required to delete the TMSI assigned to the mobile station; otherwise, the base station shall set this field to '0'.

EXCL_P_REV_MS - Exclude redirection indicator.

If this message does not apply to mobile stations with MOB_P_REV greater than or equal to six, 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 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 second increments, 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
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.

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.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the record equal to an integer number of octets. The base station shall set these bits to '0'.

3.7.2.3.2.19 TMSI Assignment Message

MSG_TAG: TASM

Field	Length (bits)
RESERVED	5
TMSI_ZONE_LEN	4
TMSI_ZONE	8 × TMSI_ZONE_LEN
TMSI_CODE	32
TMSI_EXP_TIME	24

RESERVED - Reserved bits.

The base station shall set this field to '00000'.

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 ms × 2^{12} when the TMSI is to expire.

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 *Origination Message*.
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

3.7.2.3.2.21 Extended Channel Assignment Message

MSG_TAG: ECAM

Field	**Length (bits)**
ASSIGN_MODE	3
RESERVED_2	5
Additional record fields	8 × (ADD_RECORD_LEN – 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)

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)

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

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)

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)

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)

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.

The base station shall set this field to ‘00000’.

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 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’.

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.

The base station shall set this field to ‘0’.

NUM_PILOTS - Number of pilots in the Active Set.

The base station shall set this field to number of pilots that are to be in the mobile station’s Active Set on the Traffic Channel minus one. The base station shall set this field to the value in the range 0 to N_{6m}-1 inclusive.

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 may 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 may take place before the base station sends the first *Service Connect Message*.

The base station shall set this field to ‘10’ 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 not to take place before the base station sends the first *Service Connect Message*.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET × 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.

BAND_CLASS - 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 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.

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, in the specified CDMA band class, 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.

The base station shall include NUM_PILOTS plus one occurrence of the following three-field record, one 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.

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.

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 Traffic 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_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.

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.

The base station shall set this field to minimum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_ FCH_MAX_SETPT - Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to maximum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_SUBCHAN_GAIN - Forward power control subchannel relative gain.

The base station shall set FPC_SUBCHAN_GAIN equal to the power level of the forward link power control subchannel relative to the power level of 20 ms frames at a 9600 bps or 14400 bps rate of the Forward Fundamental Channel that the Forward Power Control Subchannel is punctured on. The base station shall set the value in units of 0.25 dB.

RLGAIN_ADJ - Reverse Traffic Channel power relative to access power.

The base station shall set this field to adjust the initial Traffic Channel transmission power relative to the Access Channel or Enhanced Access Channel transmission power. The base station shall set this field as a two's complement signed binary number, in units of 1 dB.

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.

If REV_PWR_CNTL_DELAY_INCL 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 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]) used by the mobile station after handoff, in units of 1.25 ms.

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 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.

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 use. If the FREQ_INCL bit is set to ‘0’, the base station shall omit this field.

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, 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 use. If the FREQ_INCL bit is set to ‘0’, the base station shall omit this field.

NUM_PILOTS - Number of pilots whose Paging Channel may be monitored.

The base station shall set this field to the number of pilots whose Paging Channel may be monitored by the mobile station minus one. The base station shall set this field to the value in the range 0 to $N_{8m} - 1$ inclusive.

The base station shall include NUM_PILOTS plus one occurrence of the following field record for each pilot whose Paging Channel may be monitored by the mobile station.

PILOT_PN - Pilot PN sequence offset index.

The base station shall include one occurrence of this field for each base station whose Paging Channel may be monitored by the mobile station. For each occurrence, the base station shall set this field to the pilot PN sequence offset for a base station, in units of 64 PN chips. The base station having this pilot PN sequence offset should support a Primary Paging Channel with the same Paging Channel rate as the current base station.

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 '010', the base station shall include the following fields:

RESPOND - Respond on analog control channel indicator.

If the mobile station is to retransmit an *Origination Message* or *Page Response Message* on the analog control channel (see [6]) 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*.

ANALOG_SYS - System indicator.

If USE_ANALOG_SYS is equal to '0', the base station shall set this field to '0'; otherwise, the base station shall set this field to '0' if the mobile station is to use analog system A, or to '1' if the mobile station is to use analog system B.

USE_ANALOG_SYS - Use analog system indicator.

The base station shall set this field to '1' to direct the mobile station to the analog system specified by ANALOG_SYS; otherwise, the base station shall set this field to '0'.

BAND_CLASS - Band class.

The base station shall set this field according to values defined in [30].

If the ASSIGN_MODE field is set to '011', the base station shall include the following fields:

SID - System identification of the analog system.

The base station shall set this field to the system identification of the analog system supporting the assigned voice channel for this assignment (see [6]).

VMAC - Voice mobile station attenuation code.

The base station shall set this field to the mobile station power level associated with the assigned voice channel for this assignment (see [6]).

ANALOG_CHAN - Voice channel number.

The base station shall set this field to the voice channel number for this assignment (see [6]).

SCC - SAT color code.

The base station shall set this field to the supervisory audio tone color code associated with the assigned voice channel. If the assignment is to a narrow analog channel, the base station shall set this field to the two least significant bits of the DSCC.

MEM - Message encryption mode indicator.

If analog control message encryption is to be enabled on the assigned forward and reverse analog voice channels, the base station shall set this bit to '1'; otherwise, the base station shall set this bit to '0'.

AN_CHAN_TYPE - Analog voice channel type.

The base station shall set this field to the analog channel type as specified in Table 3.7.3.3.2.6-1. If the mobile station does not have narrow analog capability, the base station shall set this field to '00'.

DSCC_MSB - Digital supervisory audio tone color code most significant bit.

The base station shall set this field to '0' when directing handoff to a wide analog channel. The base station shall set this field to the most significant bit of the DSCC when directing handoff to a narrow analog channel.

BAND_CLASS - Band class.

The base station shall set this field according to values defined in [30].

If the ASSIGN_MODE field is set to '100', the base station shall include the following fields:

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.

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 Forward Traffic Channel(s) the mobile station is to use. If the FREQ_INCL bit is set to '0', the base station shall omit this field.

CDMA_FREQ - Frequency assignment.

If the FREQ_INCL bit is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

If FOR_RC is set to a Radio Configuration associated with Spreading Rate 1, 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 Forward Traffic Channel(s) the mobile station is to use. If FOR_RC is set to a Radio Configuration associated with Spreading Rate 3, the base station shall set this field to the center SR3 frequency assignment containing the Forward Traffic Channel(s) the mobile station is to use.

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'.

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 rate set defined by the DEFAULT_CONFIG field for the Forward and Reverse Traffic channels, and to indicate that service negotiation may 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 may take place before the base station sends the first *Service Connect Message*.

The base station shall set this field to '10' 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 not to take place before the base station sends the first *Service Connect Message*.

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 rate set for the Forward and Reverse Traffic Channels.

FOR_RC - Forward Traffic 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 Traffic (Fundamental and Dedicated Control) 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_RC - Reverse Traffic 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 Traffic (Fundamental and Dedicated Control) 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 '0001' or '0010' (see Table 3.7.2.3.21-3).

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET × 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.

FPC_SUBCHAN_GAIN - Forward Power Control Subchannel relative gain.

The base station shall set FPC_SUBCHAN_GAIN equal to the power level of the forward link power control subchannel relative to the power level of of 20 ms frames at a 9600 bps or 14400 bps rate on the Forward Fundamental Channel or the Forward Dedicated Control Channel that the Forward Power Control Subchannel is punctured on. The base station shall set the value in units of 0.25 dB.

RLGAIN_ADJ - Reverse Traffic Channel power relative to access power.

The base station shall set this field to adjust the initial Traffic Channel transmission power relative to the Access Channel or Enhanced Access Channel transmission power. The base station shall set this field as a two's complement signed binary number, in units of 1 dB.

NUM_PILOTS - Number of pilots in the Active Set.

The base station shall set this field to number of pilots that are to be in the mobile station's Active Set on the Traffic Channel minus one. The base station shall set this field to the value in the range 0 to N_{6m}-1 inclusive.

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.

If REV_PWR_CNTL_DELAY_INCL 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 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]) used by the mobile station after handoff, in units of 1.25 ms.

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.

3XFL_1XRL_INCL - 3X Forward Link and 1X Reverse Link indicator.

The base station shall set this field to '1' if the base station is assigning 3X traffic channel on the Forward Link and 1X traffic channel on the Reverse Link; otherwise, the base 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.

The base station shall set this field to minimum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_ FCH_MAX_SETPT - Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to maximum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

The base station shall include NUM_PILOTS plus one occurrence of the following record, one 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.

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-

_FCH_LOW – QOF index 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 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 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-

_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.

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 CH_IND field is set to '10', the base station shall include the following fields:

FPC_DCCH_INIT_SETPT - Initial Dedicated Control Channel outer loop E_b/N_t setpoint.

The base station shall set this field to initial Dedicated Control Channel outer loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_DCCH_FER - Dedicated Control Channel target Frame Error Rate.

The base station shall set this field to the target Frame Error Rate on the Dedicated Control Channel, as specified in Table 3.7.3.3.2.25-2.

FPC_ DCCH_MIN_SETPT - Minimum Dedicated Control Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to minimum Dedicated Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_ DCCH_MAX_SETPT - Maximum Dedicated Control Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to maximum Dedicated Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

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.

If the Forward Dedicated Control 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_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]) that the mobile station is to use on the Forward 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 that the mobile station is to use on the Forward 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 Mask Identifier 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 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 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 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 Dedicated Control Channel on the center SR3 frequency.

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'.

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.

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'.

If the CH_IND field is set to '11', 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_DCCH_INIT_SETPT - Initial Dedicated Control Channel outer loop E_b/N_t setpoint.

The base station shall set this field to initial Dedicated Control Channel outer loop E_b/N_t setpoint, in units of 0.125 dB.

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.

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.

FPC_ FCH_MIN_SETPT - Minimum Fundamental Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to minimum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_ FCH_MAX_SETPT - Maximum Fundamental Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to maximum Fundamental Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_DCCH_FER - Dedicated Control Channel target Frame Error Rate.

The base station shall set this field to the target Frame Error Rate on the Dedicated Control Channel.

FPC_ DCCH_MIN_SETPT - Minimum Dedicated Control Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to minimum Dedicated Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

FPC_ DCCH-

_MAX_SETPT - Maximum Dedicated Control Channel Outer Loop E_b/N_t setpoint.

The base station shall set this field to maximum Dedicated Control Channel Outer Loop E_b/N_t setpoint, in units of 0.125 dB.

The base station shall include NUM_PILOTS plus one occurrence of the following three-field record, one 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 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 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.

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 Mask Identifier 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 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 Dedicated Control Channel associated with this pilot. 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 that the mobile station is to use on the Forward Dedicated Control 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 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_LOW – QOF index 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 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:

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.

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’.

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.

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'.

3.7.2.3.2.22 General Neighbor List Message

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)

Field	Length (bits)
NUM_ANALOG_NGHBR	3

NUM_ANALOG_NGHBR occurrences of the following record:

BAND_CLASS	5
SYS_A_B	2

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 × RECORD_LEN
SRCH_OFFSET_NGHBR	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.

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.

NGHBR_SRCH_MODE- Search mode.

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.

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_NGHBR - 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 ith occurrence of the following record shall correspond the ith pilot in the *Neighbor List Message* or in the *Extended Neighbor List Message*.

NGHBR_CONFIG - Neighbor configuration.

If NGHBR_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.

Table 3.7.2.3.2.22-2. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	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): • 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	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): • 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	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): • 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 *Extended CDMA Channel List Message* is supported and the *Extended CDMA Channel List Message* is being sent by the current base station, use the first CDMA Channel listed in the *Extended CDMA Channel List Message* transmitted by the current base station; otherwise, use the first CDMA Channel listed in the *CDMA Channel List Message* transmitted by the current base station. • Use the Primary Paging Channel on the CDMA channel assignment on the neighbor base station.

011	The base station shall set the neighbor configuration to this value if the mobile station is to enter the *System Determination Substate* of the *Mobile Station Initialization State* with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2). 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.
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.

FREQ_INCL - Frequency included indicator.

If FREQ_FIELDS_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field as follows:

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 in this assignment record, the base station shall set this bit to '0'.

NGHBR_BAND - Neighbor band class.

If the FREQ_INCL bit is included and 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 omitted or is set to '0', the base station shall omit this field.

NGHBR_FREQ - Neighbor frequency assignment.

If the FREQ_INCL bit is omitted or is set to '0', the base station shall omit this field.

If the FREQ_INCL bit is included and is set to '1' and the corresponding neighbor has a 1X neighbor pilot record type, 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 included and is set to '1' and the corresponding neighbor has a 3X neighbor pilot record type, the base station shall set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the center SR3 frequency assignment containing the Paging Channel the mobile station is to search.

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'.

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_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 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_NGHBR 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 ith occurrence of the following record shall correspond the ith 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

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.

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 '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.

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.

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] on the frequency of the primary pilot.

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 as the Auxiliary pilot on the frequency of the primary 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 on the frequency of the primary pilot.

ADD_INFO_INCL1 - Additional information included for the pilot on the lower frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF1 - Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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]) on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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_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 as the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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 lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of 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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of 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_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 as the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of 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.

SRCH_OFFSET_NGHBR - Neighbor pilot channel search window size offset.

If SRCH_OFFSET_INCL equals to ‘1’, then the base station shall set this field to the value shown in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by mobile stations for this neighbor; otherwise, the base station shall omit this field.

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.

If the corresponding User Zone allows for temporary subscription, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

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:

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

COMMON_INCL - Common configuration included indicator.

If all private neighbor base stations included in this message are on the same CDMA band class and CDMA Channel number as specified in the COMMON_BAND_CLASS and COMMON_NGHBR_FREQ fields, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

COMMON_BAND_CLASS - Neighbor band class.

If COMMON_INCL is set to '1', the base station shall set this field to the CDMA band class as in Table 3.7.2.3.2.8-3 corresponding to the CDMA frequency assignment for the CDMA Channel containing the Paging Channel or the Forward Common Control Channel for all private neighbors; otherwise, the base station shall omit this field.

COMMON_NGHBR_FREQ - Neighbor frequency assignment.

If the COMMON_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 or the Forward Common Control Channel for all private neighbor base station; otherwise, the base station shall omit this field.

SRCH_WIN_N - Search window size for the Private Neighbor Set.

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 Private Neighbor Set.

NUM_PRI_NGHBR - Number of private neighbor pilot PN sequences.

The base station shall set this field to the number of private neighbors included in the message.

The base station shall include NUM_PRI_NGHBR occurrences of the following record.

SID - System Identification.

The base station shall set this field to the system identification number for this private neighbor 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 system identification number for this private neighbor network (see 2.6.5.2).

PRI_NGHBR_PN - Private neighbor pilot PN sequence offset index.

The base station shall set this field to the pilot PN sequence offset for this private neighbor, 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 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.

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.

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.

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’.

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.

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.

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]) on the frequency of the primary pilot.

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 as the Auxiliary pilot on the frequency of the primary 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 on the frequency of the primary pilot.

ADD_INFO_INCL1 - Additional information included for the pilot on the lower frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF1 - Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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]) on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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_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 as the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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 lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of 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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of 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_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 as the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of 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.

BAND_CLASS - Neighbor band class.

If COMMON_INCL is set to ‘0’, the base station shall set this field to the CDMA band class as in Table 3.7.2.3.2.8-3 corresponding to the CDMA frequency assignment for the CDMA Channel containing the Paging Channel for the private neighbor; otherwise, the base station shall omit this field.

NGHBR_FREQ - Neighbor frequency assignment.

If the COMMON_INCL bit is set to ‘0’, 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 for the private neighbor base station; otherwise, the base station shall omit this field.

UZID_INCL - User Zone identifier included indicator.

If the UZID information is included, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

NUM_UZID - Number of User Zone identifiers.

If UZID_INCL is set to ‘1’, the base station shall set this field to the number of occurrences of UZID supported by the private neighbor base station; otherwise, the base station shall omit this field.

If UZID_INCL is set to ‘1’, the base station shall include NUM_UZID occurrences of the following three-field subrecord; otherwise, the base station shall omit this subrecord.

UZID - User Zone identifiers.

The base station shall set this field to the User Zone identifier supported by the private neighbor 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.

If the corresponding User Zone allows for temporary subscription, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

3.7.2.3.2.25 Reserved

3.7.2.3.2.26 Sync Channel Message

MSG_TAG: SCHM

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)

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

P_REV - Protocol revision level.

The base station shall set this field to '00000111'.

MIN_P_REV - Minimum protocol revision level.

The base station sets this field to prevent mobile stations which cannot be supported by the base station from accessing the system.

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.

SID - System identification.

The base station shall set this field to the system 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).

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.

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 SYS_TIME - (LP_SEC × 12.5) + (LTM_OFF × 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.

The base station shall set this field to the CDMA Channel number corresponding to the CDMA frequency assignment for the CDMA Channel containing a Primary Paging Channel.[26]

EXT_CDMA_FREQ - Extended frequency assignment.

The base station shall set this field to the CDMA Channel number corresponding to the CDMA frequency assignment for the CDMA Channel containing a Primary Paging Channel that a mobile station capable of Radio Configurations greater than 2 or capable of supporting Quick Paging Channel will use.

SR1_BCCH_SUPPORTED - Common Channel on Spreading Rate 1 supported indicator.

The base station shall set this field to '1' if the base station supports common channels (BCCH/F-CCCH/EACH); otherwise, the base station shall set this field to '0'.

SR1_NON_TD-_FREQ_INCL - Non 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:

The base station shall set this field to '1' if SR1_CDMA_FREQ_NON_TD is included in the message. The base station shall set this field to '0' if the frequency specified by the EXT_CDMA_FREQ field is used for BCCH frequency assignment.

SR1_CDMA-_FREQ_NON_TD - Frequency assignment for non-transmit diversity operation.

If SR1_NON_TD_FREQ_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 CDMA Channel number corresponding to the CDMA frequency assignment for the CDMA Channel containing a Broadcast Control Channel that does not support the TD operation.

SR1_BRAT_NON_TD - BCCH data rate in non-TD mode for Spreading Rate 1.

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[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:

The base station shall set this field to '1' if SR1_CDMA_FREQ_TD, SR1_BRAT_TD, SR1_TD_MODE, and SR1_TD_POWER_LEVEL are included in the message; otherwise, the base station shall set this field to '0'.

SR1_CDMA_FREQ TD - Spreading Rate 1 frequency assignment for Transmit Diversity operation.

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 CDMA Channel number corresponding to the CDMA frequency assignment for the CDMA Channel containing a BCCH Channel that supports the TD operation.

SR1_BRAT_TD - BCCH data rate in Transmit Diversity mode for Spreading Rate 1.

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 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.

SR1_CRAT_TD – BCCH code rate in Transmit Diversity mode for Spreading Rate 1.

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 '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_TD – Walsh code for the Spreading Rate 1 BCCH in Transmit Diversity mode.

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 Walsh code corresponding to the Spreading Rate 1 BCCH in Transmit Diversity mode.

SR1_TD_MODE - Spreading Rate 1 Transmit Diversity Mode.

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 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.

If SR3_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 ‘1’, if the CDMA Channel number corresponding to the SR3 center frequency assignment for the CDMA Channel containing a Broadcast Control Channel is different to EXT_CDMA_FREQ. Otherwise, the base station shall set this field to ‘0’.

SR3_CENTER_FREQ - Center SR3 frequency assignment.

If SR3_CENTER_FREQ_INCL is included and 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 CDMA Channel number corresponding to the SR3 center frequency assignment for the CDMA Channel containing a Broadcast Control Channel.

SR3_BRAT – Spreading Rate 3 BCCH data rate.

If SR3_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 BCCH rate 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.

SR3_BCCH-_CODE_CHAN – Spreading Rate 3 BCCH Walsh code.

If SR3_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 3 BCCH.

SR3_PRIMARY_PILOT – Primary SR3 pilot.

If SR3_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 3.7.2.3.2.26-5 corresponding to the position of the 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

SR3_PILOT_POWER2 – Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

If SR3_INCL 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 higher frequency of the two remaining SR3 frequencies.

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’.

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_P_REV_INCL - Redirection mobile protocol revision included.

If the redirection specified in this message applies to the mobile stations of some specific protocol revisions, the base station shall set this field to '1'; otherwise, if this redirection applies to all mobile stations, the base station shall set this field to '0'.

EXCL_P_REV_IND - Excluding mobile protocol revision indicator.

If the REDIRECT_P_REV_INCL is set to '1', the base station shall include this field and set this field as described below; otherwise, the base station shall omit this field.

If mobile stations with MOB_P_REV in the range between REDIRECT_P_MIN and REDIRECT_P_MAX inclusive are excluded from this Global Service Redirection, the base station shall set this field to '1'. Otherwise, if the mobile stations with MOB_P_REV in the protocol revision range specified in DIRECT_P_MIN and DIRECT_P_MAX are subjected to the redirection, the base station shall set this field to '0'.

REDIRECT_P_MIN - Minimum redirection protocol revision.

The base station shall set this field to the minimum 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.

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.

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 ‘0’

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.

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.

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.

CDMA_FREQ - CDMA Channel frequency assignment.

The base station shall include one occurrence of this field for each CDMA Channel, containing either a Paging Channel, or a Broadcast Control Channel and Forward Common Control Channel.

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]).

If the base station supports a CDMA frequency assignment without transmit diversity, the base station should not set the first occurrence of this field to a CDMA channel number corresponding to a transmit diversity frequency assignment.

RC_QPCH_SEL_INCL - RC and QPCH Selection included indicator

The base station shall set this field to '1', if NUM_FREQ occurrences of RC_QPCH_HASH_IND are included; otherwise, it shall set this field to '0'.

RC_QPCH-_HASH_IND - RC_QPCH channel hashing indicator

If RC_QPCH_SEL_INCL is set to '1', the base station shall include NUM_FREQ occurrences of this field and set this field as follow; otherwise, the base station shall omit this field.

If the associated CDMA_FREQ is to be selected for CDMA channel hashing by mobile stations capable of RC greater than two or capable of supporting Quick Paging Channel, the base station shall set the field to '1'; otherwise, the base station shall set this field to '0 '.

When the *Extended CDMA Channel List Message* is sent on the Broadcast Control Channel, the base station shall set this field to '1', if the corresponding CDMA channel is to be selected for channel hashing by mobile station with Quick Paging Channel capability.

TD_SEL_INCL - Transmit diversity selection indicator included.

The base station shall set this field to '1', if the base station includes transmit diversity selection information in this message; otherwise, the base station shall set this field to '0'.

TD_MODE - Transmit diversity mode.

If the field TD_SEL_INCL 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 Transmit Diversity mode, as specified in Table 3.7.2.3.2.26-3.

If the TD_SEL_INCL is set to ‘1’, the base station shall include NUM_FREQ occurrences of the following fields:

TD_HASH_IND - Transmit diversity hash indicator.

If the associated CDMA_FREQ is to be selected for CDMA channel hashing by mobile stations capable of supporting transmit diversity [TD_MODE], the base station shall set the field to ‘1’; otherwise, the base station shall set this field to ‘0’.

TD_POWER_LEVEL - Transmit diversity power level.

If TD_HASH_IND is set to ‘0’, the base station shall omit this field; otherwise, the base station shall include this field and set it to the transmit diversity transmission power level relative to that of the Forward Pilot Channel, as specified in Table 3.7.2.3.2.21-7.

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’.

ASSIGN_UZID - Assigned User Zone identifiers.

The base station shall set this field to the User Zone identifier of the User Zone assigned to the mobile station.

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)

Field	Length (bits)
TMSI_ZONE_LEN	4
TMSI_ZONE	8 × 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

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).

SID - System identification.

The base station shall set this field to the system 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).

PACKET_ZONE_ID - Packet data services zone identifier.

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.

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'.

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’.

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.

If mobile stations that are foreign SID roamers (see 2.6.5.3) and have MOB_TERM_FOR_SID equal to ‘1’ are to be enabled for autonomous registration, 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_NID_REG - NID roamer registration indicator.

If mobile stations that are foreign NID roamers (see 2.6.5.3) and have MOB_TERM_FOR_NID equal to ‘1’ are to be enabled for autonomous registration, 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’.

POWER_UP_REG - Power-up registration indicator.

If mobile stations enabled for autonomous registration are to register immediately after powering on and receiving the system overhead messages, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

POWER_DOWN_REG - Power-down registration indicator.

If mobile stations enabled for autonomous registration are to register immediately before powering down, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

PARAMETER_REG - Parameter-change registration indicator.

If mobile stations are to register on parameter change events as specified in 2.6.5.1.6, the base station shall set this field to ‘1’. If not, the base station shall set this field to ‘0’.

REG_PRD - Registration period.

If mobile stations are not to perform timer-based registration, the base station shall set this field to ‘0000000’. If mobile stations are to perform timer-based registration, the base station shall set this field to the value in the range 29 to 85 inclusive, such that the desired timer value is

$$\lfloor 2^{REG\_PRD/4} \rfloor \times 0.08 \text{ seconds.}$$

DIST_REG_INCL - Distance-Based Registration Information Included.

The base station shall set this field to ‘1’ if it includes distance-based registration information in the message and mobile stations are to perform distance-based registration; otherwise the base station shall set this field to ‘0’.

REG_DIST - Registration distance.

If DIST_REG_INCL is set to ‘1’, the base station shall include the field REG_DIST and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to the non-zero “distance” beyond which the mobile station is to re-register (see 2.6.5.1.4).

DELETE_FOR_TMSI - Delete foreign TMSI.

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’.

USE_TMSI - Use TMSI indicator.

The base station shall set this field to the value shown in Table 3.7.2.3.2.29-2 corresponding to the type of MSID that the mobile station is to use on the Enhanced Access Channel.

PREF_MSID_TYPE - Preferred Enhanced Access Channel Mobile Station Identifier Type.

The base station shall set this field to the value shown in Table 3.7.2.3.2.30-2 corresponding to the type of MSID that the mobile station is to use on the Enhanced Access Channel.

Table 3.7.2.3.2.30-2. Preferred MSID Types

USE_TMSI (binary)	PREF_MSID_TYPE (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).

BROADCAST_GPS_ASST - Broadcast GPS Assist Indicator.

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 ‘1’ if it supports Broadcast GPS Assist capability; otherwise, the base station shall set this field to ‘0’.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

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 field consists of the subfields shown in Table 2.7.1.3.2.1-4.

STORE_KEY – Store session key indicator

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 ‘1’ to indicate that the mobile station is to store the session key; otherwise the base station shall set this field to ‘0’.

3.7.2.3.2.31 MC-RR Parameters Message

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)

Field	Length (bits)
ADD_FIELDS_LEN	8
ADD_FIELDS	8 × 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)

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)

Field	Length (bits)
SENDING_RAND	0 or 1
PRI_NGHBR_LIST	0 or 1
USER_ZONE_ID	0 or 1
EXT_GLOBAL_REDIRECT	0 or 1
RESERVED	0 or (NUM_OPT_MSG – 4)

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).

BASE_ID - Base station identification.

The base station shall set this field to its identification number.

P_REV - Protocol revision level.

The base station shall set this field to ‘00000111’.

MIN_P_REV - Minimum protocol revision level.

The base station sets this field to prevent mobile stations, which cannot be supported by the base station from accessing the system.

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.

SR3_INCL - Spreading Rate 3 common channel parameters included indicator.

The base station shall set this field to ‘1’ if the base station includes SR3 related parameters in this message; otherwise, the base station shall set this field to ‘0’.

If the base station is operating in SR3 mode, the base station shall set this field to ‘0’.

SR3_CENTER-

_FREQ_INCL - Center SR3 frequency assignment included.

If SR3_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 '1', if the CDMA Channel number corresponding to the SR3 center frequency assignment for the CDMA Channel containing a Broadcast Control Channel is different from the current SR1 frequency assignment. Otherwise, the base station shall set this field to '0'.

SR3_CENTER_FREQ - Center SR3 frequency assignment.

If SR3_CENTER_FREQ_INCL is included and 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 CDMA Channel number corresponding to the SR3 center frequency assignment for the CDMA Channel containing a Broadcast Control Channel.

SR3_BRAT - Spreading Rate 3 BCCH data rate.

If SR3_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 BCCH rate 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.

SR3_BCCH-

_CODE_CHAN - Spreading Rate 3 BCCH Walsh code index.

If SR3_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 Walsh code index corresponding to the Spreading Rate 3 BCCH.

SR3_PRIMARY_PILOT - Primary SR3 pilot.

If SR3_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 3.7.2.3.2.26-5 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.

If SR3_INCL 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.

SR3_PILOT_POWER2 - Relative power level between the primary SR3 pilot and the pilot on the higher frequency of the two remaining SR3 frequencies.

If SR3_INCL 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 higher frequency of the two remaining SR3 frequencies.

SRCH_WIN_A - Search window size for the Active Set and Candidate Set.

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 Active Set and Candidate Set.

SRCH_WIN_R - Search window size for the Remaining Set.

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 Remaining Set.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

The base station shall set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c / I_o \rfloor$.

T_DROP - Pilot drop threshold.

This value is used by mobile stations to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

The base station shall set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c / I_o \rfloor$.

T_COMP - Active Set versus Candidate Set comparison threshold.

Mobile stations transmit a *Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

The base station shall set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.

T_TDROP - Drop timer value.

Timer value after which an action is taken by mobile stations for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

The base station shall set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by mobile stations.

NGHBR_MAX_AGE - Neighbor Set maximum AGE.

The base station shall set this field to the maximum AGE value beyond which mobile stations are to drop members from the Neighbor Set (see 2.6.6.2.6.3).

SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the Active Set, or dropping a pilot from the Active Set (see 2.6.6.2.3 and 2.6.6.2.5.2).

The base station shall set this field as an unsigned binary number.

ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to the Active Set (see 2.6.6.2.5.2).

The base station shall set this field as a two's complement signed binary number, in units of dB.

DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot from the Active Set (see 2.6.6.2.3).

The base station shall set this field as a two's complement signed binary number, in units of dB.

ENC_SUPPORTED – Encryption fields included.

The base station shall set this field to ‘1’ if the encryption related fields are included; otherwise the base station shall set this field to ‘0’.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is included, this field indicates which signaling encryption algorithms are supported by the base station.

This field consists of the subfields shown in Table 2.7.1.3.2.1-5.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is included, the base station shall set this field to indicate the supported user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-7.

The base station shall set each subfield to ‘1’ if the corresponding user information encryption algorithm is supported by the base station; otherwise, the base station shall set the subfield to ‘0’.

STORE_KEY – Store session key indicator

The base station shall include this field only if ENC_SUPPORTED is equal to ‘1’. If this field is included, the base station shall set this field to ‘1’ to indicate that the mobile station is to store the session key; otherwise the base station shall set this field to ‘0’.

ADD_FIELDS_LEN - Additional fields length.

The base station shall set this field to the number of octets included in the ADD_FIELDS. The base station shall set this field to ‘00000000’.

ADD_FIELDS - Additional fields.

The base station shall include 8 x ADD_FIELDS_LEN bits to support additional fields, if any.

CCH_INFO_INCL - Common Channel information included indicator.

If the message is sent on the f-csch and additional 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 set this field to '1'.

MCC - Mobile Country Code.

If CCH_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 CCH_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).

MAX_SLOT_CYCLE-_INDEX - Maximum slot cycle index.

If CCH_INFO_INCL is set to '1', the base station shall include the field MAX_SLOT_CYCLE_INDEX and shall set this field as shown below; otherwise, the base station shall omit this field.

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).

CHAN_SEL_PREF - Channel selection preference indicator.

If CCH_INFO_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it as follows.

If transmit diversity support is preferred for CDMA Channel selection, the base station shall set this field to '1'. If over Quick Paging Channel support is preferred for CDMA Channel selection, the base station shall set this field to '0'.

PWR_REP_THRESH - Power control reporting threshold.

If CCH_INFO_INCL is set to '1', the base station shall include the field PWR_REP_THRESH and shall set this field as shown below; otherwise, the base station shall omit this field.

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 mobile stations are 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.

If CCH_INFO_INCL is set to '1', the base station shall include the field PWR_REP_FRAMES and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to the value such that the number given by

$$\lfloor 2^{(\mathrm{PWR\_REP\_FRAMES}/2)} \times 5 \rfloor \text{ frames}$$

is the number of frames over which mobile stations are to count frame errors.

PWR_THRESH_ENABLE - Threshold report mode indicator.

If CCH_INFO_INCL is set to '1', the base station shall include the field PWR_THRESH_ENABLE and shall set this field as shown below; otherwise, the base station shall omit this field.

If mobile stations are to generate threshold *Power Measurement Report Messages*, the base station shall set this field to '1'. If mobile stations are 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 CCH_INFO_INCL is set to '1', the base station shall include the field PWR_PERIOD_ENABLE and shall set this field as shown below; otherwise, the base station shall omit this field.

If mobile stations are to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '1'. If mobile stations are not to generate periodic *Power Measurement Report Messages*, the base station shall set this field to '0'.

PWR_REP_DELAY - Power report delay.

The period that mobile stations wait following a *Power Measurement Report Message* before restarting frame counting for power control purposes.

If CCH_INFO_INCL is set to ‘1’, the base station shall include the field PWR_REP_DELAY and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to the power report delay value, in units of 4 frames (see 2.6.4.1.1).

RESELECT_INCLUDED - System reselection parameters included.

If CCH_INFO_INCL is set to ‘1’, the base station shall include the field RESELECT_INCLUDED and shall set this field as shown below; otherwise, the base station shall omit this field.

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 included and is set to ‘1’, the base station shall include the field EC_THRESH and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall 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.

EC_IO_THRESH - Pilot E_C / I_O threshold.

If RESELECT_INCLUDED is included and is set to ‘1’, the base station shall include the field EC_IO_THRESH and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to:

$$\lfloor -20 \times \log_{10} (pilot\_threshold) \rfloor$$

where *pilot_threshold* is the pilot E_C/I_O below which the mobile station is to perform system reselection.

BASE_LAT - Base station latitude.

If CCH_INFO_INCL is set to ‘1’, the base station shall include this field and set it as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to its 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°).

BASE_LONG - Base station longitude.

If CCH_INFO_INCL is set to '1', the base station shall include this field and set it as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to its 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°).

PILOT_REPORT - Pilot reporting indicator.

If CCH_INFO_INCL is set to '1', the base station shall include the field PILOT_REPORT 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 to report the additional pilots which have pilot strengths exceeding T_ADD in all Enhanced 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*.

ACC_ENT_HO_ORDER - Access entry handoff permitted indicator.

If CCH_INFO_INCL is 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 '1' if the mobile station is permitted to perform an access entry handoff after receiving a message while performing the *Mobile Station Order and Message Processing Operation* in the *Mobile Station Idle State* (see 2.6.2.4); otherwise, the base station shall set this field to '0'.

ACCESS_HO - Access handoff permitted indicator.

If CCH_INFO_INCL is 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 ‘1’ if the mobile station is permitted to perform an access handoff (see 2.6.3.1.3.2); otherwise, the base station shall set this field to ‘0’.

ACCESS_HO_MSG_RSP - Access handoff permitted for message response indicator.

If ACCESS_HO 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 ‘1’ if the mobile station is permitted to perform an access handoff after receiving a message and before responding to that message in the *System Access State*; otherwise, the base station shall set this field to ‘0’.

ACCESS_PROBE_HO - Access probe handoff permitted indicator.

If CCH_INFO_INCL is 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 ‘1’ if the mobile station is permitted to perform an access probe handoff (see 2.6.3.1.3.3); otherwise, the base station shall set this field to ‘0’.

ACC_HO_LIST_UPD - Access handoff list update permitted indicator.

If ACCESS_PROBE_HO is included and is 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 ‘1’ if the mobile station is permitted to update the access handoff list during an access attempt (see 2.6.3.1.7.2); otherwise, the base station shall set this field to ‘0’.

ACC_PROBE_HO-_OTHER_MSG - Access probe handoff permitted for messages other than the *Origination Message* and the *Page Response Message*.

If ACCESS_PROBE_HO 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 ‘1’ if the mobile station is permitted to perform an access probe handoff for messages other than the *Origination Message* and the *Page Response Message*. The base station shall set this field to ‘0’ if the mobile station is permitted to perform an access probe handoff only for the *Origination Message* and the *Page Response Message*. See 2.6.3.1.3.3.

MAX_NUM_PROBE_HO - Maximum number of times that the mobile station is permitted to perform an access probe handoff.

If ACCESS_PROBE_HO 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 maximum number of times the mobile station is allowed to perform an access probe handoff within an access attempt minus one.

NUM_FCCCH - Total number of 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.

The base station shall set this field to the total number of Forward Common Control Channels on this CDMA Channel.

FCCCH_RATE – Rate words 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.

The base station shall set this field to the FCCCH rate field value shown in Table 3.7.2.3.2.31-1 corresponding to the data rate used on the Forward Common Control Channels in the 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).

NUM_BCCH_BCAST - The number of Broadcast Control Channels used for transmitting broadcast messages.

If the base station supports transmission of broadcast messages, the base station shall set this field to the number of Broadcast Control Channels used for transmitting broadcast messages. If the base station supports transmission of broadcast messages, the base station shall not set this field to '000'.

The base station shall set NUM_BCCH_BCAST occurrences of the following record:

BCCH_CODE_CHAN - The Walsh Code index for the Broadcast Control Channel specified by BCCH_ID.

The base station shall set this field to the Walsh code corresponding to the Broadcast Control Channel specified by BCCH_ID.

BRAT - BCCH data rate.

The base station shall set this field to the BRAT field value shown in Table 3.7.2.3.2.31-2 corresponding to the data rate used by the Broadcast Control Channel to which the mobile 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

BCCH_CODE_RATE - BCCH code rate.

For spreading rate 1, 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]). For spreading rate 1, 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]). For spreading rate 3, the base station shall set this field to '0'.

QPCH_SUPPORTED - Quick Paging Channel Supported Indication.

If CCH_INFO_INCL is set to '1', the base station shall include the field QPCH_SUPPORTED and shall set this field as shown below; otherwise, the base station shall omit this field.

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 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.

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 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.

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.

QPCH_POWER-_LEVEL_PAGE - Quick Paging Channel paging indicator transmit power level.

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.

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 3.7.2.3.2.31-3.

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-_BCAST - Quick Paging Channel broadcast indicator 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.

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’.

MAC_CF_SUPPORTED - MAC control function supported indicator.

If CCH_INFO_INCL is set to ‘1’, the base station shall include the field MAC_CF_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’ to indicate that the base station supports MAC control functions; otherwise, the base station shall set this field to ‘0’.

RLGAIN_TRAFFIC_PILOT - Gain adjustment of the Reverse Traffic Channel relative to the Reverse Pilot Channel for Radio Configurations greater than 2.

If CCH_INFO_INCL is set to ‘1’, the base station shall include the field RLGAIN_TRAFFIC_PILOT and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to the correction factor to be used by mobile stations in setting the power of a reverse traffic channel, expressed as a two’s complement value in units of 0.125 dB (see 2.1.2.3.3 of [2]).

REV_PWR-CNTL_DELAY_INCL - Reverse Power Control Delay included indicator.

If CCH_INFO_INCL is set to ‘1’, the base station shall include this field and set it as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to ‘1’ if the base station includes the REV_PWR_CNTL_DELAY field in this message; otherwise, the base station shall set this field to ‘0’.

REV_PWR-_CNTL_DELAY - The reverse power control delay.

If REV_PWR_CNTL_INCL is included and 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 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.

MOB_QOS - Indicator granting permission to the mobile station to request QoS parameter settings in the *Origination Message*.

If CCH_INFO_INCL is set to '1', the base station shall include this field and set it 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 allowed to include a QoS record in the *Origination Message*, or to '0', otherwise.

USE_SYNC_ID - Sync ID supported indicator.

The base station shall set this field to '1' to indicate that the mobile station is permitted to include the SYNC_ID field in the *Page Response Message* and the *Origination Message*. Otherwise, the base station shall set this field to '0'.

NUM_OPT_MSG - Number of optional overhead messages to be sent.

If CCH_INFO_INCL is set to '1, the base station shall include this field and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall set this field to the number of optional overhead messages to be sent.

SENDING_RAND - *ANSI-41 RAND Message* indicator.

If NUM_OPT_MSG is included and is equal to or greater than 1, the base station shall include the field SENDING_RAND and shall set this field as shown below; otherwise, the base station shall omit this field.

If the base station is sending the *ANSI-41 RAND Message* on the Broadcast Control Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

PRI_NGHBR_LIST - *Private Neighbor List Message* indicator.

If NUM_OPT_MSG is included and is equal to or greater than 2, the base station shall include the field PRI_NGHBR_LIST and shall set this field as shown below; otherwise, the base station shall omit this field.

If the base station is sending the *Private Neighbor List Message* on the Broadcast Control Channel, it shall set this field to '1'; otherwise, it shall set this field to '0'.

USER_ZONE_ID - *User Zone Identification Message* indicator.

If NUM_OPT_MSG is included and is equal to or greater than 3, the base station shall include the field USER_ZONE_ID and shall set this field as shown below; otherwise, the base station shall omit this field.

If the base station is sending the *User Zone Identification Message* on the Broadcast Control Channel, it shall set this field to ‘1’; otherwise, it shall set this field to ‘0’.

EXT_GLOBAL-

_REDIRECT - Extended *Global Service Redirection Message* indicator.

If NUM_OPT_MSG is included and is equal to or greater than 4, the base station shall include the field EXT_GLOBAL_REDIRECT and shall set this field as shown below; otherwise, the base station shall omit this field.

If the base station is sending the *Extended Global Service Redirection Message* on the Broadcast Control Channel, it shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

RESERVED - Reserved bits.

If NUM_OPT_MSG is included and is equal to or greater than 5, the base station shall include the field RESERVED and shall set this field as shown below; otherwise, the base station shall omit this field.

The base station shall add (NUM_OPT_MSG – 4) reserved bits. The base station shall set these bits to ‘0’.

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.

3.7.2.3.2.33 Enhanced Access Parameters Message

MSG_TAG: EAPM

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)

(continues on next page)

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)

1

Field	Length (bits)
EACH_SLOT_OFFSET2	6
RESERVED	0 – 7 (as needed)

BA_PARMS_LEN	2
NUM_EACH_BA	5
EACH_BA_RATES_SUPPORTED	8
RESERVED	0 – 7 (as needed)

RA_PARMS_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

(continues on next page)

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)

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 - *Enhanced Access Parameters Message* sequence number.

The base station shall set this field to ACC_CONFIG_SEQ (see 2.6.2.2.15).

PSIST_PARMS_INCL - Persistence parameters included indicator.

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’.

PSIST_PARMS_LEN - Length of persistence parameters record.

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.

PSIST(0-9)_EACH - Persistence value for access overload classes 0 through 9.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload classes 0 through 9 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile stations is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111111’.

PSIST(10)_EACH - Persistence value for access overload class 10 (test mobile stations).

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 10 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile station is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST(11)_EACH - Persistence value for access overload class 11 (emergency mobile stations).

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 11 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile station is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST(12)_EACH - Persistence value for access overload class 12.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 12 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile station is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST(13)_EACH - Persistence value for access overload class 13.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 13 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile station is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST(14)_EACH - Persistence value for access overload class 14.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 14 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile station is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST(15)_EACH - Persistence value for access overload class 15.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload class 15 is permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used. If such a mobile stations is not permitted to transmit requests on the Enhanced Access Channel, the base station shall set this field to ‘111’.

PSIST_EMG - Persistence value for emergency call for access overload classes 0 through 9.

If PSIST_PARMS_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a mobile station in access overload classes 0 through 9 is permitted to transmit emergency requests on the Enhanced Access Channel, the base station shall set this field to the persistence value to be used for the emergency calls. If such a mobile station is not permitted to transmit emergency requests on the Enhanced Access Channel, the base station shall set this field to '111'.

MSG_PSIST_EACH - Persistence modifier for Enhanced Access Channel attempts for message transmissions.

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 persistence modifier for Enhanced Access Channel attempts for message transmissions.

REG_PSIST_EACH - Persistence modifier for Enhanced Access Channel attempts for registrations which are not responses to the *Registration Request Order*.

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 persistence modifier for Enhanced Access Channel attempts for registrations which are not responses to the *Registration Request Order*.

RESERVED - Reserved bits.

If PSIST_PARMS_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall include as many bits as required to make the length of the persistence parameters record an integral number of octets. If this field is included, the base station shall set each of these bits to '0.

LAC_PARMS_LEN - Length of Link Access Control parameter fields.

The base station shall set this field to the total length, in octets, of Link Access Control parameters included in the message, including the LAC_PARMS_LEN and RESERVED fields.

ACC_TMO - Acknowledgment timeout.

The base station shall set this field to one less than the length of time, in units of 20 ms, that a mobile station is to wait to receive a Layer 2 acknowledgment after the end of an Enhanced Access Channel transmission.

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 $2^{PROBE\_PN\_RAN\_EACH} - 1$ 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

ACCESS_MODE_MIN-
_DURATION - The minimum message duration for the corresponding Access Mode.

The base station shall set this field to the minimum message duration for the corresponding Access Mode, in units of 5 ms. See [3].

ACCESS_MODE_MAX-
_DURATION - The maximum message duration for the corresponding Access Mode.

The base station shall set this field to the maximum message duration for the corresponding Access Mode, in units of 5 ms. See [3].

RLGAIN_COMMON-
_PILOT - Gain adjustment of the Enhanced Access Channel or Reverse Common Control Channel relative to the Reverse Pilot Channel.

The base station shall set this field to the correction factor to be used by mobile stations in setting the power of a code channel, expressed as a two's complement value in units of 0.125 dB (see 2.1.2.3.3 of [2]).

IC_THRESH - Interference correction threshold.

The threshold level at which the interference correction begins to be applied.

IC_MAX - The maximum interference correction that can be applied.

The base station shall set this field to the maximum interference correction that can be applied, in units of 1 dB (see 2.1.2.3.1.2 of [2]).

NUM_MODE_PARM-
_REC - The number of mode-specific parameter records.

The base station shall set this field to the number of mode-specific parameter records included in the message, minus one.

The base station shall include NUM_MODE_PARM_REC + 1 occurrences of the following record:

EACH_PARM_REC-
_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.

The base station shall set this field to one less than the maximum number of access probes a mobile station is to transmit in a single access probe sequence.

EACH_PREAMBLE-_ENABLED - Preamble enabled indicator for the Enhanced Access Channel.

The base station shall set this field to ‘1’ if EACH preambles related information is included in this message; otherwise, the base station shall set this field to ‘0’.

EACH_PREAMBLE-_NUM_FRAC - The number of fractional preambles on the Enhanced Access Channels.

If EACH_PREAMBLE_ENABLED is set to ‘1’, the base station shall set this field to the number of fractional preambles minus one on the Enhanced Access Channels; otherwise, the base station shall omit this field.

EACH_PREAMBLE-_FRAC_DURATION - Fractional preamble duration on the Enhanced Access Channels.

If EACH_PREAMBLE_ENABLED is set to ‘1’, the base station shall set this field to the fractional preamble duration minus one on an Enhanced Access Channel, in units of 1.25 ms; otherwise, the base station shall omit this field.

EACH_PREAMBLE-_OFF_DURATION - Fractional preamble gated-off duration on the Enhanced Access Channels.

If EACH_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 an Enhanced Access Channel; otherwise, the base station shall omit this field.

EACH_PREAMBLE-_ADD_DURATION - Additional preamble duration on the Enhanced Access Channels.

If EACH_PREAMBLE_ENABLED is set to ‘1’, the base station shall set this field to the additional preamble duration on an Enhanced Access Channel, in units of 1.25 ms; otherwise, the base station shall omit this field.

EACH_ACCESS-
_THRESH - Pilot E_C/I_O threshold for transmission on the Enhanced Access Channels.

The base station shall set this field to:

$$\lfloor -20 \times \log_{10} pilot\_threshold \rfloor$$

where *pilot_threshold* is the pilot E_C/I_O 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) × 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 (EACH_ID × EACH_SLOT_OFFSET2 + EACH_SLOT_OFFSET1) mod 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 (EACH_ID × EACH_SLOT_OFFSET2 + EACH_SLOT_OFFSET1) mod 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.

RESERVED - Reserved bits.

The base station shall include as many bits as required to make the length of the mode-specific parameters record an integral number of octets. The base station shall set each of these bits to '0.

BA_PARMS_LEN - Length of Basic Access Mode parameter record.

The base station shall set this field to the total length, in octets, of Basic Access Mode parameters record included in the message, including the BA_PARMS_LEN and RESERVED fields.

NUM_EACH_BA - Number of Enhanced Access Channels used for the Basic Access Mode.

The base station shall set this field to the number of Enhanced Access Channels used for the Basic Access mode.

EACH_BA_RATES_SUPPORTED - Supported rate words for the Basic Access mode on the Enhanced Access Channels.

The base station shall set each subfield of the EACH_BA_RATES_SUPPORTED field as follows: the base station shall set the subfield to '1' if the corresponding mode in Table 3.7.2.3.2.33-3 is allowed; otherwise the base station shall set the subfield to '0'.

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

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.

NUM_RCCCH - Number of Reverse Common Control Channels used for the Reservation Mode.

The base station shall set this field to the number of Reverse Common Control Channels used for the Reservation mode.

RCCCH_RATES_SUPPORTED - Supported rate words on the Reverse Common Control Channels.

The base station shall set each bit of the RCCCH_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'.

RCCCH_PREAMBLE_ENABLED - Preamble enabled indicator for the Reverse Common Control Channel.

The base station shall set this field to '1' if RCCCH preambles related information is included in this message; otherwise, the base station shall set this field to '0'.

RCCCH_PREAMBLE_NUM_FRAC - Number of fractional preambles on the Reverse Common Control Channels.

If RCCCH_PREAMBLE_ENABLED is set to '1', the base station shall set this field to the number of fractional preambles minus one on the Reverse Common Control Channels; otherwise, the base station shall omit this field.

RCCCH_PREAMBLE_FRAC_DURATION - Fractional preamble duration for the Reverse Common Control Channels.

If RCCCH_PREAMBLE_ENABLED is set to '1', the base station shall set this field to the fractional preamble duration minus one on a Reverse Common Control Channel, in units of 1.25 ms; otherwise, the base station shall omit this field.

RCCCH_PREAMBLE_OFF_DURATION - Fractional preamble gated-off duration on Reverse Common 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) × 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 × RCCCH_SLOT_OFFSET2 + RCCCH_SLOT_OFFSET1) mod 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 × RCCCH_SLOT_OFFSET2 + RCCCH_SLOT_OFFSET1) mod 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.

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 a Reverse Common Control Channel, expressed as a two's complement value in units of 1 dB (see [2]).

RA_PC_DELAY - Power control delay for the Reverse Common Control Channel.

The base station shall set this field to the number of power control bits the mobile is to disregard after initiating transmission on a Reverse Common Control Channel.

EACAM_CACH_DELAY - Maximum time after an Enhanced Access Channel header transmission for receiving a response on the Common Assignment Channel when Reverse Common Control Channel soft handoff has not been requested.

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* if the mobile station has not requested Reverse Common Control Channel soft handoff .

RCCCH_HO-

_SUPPORTED - Reverse Common Control Channel handoff supported indicator.

The base station shall set this field to '1' if Reverse Common Control Channel handoff is supported by the base station; otherwise, the base station shall set this field to '0'.

RCCCH_HO_THRESH - Reverse Common Control Channel soft handoff threshold.

If RCCCH_HO_SUPPORTED is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to:

$$\lfloor -20 \times \log_{10} pilot\_threshold \rfloor$$

where *pilot_threshold* is the pilot E_c/I_o threshold used to determine whether the mobile station requests Reverse Common Control Channel in soft handoff.

This is a positive value in units of 0.5 dB.

EACAM_PCCAM_DELAY - Maximum time after an Enhanced Access Channel header transmission for receiving a response on the Common Assignment Channel when Reverse Common Control 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:

$$\lfloor -20 \times \log_{10} pilot\_threshold \rfloor$$

where *power_threshold* is the pilot E_c/I_o value below which the mobile station is to ignore closed loop power control bits sent on the Common Power Control Subchannel.

RA_DROP_THRESH_TIME - Timer value for the mobile station to abort power controlled transmissions if pilot E_c/I_o remains below RA_DROP_THRESH continuously.

The base station shall set this field to the time interval for which the pilot E_c/I_o is continuously below RA_DROP_THRESH, after which the mobile station is to abort transmission on the Enhanced Access Channel or the Reverse Common Control.

RA_CPCCH_STEP_UP - Common Power Control Channel step size used for the power up command.

The base station shall set this field to the step size used for the power up command, in units of 0.5 dB.

RA_CPCCH_STEP_DN - Common Power Control Channel step size used for the power down command.

The base station shall set this field to the step size used for the power down command, in units of 0.5 dB.

NUM_PCSCH_RA - Number of Power Control Subchannels used for the Reservation Access Mode.

The base station shall set this field to the number of Power Control Subchannels used for the Reservation Access Mode.

RESERVED - Reserved bits.

The base station shall include as many bits as required to make the length of the Reservation Access Mode record an integral number of octets. The base station shall set each of these bits to ‘0’.

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_TYPE (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_NGHBR	0 or 4
SRCH_OFFSET_NGHBR	0 or 3
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
ACCESS_ENTRY_HO	0 or 1
ACCESS_HO_ALLOWED	0 or 1

RESERVED	0 – 7 (as needed)

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 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_NGHBR 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.

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.

NGHBR_SET-_ENTRY_INFO - Neighbor Set access entry handoff information included indicator.

If the base station is including information on the Neighbor Set access entry handoff, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

NGHBR_SET-_ACCESS_INFO - Neighbor Set access handoff included indicator.

If the base station is including information on the Neighbor Set access handoff or access probe handoff, the base station shall set this field to ‘1’, otherwise, the base station shall set this field to ‘0’.

NUM_NGHBR - 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 subrecord 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 3.7.2.3.2.34-3 corresponding to the configuration of this neighbor.

The base station shall not set this field to '000' if the Broadcast Control Channel coding rate or Broadcast Control Channel walsh code index for the neighbor base station is different from the Broadcast Control Channel coding rate or Broadcast Control Channel walsh code index for the current base station. The base station shall not set this field to '000' if the Forward Common Channel coding rate for the neighbor base station is different from the Forward Common Channel coding rate for the current base station.

Table 3.7.2.3.2.34-3. Neighbor Configuration Field

Value (binary)	Neighbor Configuration
000	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): • 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	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): • 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	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): • 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 *Extended CDMA Channel List Message* transmitted by the current base station.
011	The base station shall set the neighbor configuration to this value if the mobile station is to enter the *System Determination Substate* of the *Mobile Station Initialization State* with a new system indication when it performs idle handoff to the neighbor base station (see 2.6.2.1.4.2). 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.
100	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): • 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.

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’.

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 3.7.2.3.2.34-4 corresponding to the type of Pilot Record specified by this record.

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	

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.

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.

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.

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'.

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.

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.

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] on the frequency of the primary pilot.

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 as the Auxiliary pilot on the frequency of the primary 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 on the frequency of the primary pilot.

ADD_INFO_INCL1 - Additional information included for the pilot on the bwer frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF1 - Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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] on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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_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 as the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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 lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of 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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of 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_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 as the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of 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.

SRCH_OFFSET_NGHBR - Neighbor pilot channel search window size offset.

If SRCH_OFFSET_INCL equals to ‘1’, then the base station shall include the field SRCH_OFFSET_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 2.6.6.2.1-2 corresponding to the search window offset to be used by mobile stations for this neighbor.

FREQ_INCL - Frequency included indicator.

If FREQ_FIELDS_INCL is set to ‘1’, the base station shall include the field FREQ_INCL and shall set this field as described below; otherwise, the base station shall omit this field.

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 in this assignment record, the base station shall set this bit to ‘0’.

NGHBR_BAND - Neighbor band class.

If the FREQ_INCL field is included and is set to ‘1’, the base station shall include the field NGHBR_BAND 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 CDMA band class, as specified in [30], corresponding to the CDMA frequency assignment for the CDMA Channel containing the Broadcast Control Channel/Forward Common Control Channel the mobile station is to search.

NGHBR_FREQ - Neighbor frequency assignment.

If the FREQ_INCL field is omitted or is set to ‘0’, the base station shall omit this field.

If the FREQ_INCL field is included and is set to ‘1’ and the corresponding neighbor has a 1X neighbor pilot record type, 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 Broadcast Control Channel/Forward Common Control Channel the mobile station is to search.

If the FREQ_INCL field is included and is set to ‘1’ and the corresponding neighbor has a 3X neighbor pilot record type, the base station shall set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the center SR3 frequency assignment containing the Broadcast Control Channel/Forward Common Control Channel the mobile station is to search.

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’.

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 shall 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 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 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 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.

ACCESS_ENTRY_HO - Access entry handoff permitted when entering the System Access State.

If NGHBR_SET_ENTRY_INFO is equal to '1', the base station shall include the field ACCESS_ENTRY_HO 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 the mobile station is permitted to perform an access entry handoff to the base station associated with the corresponding pilot between the time it receives a message on the Paging Channel when in the *Mobile Station Idle State* and it enters the *System Access State* to respond to the message; otherwise, the base station shall set this field to '0'.

ACCESS_HO_ALLOWED - Access handoff and access probe handoff permitted for the corresponding pilot while in the *System Access State*.

If NGHBR_SET_ACCESS_INFO is equal to '1', the base station shall include the field ACCESS_HO_ALLOWED 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 the mobile station is permitted to perform an access handoff or access probe handoff to the base station associated with the corresponding pilot when the mobile station is in the *System Access State* (see 2.6.3.1.8 and 2.6.3.1.9); otherwise, the base station shall set this field to '0'.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the entire RADIO_INTERFACE_TYPE record equal to an integer number of octets. The base station shall set these bits to '0'.

If RADIO_INTERFACE_TYPE is equal to '0001', the base station shall include the following 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.

The base station shall add reserved bits as needed in order to make the length of the entire RADIO_INTERFACE_TYPE record equal to an integer number of octets. The base station shall set these bits to '0'.

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 × 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

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).

READ_NEXT_SLOT - Pages carried into next slot indicator.

If all messages and records directed to mobile stations operating in the slotted mode and active in this slot, are included in this slot, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

READ_NEXT-_SLOT_BCAST - Enhanced Broadcast Pages carried into next slot indicator.

If all enhanced broadcast pages directed to mobile stations operating in the slotted mode and active in this slot to receive enhanced broadcast pages are included in this slot, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

SERVICE_OPTION - Service option.

The base station shall set this field to the service option code shown in TSB58-B, corresponding to the requested service option.

ADD_FIELDS_INCL - Additional Fields Included.

If additional fields are included, 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'.

ADD_LEN - Length of the additional record.

If ADD_FIELDS_INCL is set to '1', the base station shall set ADD_LEN to the length of the additional record in octets; otherwise the base station shall omit this field.

ADD_RECORD - Additional record.

If ADD_FIELDS_INCL is set to '1', the base station shall set this field to all zeroes such that the length is 8 X ADD_LEN bits.

BCCH_INDEX - BCCH index.

The base station shall set this field to the index of the BCCH to which the mobile station is being redirected.

TIME_OFFSET - BCCH offset.

The base station shall set this field to one less than the time offset, in units of 40 ms, from the beginning of the slot in which this message began to the beginning of the Broadcast Control Channel slot to which the mobile station is being directed.

REPEAT_TIME-_OFFSET - BCCH offset of repeat.

The base station shall set this field to one less than the time offset, in units of 40 ms, from the time specified by TIME_OFFSET to the beginning of the Broadcast Control Channel slot to which the mobile station is being directed for a repeat of the broadcast message.

3.7.3 f-dsch

During Traffic Channel operation, the base station sends signaling messages to the mobile station using the f-dsch.

3.7.3.1 Reserved

3.7.3.2 Reserved

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
Order Message	ORDRM	3.7.3.3.2.1
Authentication Challenge Message	AUCM	3.7.3.3.2.2
Alert With Information Message	AWIM	3.7.3.3.2.3
Data Burst Message	DBM	3.7.3.3.2.4
Analog Handoff Direction Message	AHDM	3.7.3.3.2.6
In-Traffic System Parameters Message	ITSPM	3.7.3.3.2.7
Neighbor List Update Message	NLUM	3.7.3.3.2.8
Send Burst DTMF Message	BDTMFM	3.7.3.3.2.9
Power Control Parameters Message	PCNPM	3.7.3.3.2.10
Retrieve Parameters Message	RTPM	3.7.3.3.2.11
Set Parameters Message	STPM	3.7.3.3.2.12
SSD Update Message	SSDUM	3.7.3.3.2.13
Flash With Information Message	FWIM	3.7.3.3.2.14
Mobile Station Registered Message	MSRM	3.7.3.3.2.15
Status Request Message	STRQM	3.7.3.3.2.16
Extended Handoff Direction Message	EHDM	3.7.3.3.2.17
Service Request Message	SRQM	3.7.3.3.2.18
Service Response Message	SRPM	3.7.3.3.2.19
Service Connect Message	SCM	3.7.3.3.2.20
Service Option Control Message	SOCM	3.7.3.3.2.21
TMSI Assignment Message	TASM	3.7.3.3.2.22
Service Redirection Message	SRDM	3.7.3.3.2.23
Supplemental Channel Assignment Message	SCAM	3.7.3.3.2.24
Power Control Message	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
Extended Neighbor List Update Message	ENLUM	3.7.3.3.2.26
Candidate Frequency Search Request Message	CFSRQM	3.7.3.3.2.27
Candidate Frequency Search Control Message	CFSCNM	3.7.3.3.2.28
Power Up Function Message	PUFM	3.7.3.3.2.29
Power Up Function Completion Message	PUFCM	3.7.3.3.2.30
General Handoff Direction Message	GHDM	3.7.3.3.2.31
Resource Allocation Message	RAM	3.7.3.3.2.32
Resource Allocation Mini Message	RAMM	3.7.3.3.2.33
Extended Release Message	ERM	3.7.3.3.2.34
Extended Release Mini Message	ERMM	3.7.3.3.2.35
Universal Handoff Direction Message	UHDM	3.7.3.3.2.36
Extended Supplemental Channel Assignment Message	ESCAM	3.7.3.3.2.37
Forward Supplemental Channel Assignment Mini Message	FSCAMM	3.7.3.3.2.38
Reverse Supplemental Channel Assignment Mini Message	RSCAMM	3.7.3.3.2.39
Mobile Assisted Burst Operation Parameters Message	MABOPM	3.7.3.3.2.40
User Zone Reject Message	UZRM	3.7.3.3.2.41
User Zone Update Message	UZUM	3.7.3.3.2.42
Call Assignment Message	CLAM	3.7.3.3.2.43
Extended Alert With Information Message	EAWIM	3.7.3.3.2.44
Extended Flash With Information Message	EFWIM	3.7.3.3.2.45
Security Mode Command Message	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 × 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.

If the order carried by this message is not a Call Control order (see 3.6.8), 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 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.

3.7.3.3.2.2 Authentication Challenge Message

MSG_TAG: AUCM

Field	Length (bits)
RANDU	24

RANDU - Random challenge data.

The base station shall set this field as specified in 2.3.12.1.4.

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 × 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:

CHARi	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 CHARi fields of this message equal to the EXTENDED_BURST_TYPE_INTERNATIONAL field as described in the definition of CHARi below. If the base 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 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 CHARi field included in this message.

CHARi - 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 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 x (NUM_FIELDS – 2)

3.7.3.3.2.5 Reserved

No text.

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.

The base shall set this field to the MAC value shown in Table 2.1.2-1 of [12] corresponding to the nominal power for this mobile station.

ANALOG_CHAN - Analog voice channel number.

The base station shall set this field to the channel number of the analog voice channel, as specified in Table 2.1.1-1 of [12].

SCC - SAT color code.

This indicates the supervisory audio tone associated with the designated analog voice channel.

The base station shall set this field to the SAT value shown in Table 3.7.1-2 of [12] and 2.4.1 of [12].

If the assignment is to a narrow analog channel, the base station shall set this field to the two least significant bits of the DSCC.

MEM - Message encryption mode indicator.

To enable analog control message encryption on the assigned forward and reverse analog voice channels, the base station shall set this bit to '1'. To disable analog control message encryption, the base station shall set this bit to '0'.

AN_CHAN_TYPE - Analog voice channel type.

The base station shall set this field to the analog channel type as specified in Table 3.7.3.3.2.6-1. If the mobile station does not have narrow analog capability, the base station shall set this field to '00'.

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

DSCC_MSB - Digital supervisory audio tone color code most significant bit.

The base station shall set this field to ‘0’ when directing handoff to a wide analog channel. The base station shall set this field to the most significant bit of the DSCC when directing handoff to a narrow analog channel.

BAND_CLASS - Band class.

The base station shall set this field according to values defined in [30].

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 which is to be transferred to the analog system.

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).

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).

SRCH_WIN_A - Search window size for the Active Set and Candidate Set.

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 Active Set and Candidate Set.

SRCH_WIN_N - Search window size for the Neighbor Set.

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 Neighbor Set.

SRCH_WIN_R - Search window size for the Remaining Set.

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.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

The base station shall set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c / I_o \rfloor$.

T_DROP - Pilot drop threshold.

This value is used by the mobile station to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

The base station shall set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c / I_o \rfloor$.

T_COMP - Active Set versus Candidate Set comparison threshold.

The mobile station transmits a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

The base station shall set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB.

T_TDROP - Drop timer value.

Timer value after which an action is taken by the mobile station for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

The base station shall set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by the mobile station.

NGHBR_MAX_AGE - Maximum age for retention of Neighbor Set members.

The mobile station drops neighbor set members whose AGE count exceeds this field.

The base station shall set this field to the Neighbor Set maximum age retention value (see 2.6.6.2.6.3).

P_REV - Protocol revision level.

The base station shall set this field to the base station protocol revision level.

SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the Active Set, or dropping a pilot from the Active Set (see 2.6.6.2.3 and 2.6.6.2.5.2).

The base station shall set this field as an unsigned binary number.

ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to the Active Set (see 2.6.6.2.5.2).

The base station shall set this field as a two's complement signed binary number, in units of dB.

DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot from the Active Set (see 2.6.6.2.3).

The base station shall set this field as a two's complement signed binary number, in units of dB.

PACKET_ZONE_ID - Packet data services zone identifier.

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.

If the base station does not support a packet data service zone, the base station shall set this field to '00000000'.

EXTENSION - Indicator that extension fields are present.

If Reverse Supplemental Code Channel or Reverse Supplemental Channel system 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'.

T_MULCHAN - *Supplemental Channel Request Message* pilot strength reporting offset.

If EXTENSION is set to '1', the base station shall include this field and set this field to the threshold offset that the mobile station is to use when reporting neighbor pilot strength measurements in a *Supplemental Channel Request Message*. The mobile station is to interpret this field as an offset to T_ADD ranging from 0.5 dB (corresponding to T_MULCHAN = '000') to 4.0 dB (corresponding to T_MULCHAN = '111') in 0.5 dB increments.

BEGIN_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the beginning of transmission on Reverse Supplemental Code Channel.

If EXTENSION is set to '1', the base station shall include this field and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when beginning transmission on Reverse Supplemental Code Channels.

RESUME_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the resumption of transmission.

If EXTENSION is set to '1', the base station shall include this field and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when resuming transmission on a Reverse Supplemental Code Channel following an autonomous suspension of transmission on an allocated Supplemental Code Channel.

T_SLOTTED_INCL - Slotted timer value included indicator.

The base station shall set this field to ‘1’ if the slotted timer value is included; otherwise, the base station shall set this field to ‘0’.

T_SLOTTED - Slotted timer value

If T_SLOTTED_INCL is set to ‘1’, the base station shall include this field and set this field to the value of the $T_{MS\_Slotted}$ timer to be used by the mobile station in units of 80 ms.

ENC_SUPPORTED – Encryption fields included.

The base station shall set this field to ‘1’ in the encryption related fields are included; otherwise the base station shall set this field to ‘0’.

SIG_ENCRYPT_SUP – Signaling Encryption supported indicator.

The base station shall include this field only ENC_SUPPORTED is equal to ‘1’. If this field is included, this field indicates which signaling encryption algorithms are supported by the mobile station.

This field consists of the subfields shown in Table 2.7.1.3.2.1-4.

UI_ENCRYPT_SUP – User information Encryption supported indicator.

The base station shall include this field only ENC_SUPPORTED is equal to ‘1’. If this field is included, the base station shall set this field to indicate the supported user information encryption algorithms.

This field consists of the subfields shown in Table 2.7.1.3.2.4-7.

The base station shall set each subfield to ‘1’ if the corresponding user information encryption algorithm is supported by the base station; otherwise, the base station shall set the subfield to ‘0’.

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:

DIGITi	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.

DIGITi - 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.

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.

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

$$\lfloor 2^{(\mathrm{PWR\_REP\_FRAMES}/2)} \times 5 \rfloor \text{ frames}$$

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'.

PWR_REP_DELAY - Power report delay.

The period that the mobile station waits following a *Power Measurement Report Message* before restarting frame counting for power control purposes.

The base station shall set this field to the power report delay value, in units of 4 frames (see 2.6.4.1.1).

3.7.3.3.2.11 Retrieve Parameters Message

MSG_TAG: RTPM

Field	Length (bits)
One or more occurrences of the following field:	
PARAMETER_ID	16

PARAMETER_ID - Parameter identification.

The base station can request the mobile station to report any parameter specified in Table E-1.

The base station shall include one occurrence of this field for each parameter requested. The base station shall set this field to the parameter identification number specified in Table E-1 corresponding to the parameter requested.

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.

3.7.3.3.2.13 SSD Update Message

MSG_TAG: SSDUM

Field	Length (bits)
RANDSSD	56

RANDSSD - Random data.

The base station shall set this field as specified in 2.3.12.1.5.

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 × 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’.

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.

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_LAT - Base station latitude.

The base station shall set this field to its 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°).

BASE_LONG - Base station longitude.

The base station shall set this field to its 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°).

REG_DIST - Registration distance.

If mobile stations are to perform distance-based registration, the base station shall set this field to the non-zero "distance" beyond which the mobile station is to re-register (see 2.6.5.1.4). If mobile stations are not to perform distance-based registration, the base station shall set this field to 0.

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 × 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.

3.7.3.3.2.17 Extended Handoff Direction Message

MSG_TAG: EHDM

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

(continues on next page)

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.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_ADD and set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_DROP - Pilot drop threshold.

This value is used by mobile stations to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_DROP and set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_COMP - Active Set versus Candidate Set comparison threshold.

The mobile station transmits a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_COMP and set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB; otherwise, the base station shall omit this field.

T_TDROP - Drop timer value.

Timer value after which an action is taken by the mobile station for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* or an *Extended Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_TDROP and set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by the mobile station; otherwise, the base station shall omit this field.

HARD_INCLUDED - Hard handoff parameters included.

If the mobile station is to change FRAME_OFFSET, PRIVATE_LCM, ENCRYPT_MODE, SERV_NEG_TYPE, NOM_PWR_EXT, NUM_PREAMBLE, NOM_PWR, BAND_CLASS, or CDMA_FREQ, or the mobile station is to perform a reset of the acknowledgment procedures, or the mobile station is to reset Forward Traffic Channel power control counters, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET × 1.25 ms relative to system timing (see [2]).

If HARD_INCLUDED is set to '1', the base station shall include the field FRAME_OFFSET and set it to the Forward and Reverse Traffic Channel frame offset; otherwise, the base station shall omit this field.

PRIVATE_LCM - Private long code mask indicator.

This field is used to change the long code mask after a hard handoff.

If HARD_INCLUDED is set to '1', the base station shall include the field PRIVATE_LCM and set it 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 HARD_INCLUDED is set to '1', the base station shall include the field RESET_L2 and set it 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 HARD_INCLUDED is set to ‘1’, the base station shall include the field RESET_FPC and set it 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 HARD_INCLUDED is set to ‘1’, the base station shall include the field SERV_NEG_TYPE and set it 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’.

ENCRYPT_MODE - Message encryption mode.

If HARD_INCLUDED is set to ‘1’, the base station shall include the field ENCRYPT_MODE and set it 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 messages sent on the Forward and Reverse Traffic Channels, as specified in 2.3.12.2; otherwise, the base station shall omit this field.

NOM_PWR_EXT - Extended nominal transmit power.

If HARD_INCLUDED is 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 this field is included, a Band Class 0 base station shall set this field to ‘0’.

If this field is included, a Band Class 1 base station shall set this field to ‘1’ if the correction factor to be used by the mobile station in the open loop power estimate is between –24 dB and –9 dB inclusive; otherwise (the correction factor is in the range –8 dB to 7 dB inclusive), the base station shall set this field to ‘0’.

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 l.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.

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 as 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.

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.

RECORD_TYPE	-	Information record type. The base station 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. The base station shall set this field to the number of octets included in the type-specific fields of the Service Configuration information record.
Type-specific fields	-	Type-specific fields. The base station shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

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.

RECORD_TYPE	-	Information record type. The base station 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. The base station shall set this field to the number of octets included in the type-specific fields of the Service Configuration information record.
Type-specific fields	-	Type-specific fields. The base station shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

3.7.3.3.2.20 Service Connect Message

MSG_TAG: SCM

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

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 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.

RECORD_TYPE - Information record type.

The base station 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.

The base station shall set this field to the number of octets included in the type-specific fields of the Service Configuration information record.

Type-specific fields - Type-specific fields.

The base station shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

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 non-negotiable service configuration parameters.

RECORD_TYPE - Information record type.

The base station shall set this field to the record type value shown in Table 3.7.5-1 corresponding to the Non-Negotiable Service Configuration information record.

RECORD_LEN - Information record length.

The base station shall set this field to the number of octets included in the type-specific fields of the Non-Negotiable Service Configuration information record.

Type-specific fields - Type-specific fields.

The base station shall set these fields as specified in 3.7.5.20 for the Non-Negotiable Service Configuration information record.

CC_INFO_INCL – Call Control information included indicator.

If the USE_OLD_SERV_CONFIG 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:

The base station shall set this field to '1' if Call Control related parameters (to assign new call(s)) are included in this message; otherwise, the base station shall set this field to '0'.

NUM_CALLS_ASSIGN - Number of call assignments.

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 occurences 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 × 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.

Type-specific fields	-	Type-specific fields. The base station shall set these fields as specified by the requirements for the service option, which are defined external to this specification. See relevant service option specification.

3.7.3.3.2.22 TMSI Assignment Message

MSG_TAG: TASM

Field	Length (bits)
TMSI_ZONE_LEN	4
TMSI_ZONE	8 × 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 ms × 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.

CDMA_CHAN - CDMA Channel number.

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.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to ‘0’.

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_PARMS_INCLUDED	1
T_MULCHAN	0 or 3
BEGIN_PREAMBLE	0 or 3
RESUME_PREAMBLE	0 or 3

FOR_INCLUDED	1

(continues on next page)

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

USE_RETRY_DELAY - Assign or Retry Indicator.

The base station shall set this field to ‘1’ to indicate that this message contains a retry delay time; otherwise, the base station shall set this field to ‘0’ to indicate that no RETRY_DELAY has been included.

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 Message*s 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.

If EXPL_REV_START_TIME is included and set to '1', the base station shall include and set this field to the System Time, in units of 80 ms (modulo 64), at which the mobile station may start transmitting on the specified number of Reverse Supplemental Code Channels. If EXPL_REV_START_TIME is omitted or set to '0', the base station shall omit this field.

USE_REV_DURATION - Use reverse duration indicator.

The base station shall set this field to '1' if the REV_DURATION field is included in the message; otherwise, the base station shall set this field to '0'. If the mobile station is granted permission to transmit on Reverse Supplemental Code Channels (i.e., NUM_REV_CODES is not '000') then a value of '0' for this field indicates an infinite Reverse Supplemental Code Channel assignment duration (i.e., the mobile station may transmit on Reverse Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies an updated REV_DURATION or an updated value of NUM_REV_CODES).

REV_DURATION - Duration of Reverse Supplemental Code Channel assignment.

The base station shall include this field only if the USE_REV_DURATION field is included and set to '1'. If this field is included, this field indicates the allocated duration, in units of 80 ms, during which the mobile station may transmit on Reverse Supplemental Code Channels.

USE_REV_HDM_SEQ - Use Reverse *General Handoff Direction Message* sequence number indicator.

The base station shall set this field to '1' to indicate that this Reverse Supplemental Code Channel assignment shall take effect at the same time as a corresponding *General Handoff Direction Message*; otherwise, the base station shall set this field to '0'. If USE_REV_HDM_SEQ is set to '1', then the base station shall set EXPL_REV_START_TIME to '0'.

REV_LINKED_HDM_SEQ - Sequence number of the reverse linked *General Handoff Direction Message*.

If USE_REV_HDM_SEQ is included and set to '1', then the base station shall set this field to the sequence number of the *General Handoff Direction Message* (HDM_SEQ) to which this Reverse Supplemental Code Channel assignment is linked.

NUM_REV_CODES - Number of Reverse Supplemental Code Channels.

The base station shall set this field to the number of Reverse Supplemental Code Channels that are assigned to the mobile station.

USE_T_ADD_ABORT - Reverse use T_ADD abort indicator.

The base station shall set this field to ‘1’ to indicate that the mobile station is to utilize the T_ADD Reverse Supplemental Code Channel abort feature for this reverse assignment; otherwise, the base station shall set this field to ‘0’.

USE_SCRM_SEQ_NUM - Use *Supplemental Channel Request Message* sequence number indicator.

The base station shall set this field to ‘1’ if the SCRM_SEQ_NUM field is included in this message; otherwise, the base station shall set this field to ‘0’.

SCRM_SEQ_NUM - *Supplemental Channel Request Message* sequence number.

If USE_SCRM_SEQ_NUM is set to ‘1’, the base station shall set this field to the sequence number corresponding to the SCRM_SEQ_NUM field in a *Supplemental Channel Request Message* to which the mobile station is to match this message; otherwise, the base station shall omit this field.

REV_PARMS_INCLUDED - Reverse additional parameters included flag.

The base station shall set this field to ‘1’ if the following three fields (T_MULCHAN, BEGIN_PREAMBLE, and RESUME_PREAMBLE) are included in this message; otherwise, the base station shall set this field to ‘0’.

T_MULCHAN - *Supplemental Channel Request Message* pilot strength reporting offset.

If REV_PARMS_INCLUDED is set to ‘1’, the base station shall include this field and set this field to the threshold offset that the mobile station is to use when reporting neighbor pilot strength measurements in a *Supplemental Channel Request Message*. The mobile station is to interpret this field as an offset to T_ADD ranging from 0.5 dB (corresponding to T_MULCHAN = ‘000’) to 4.0 dB (corresponding to T_MULCHAN = ‘111’) in 0.5 dB increments.

BEGIN_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the beginning of transmission on Reverse Supplemental Code Channel.

If REV_PARMS_INCLUDED is set to '1', the base station shall include this field and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when beginning transmission on Reverse Supplemental Code Channels.

RESUME_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the resumption of transmission.

If REV_PARMS_INCLUDED is set to '1', the base station shall include this field and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when resuming transmission on a Reverse Supplemental Code Channel following an autonomous suspension of transmission on an allocated Supplemental Code Channel.

FOR_INCLUDED - Forward Supplemental Code Channel configuration indicator.

The base station shall set this field to '1' to indicate that this message contains assignment information for Forward Supplemental Code Channels; otherwise, the base station shall set this field to '0'.

If FOR_INCLUDED is set to '1', then the base station shall include the remaining fields in this message, otherwise the base station shall omit all of the following except for RESERVED.

FOR_SUP_CONFIG - Forward Supplemental Code Channel configuration indicator.

The base station shall set this field to '00' to indicate that the mobile station is to stop processing the Forward Supplemental Code Channels at the implicit action time of the message.

The base station shall set this field to '01' to indicate that the mobile station is to start processing the Forward Supplemental Code Channels in the Code Channel List at the implicit, explicit, or linked start time specified by this message (see 2.6.6.2.5.1).

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 update its Code Channel List and stop processing the Forward Supplemental Code Channels at 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’.

If FOR_SUP_CONFIG is set to ‘01’ or ‘11’, then the base station may set this field to ‘0’ to indicate that the mobile station is to be assigned an infinite Forward Supplemental Code Channel assignment duration (i.e., the mobile station is to continue processing Forward Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies an updated FOR_DURATION). Otherwise, the base station may set this field to ‘1’ to indicate that the mobile station is to be given a Forward Supplemental Code Channel assignment for the duration specified by the FOR_DURATION field.

If FOR_SUP_CONFIG is set to ‘00’ or ‘10’, then the base station shall set USE_FOR_DURATION to ‘0’.

FOR_DURATION - Duration of Forward Supplemental Code Channel assignment.

The base station shall include this field only if USE_FOR_DURATION is included and set to ‘1’. If this field is included, this field indicates allocated duration, in units of 80 ms, during which the mobile station is to process the Forward Supplemental Code Channels.

USE_FOR_HDM_SEQ - Use Forward *General Handoff Direction Message* sequence number indicator.

This field indicates whether processing of the Forward Supplemental Code Channels shall take effect at the same time as a corresponding *General Handoff Direction Message*.

The base station shall include this field only if FOR_SUP_CONFIG is equal to ‘01’ or ‘11’. If this message is linked with a *General Handoff Direction Message*, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’. If USE_FOR_HDM_SEQ is set to ‘1’, then the base station shall set EXPL_FOR_START_TIME to ‘0’.

FOR_LINKED_HDM_SEQ - Sequence number of the *General Handoff Direction Message*.

If the USE_FOR_HDM_SEQ field is included and set to ‘1’, the base station shall set this field to the sequence number of the *General Handoff Direction Message* (HDM_SEQ) to which this Forward Supplemental Code Channel assignment is linked; otherwise, if USE_FOR_HDM_SEQ is not included or is set to ‘0’, then base station shall omit this field.

NUM_SUP_PILOTS - Number of pilots in the Active Set which have at least one 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 ith code channel index in the list for each pilot PN sequence offset indicates the appropriate code channel to be used for the ith 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:

BASE_CODE_CHAN - Base code channel index.

If EXPL_CODE_CHAN is equal to ‘0’ the base station shall include this field and set it 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 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) for the Forward Supplemental Code Channels associated with this pilot.

The base station shall not include this field if EXPL_CODE_CHAN is equal to ‘1’ or if EXPL_CODE_CHAN is not included.

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)

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

PWR_CNTL_STEP - Power control step size

The base station shall set this field to the closed loop power control step size parameter shown in Table 3.7.3.3.2.25-1 corresponding to the power control step size that the mobile station is to use for closed loop power control.

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.	

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_INCL - Forward Link Power Control parameter included indicator.

If the forward power control related information is included in this message, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

FPC_MODE - Forward Power Control Operation Mode 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:

The base station shall set the value to the forward power control operation mode as specified in Table 2.1.3.1.11-1 of [2].

FPC_PRI_CHAN - Power Control Subchannel 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:

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 the 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’.

FPC_OLPC_FCH_INCL - Fundamental 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 fundamental 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_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.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to the target Frame Error Rate on the Forward Dedicated Control Channel, as specified in Table 3.7.3.3.2.25-2; otherwise, the base station shall omit this field.

FPC_DCCH_MIN_SETPT - Minimum Dedicated Control Channel Outer Loop Eb/Nt setpoint.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to minimum Dedicated Control 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_DCCH_MAX_SETPT - Maximum Dedicated Control Channel Outer Loop Eb/Nt setpoint.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to maximum Dedicated Control 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_SEC_CHAN - Master Supplemental channel index.

If FPC_INCL is set to '1' and FPC_MODE is set to '001' or '010', the base station shall set this field to the master Supplemental Channel index; otherwise, the base station shall omit this field.

NUM_SUP – Number of Supplemental Channels.

If FPC_INCL is set to ‘0’ the base station shall omit this field; otherwise, the base station shall set this field to the total number of the Supplemental Channels.

The base station shall include NUM_SUP occurrences of the following record:

SCH_ID - Supplemental channel index.

The base station shall set this field to the Supplemental Channel index.

FPC_SCH_FER - Supplemental channel target Frame Error Rate.

The base station shall set this field to the target Frame Error Rate on the Supplemental Channel, as specified in Table 3.7.3.3.2.25-2.

FPC_MIN_SCH_SETPT - Minimum Supplemental Channel outer loop Eb/Nt setpoint.

The base station shall set this field to minimum Supplemental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB.

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_MAX_SCH_SETPT - Maximum Supplemental Channel outer loop Eb/Nt setpoint.

The base station shall set this field to maximum Supplemental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB.

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_THRESH_INCL - Setpoint Report Threshold included indicator.

If FPC_SETPT_THRESH is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FPC_SETPT_THRESH - Setpoint Report Threshold.

If FPC_THRESH_INCL is set to '1', the base station shall set the value to FPC_SETPT_THRESH (in units of 0.125 dB) above which the outer loop report message will be sent by the mobile station; otherwise, the base station shall omit this field.

FPC_THRESH_SCH_INCL - SCH Setpoint Report Threshold included indicator.

If FPC_SETPT_THRESH_SCH is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

FPC_SETPT-_THRESH_SCH - SCH Setpoint Report Threshold.

If FPC_THRESH_SCH_INCL is set to '1', the base station shall set the value to FPC_SETPT_THRESH_SCH (in units of 0.125 dB) above which the outer loop report message will be sent by the mobile station; otherwise, the base station shall omit this field.

RPC_INCL - Reverse Link Power Control parameter included indicator.

If the reverse power control related information is included in this message, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

RPC_NUM_REC - Number of records for Reverse Link Power Control.

If RPC_INCL is set to '0', the base station shall omit this field; otherwise, the base station shall set this field to one less than the number of records included in this message.

If RPC_NUM_REC is included in this message, the base station shall include RPC_NUM_REC occurrences of the following record:

RPC_ADJ_REC_TYPE - Reverse Link Power Control adjustment record type.

The base station shall set this field to the value shown in Table 3.7.2.3.2.25-3 corresponding to the type of adjustment that is to be used.

Table 3.7.3.3.2.25-3. RPC_ADJ_REC_TYPE and RPC_ADJ_REC_LEN fields

Description	RPC_ADJ_REC_TYPE (binary)	RPC_ADJ_REC_LEN
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.		

RPC_ADJ_REC_LEN - Reverse Link Power Control adjustment record length.

The base station shall set this field to the number of octets in the type-specific fields of this adjustment record as given in Table 3.7.2.3.2.25-3.

Type-specific fields - Reverse Link Power Control adjustment record type-specific fields.

The base station shall include type-specific fields based on the RPC_ADJ_REC_TYPE of this adjustment record, as 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.

If DCCH_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 Dedicated Control 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.

SCH0_INCL - SCH0 channel adjustment gain included indicator.

If SCH0_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’.

SCH0_CHAN_ADJ_GAIN - Channel adjustment gain for Reverse Supplemental Channel 0.

If SCH0_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 Supplemental Channel 0. 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.

SCH1_INCL - SCH1 channel adjustment gain included indicator.

If SCH1_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’.

SCH1_CHAN_ADJ_GAIN - Channel adjustment gain for Reverse Supplemental Channel 1.

If SCH1_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 Supplemental Channel 1. 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.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to ‘0’.

If RPC_ADJ_REC_TYPE is equal to ‘0001’, the base station shall set type-specific fields as

specified in Table 3.7.2.3.2.25-5.

Table 3.7.2.3.2.25-5. Type Specific Fields for 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

(continues on next page)

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)

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.

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 1500 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 1500 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_2700 - Reverse Link Attribute Adjustment Gain for the transmission rate 2700 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 2700 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 2700 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_4800 - Reverse Link Attribute Gain Adjustment for the transmission rate 4800 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 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.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 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_1800 - Reverse Link Attribute Gain Adjustment for the transmission rate 1800 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 1800 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 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 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_3600 - Reverse Link Attribute Adjustment Gain for the transmission rate 3600 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 3600 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 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.

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 14400 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.

5MS_INCL - 5ms frame Reverse Link Attribute Adjustment Gain included indicator.

If Reverse Link Attribute Adjustment Gain for 5ms 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-_9600_5MS - Reverse Link Attribute Adjustment Gain for the transmission rate 9600 bits/s with 5ms frame.

If 5MS_INCL is set to '0', the base station shall omit this field.

If 5MS_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 5ms frame. The base station shall set the value in the range from –48 to 48 inclusive.

If 5MS_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 5ms 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 40 ms frame included indicator.

If Reverse Link Attribute adjustment Gain for Radio Configuration 3 or 5 of 40 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-

_1350_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 1350 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 1350 bits/s, convolution code 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 1350 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-

_2400_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 2400 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 2400 bits/s, convolution code 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 2400 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-_4800_40MS - Reverse Link Attribute Gain Adjustment for the transmission rate 4800 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 4800 bits/s, convolution code 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 4800 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-_9600_40MS - Reverse Link Attribute Gain Adjustment for the transmission rate 9600 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 9600 bits/s, convolution code 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 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.

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 3600 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 3600 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-_7200_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 7200 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 7200 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 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 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-

_14400_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 14400 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 gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 14400 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 14400 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.

RC3_RC5_80MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 80 ms frame included indicator.

If Reverse Link Attribute adjustment Gain for Radio Configuration 3 or 5 of 80 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-

_1200_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 1200 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 1200 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 1200 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-_2400_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 2400 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 2400 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 2400 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-_4800_80MS - Reverse Link Attribute Gain Adjustment for the transmission rate 4800 bits/s.

If RC3_RC5_80MS_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 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 840ms 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.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 80ms 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_80MS - Reverse Link Attribute Gain Adjustment for the transmission rate 1800 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 1800 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 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 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-_3600_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 3600 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 3600 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 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.

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 gain adjustment that the mobile station is to make for the transmission attributes with transmission rate 14400 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_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 14400 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.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to '0'.

If RPC_ADJ_REC_TYPE is equal to '0010', the base station shall set type-specific fields as 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)

CODE_TYPE - Coding type indicator.

If the following corresponding gain adjustment fields apply for the convolutonal 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.

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 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-_76800 - Reverse Link Attribute Adjustment Gain for the transmission rate 76800 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 76800 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 76800 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-_153600 - Reverse Link Attribute Adjustment Gain for the transmission rate 153600 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 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.

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 614400 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 614400 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.

RC4_RC6-_20MS_INCL - Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 20ms frame included indicator.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 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-_28800 - Reverse Link Attribute Adjustment Gain for the transmission rate 28800 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 28800 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 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.

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 115200 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 115200 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-_230400 - Reverse Link Attribute Adjustment Gain for the transmission rate 230400 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 230400 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 230400 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-_460800 - Reverse Link Attribute Adjustment Gain for the transmission 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.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 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-_19200_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 19200 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 19200 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 19200 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-_38400_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 38400 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 38400 bits/s, and 40ms 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 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.

If RC3_RC5_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 153600 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 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 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-_307200_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 307200 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 307200 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 307200 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.

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-_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.

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 57600 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-_115200_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 115200 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 115200 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 115200 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-_230400_40MS - Reverse Link Attribute Adjustment Gain for the transmission rate 230400 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 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.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 3 or 5 of 80ms 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_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 19200 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 19200 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 19200 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-_38400_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 38400 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 38400 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 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.

If RC3_RC5_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 153600 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 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 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.

If Reverse Link Attribute Adjustment Gain for Radio Configuration 4 or 6 of 80ms 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_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 28800 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 28800 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 28800 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-_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.

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 115200 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-_259200_80MS - Reverse Link Attribute Adjustment Gain for the transmission rate 259200 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 259200 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 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 259200 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.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to '0'.

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 × 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_NGHBR - 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

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.

SEARCH_PRIORITY - Pilot Channel search priority.

If NGHBR_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 NGHBR_SRCH_MODE is set to any other value, the base station shall omit this field.

Table 3.7.3.3.2.26-2. 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 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 NGHBR_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'.

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.

SRCH_OFFSET_INCL - Neighbor pilot channel search window offset included.

If NGHBR_SRCH_MODE = '10' or '11' and if the SRCH_OFFSET_NGHBR 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 as is used for previous pilots which are listed in this message. Specifically, the ith occurrence of the following record shall correspond the ith pilot in this 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 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.

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.

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.

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
RESERVED	7

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'.

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.

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.

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]) on the frequency of the primary pilot.

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 as the Auxiliary pilot on the frequency of the primary 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 on the frequency of the primary pilot.

ADD_INFO_INCL1 - Additional information included for the pilot on the lower frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF1 - Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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]) on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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_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 as the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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 lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of 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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of 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_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 as the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of 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.

SRCH_OFFSET_NGHBR - Neighbor pilot channel search window offset.

If SRCH_OFFSET_INCL equals to ‘1’, then the base station shall set this field to the value shown in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by the mobile station for this neighbor; otherwise, the base station shall omit this field.

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_TYPE(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_NGHBR_SRCH_MODE	2

If PILOT_UPDATE is set to '1', the base station shall include NUM_PILOTS occurrences of the following record:

NGHBR_PN	9
SEARCH_SET	1
SEARCH_PRIORITY	0 or 2
SRCH_WIN_NGHBR	0 or 4

If PILOT_UPDATE is set to '1', the base station shall include the following field:

CF_SRCH_OFFSET_INCL	1

(continues on next page)

Field	Length (bits)
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 × RECORD_LEN
SRCH_OFFSET_NGHBR	0 or 3

RESERVED_3	0 - 7 (as needed)

BAND_CLASS - Band class.

The base station shall set this field to the CDMA band class of the Candidate Frequency.

CDMA_FREQ - Frequency assignment.

The base station shall set this field to the CDMA frequency assignment for the Candidate Frequency.

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 Candidate Frequency 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 the CDMA Candidate Frequency to search for pilots 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 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 $\lfloor max\_wait\_time / 0.08 \rfloor$, 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'.

PILOT_UPDATE - Pilot search parameter update indicator.

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'.

NUM_PILOTS - Number of pilots included in the message.

The base station shall set this field to the number of the CDMA Candidate Frequency pilots included in this message. The base station shall set this field to a value from 0 to N_{8m}, inclusive.

CF_NGHBR_SRCH-_MODE - Search mode for Candidate Frequency Search Set.

The base station shall set this field to the value shown in Table 3.7.3.3.2.27-3 corresponding to the search mode.

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

The base station shall include NUM_PILOTS occurrences of the following four-field record, one for each included CDMA Candidate Frequency pilot.

NGHBR_PN - Neighbor pilot PN sequence offset index.

The base station shall set this field to the pilot's PN sequence offset, in units of 64 PN chips.

SEARCH_SET - Flag to indicate if the corresponding pilot is to be searched.

The base station shall set this field to '1' if the mobile station should add the corresponding pilot to its Candidate Frequency Search Set; otherwise, the base station shall set this field to '0'.

SEARCH_PRIORITY - Pilot Channel search priority.

If CF_NGHBR_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 CF_NGHBR_SRCH_MODE is set to any other value, the base station shall omit this field.

SRCH_WIN_NGHBR - Neighbor pilot channel search window size.

If CF_NGHBR_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 mobile stations for this neighbor. If the CF_NGHBR_SRCH_MODE is set to any other value, the base station shall omit this field.

CF_SRCH_OFFSET_INCL - Neighbor pilot channel search window offset included.

If PILOT_UPDATE is set to ‘0’, the base station shall omit this field; otherwise, the base station shall include this field and set it as follows:

If CF_NGHBR_SRCH_MODE is set to ‘10’ or ‘11’ and if SRCH_OFFSET_NGHBR is included in the message, the base station shall set this bit to ‘1’; otherwise, the base station shall set this bit to ‘0’.

If PILOT_UPDATE is set to ‘1’, the base station shall include NUM_PILOTS occurrences of the following four-field record, one for each included CDMA Candidate Frequency Pilot.

ADD_PILOT_REC_INCL - Additional pilot information included indicator.

The base station shall set this field to ‘1’ if additional pilot information listed in 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.

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 these bits 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.

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.

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'.

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.

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.

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]) on the frequency of the primary pilot.

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 as the Auxiliary pilot on the frequency of the primary 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 on the frequency of the primary pilot.

ADD_INFO_INCL1 - Additional information included for the pilot on the lower frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF1 - Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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]) on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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_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 as the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 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 lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station shall set this field to ‘0’; otherwise, the base station shall set this field to ‘1’.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of 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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of 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_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 as the Auxiliary pilot on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of 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.

SRCH_OFFSET_NGHBR - Neighbor pilot channel search window offset.

If CF_SRCH_OFFSET_INCL is included and equals to ‘1’, then the base station shall set this field to the value specified in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by the mobile station for this neighbor; otherwise, the base station shall omit this field.

RESERVED_3 - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the Mode-specific fields equal to an integer number of octets. The base station shall set these bits to ‘0’.

If SEARCH_MODE is equal to ‘0001’, the base station shall include the following fields:

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

$$\lfloor - 20 \times \log_{10} (total\_ec\_io\_thresh) \rfloor$$

where *total_ec_io_thresh* is defined by the following rule: The mobile station is not to visit any analog frequency if the total E_C/I_O of the pilots in the Serving Frequency Active Set is greater than *total_ec_io_thresh*.

RESERVED_4 - Reserved bits.

The base station shall set this field to '000000'.

NUM_ANALOG_FREQS - Number of analog frequencies.

The base station shall set this field to the number of neighbors on the candidate frequency. The base station shall set this field to a value from 1 to 7, inclusive.

The message will include NUM_ANALOG_FREQS occurrences of the following one-field record, one for each neighbor on the candidate frequency.

ANALOG_FREQ - Analog frequency channel number.

The base station shall set this field to the analog frequency channel number to search.

RESERVED_5 - Reserved bits.

The base station shall add reserved bits as needed in order to make the length of the Mode-specific fields equal to an integer number of octets. The base station shall set these bits to '0'.

ALIGN_TIMING - Align timing indicator.

If the base station requests that the mobile station offset the start of the first search from the action time of this message (or of a subsequent *Candidate Frequency Search Control Message* that starts a search) by a delay specified by the SEARCH_OFFSET field, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

SEARCH_OFFSET - Search offset.

If the ALIGN_TIMING field is set to '0', the base station shall omit this field; otherwise, the base station shall include this field and set it to

$$\min(63, \lceil search\_offset\_time / 0.00125 \rceil)$$

where *search_offset_time* is the time offset, in seconds, of the start of the first search from the action time of this message (or of a subsequent *Candidate Frequency Search Control Message* that starts a search).

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.

The base station shall set this field to one less than the number of power control groups that the mobile station is to transmit at nominal power prior to transmitting a PUF pulse. The base station shall set the values of PUF_SETUP_SIZE and PUF_PULSE_SIZE so that [PUF_SETUP_SIZE + 1 + PUF_PULSE_SIZE + 1] mod 16 is not equal to 0.

PUF_PULSE_SIZE - Number of PUF pulse power control groups.

The base station shall set this field to one less than the number of power control groups that the mobile station is to transmit at elevated power level during the PUF pulse. The base station shall set the values of PUF_SETUP_SIZE and PUF_PULSE_SIZE so that [PUF_SETUP_SIZE + 1 + PUF_PULSE_SIZE + 1] mod 16 is not equal to 0.

PUF_INTERVAL - PUF interval.

The base station shall set this field to the number of frames between the start of each PUF probe.

PUF_INIT_PWR - Power increase of initial PUF pulse.

The base station shall set this field to the amount (in dB) that the mobile station is to increase its mean output power for the first PUF pulse.

PUF_PWR_STEP - PUF power step.

The base station shall set this field to the value (in dB) by which the mobile station is to increment the power of a PUF pulse above nominal power from one PUF pulse to the next.

TOTAL_PUF_PROBES - Total number of PUF probes.

The base station shall set this field to one less than the maximum number of PUF probes the mobile station is to transmit in a PUF attempt.

MAX_PWR_PUF - Maximum number of PUF probes transmitted at full power.

The base station shall set this field to one less than the number of PUF pulses that the mobile station is to transmit at maximum power level.

PUF_FREQ_INCL - Frequency included indicator.

If the mobile station is to change PUF_BAND_CLASS or PUF_CDMA_FREQ, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

PUF_BAND_CLASS - Band class.

If PUF_FREQ_INCL is set to ‘1’, the base station shall include this field 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.

PUF_CDMA_FREQ - Frequency assignment.

If PUF_FREQ_INCL is set to ‘1’, the base station shall include this field and set it to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA frequency for the CDMA Channel as specified in [2]; otherwise, the base station shall omit this field.

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)

1

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)

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)

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

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 omit this field.

HDM_SEQ - *General 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 to the handoff message sequence number, as specified in 3.6.6.2.2.10.

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 the Candidate Set; otherwise, the base station shall omit this field.

SRCH_WIN_N - Search window size for the Neighbor Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field SRCH_WIN_N and set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the search window size to by used by mobile stations for the Neighbor Set after completion of the handoff; otherwise, the base station shall omit this field.

SRCH_WIN_R - Search window size for the Remaining Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field SRCH_WIN_R and set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the search window size to by used by mobile stations for the Remaining Set after completion of the handoff; otherwise, the base station shall omit this field.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_ADD and set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_DROP - Pilot drop threshold.

This value is used by mobile stations to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_DROP and set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_COMP - Active Set versus Candidate Set comparison threshold.

The mobile station transmits a *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_COMP and set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB; otherwise, the base station shall omit this field.

T_TDROP - Drop timer value.

Timer value after which an action is taken by the mobile station for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_TDROP and set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by the mobile station; otherwise, the base station shall omit this field.

SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the active set, or dropping a pilot from the active set (see 2.6.6.2.3 and 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field SOFT_SLOPE in the additional fields and set this field as an unsigned binary number; otherwise, the base station shall omit this field.

ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to the active set (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field ADD_INTERCEPT in the additional fields and set this field as a two's complement signed binary number; otherwise, the base station shall omit this field.

DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot from the active set (see 2.6.6.2.3).

If SEARCH_INCLUDED is set to ‘1’, the base station shall include the field DROP_INTERCEPT in the additional fields and set this field as a two' complement signed binary number; otherwise, the base station shall omit this field.

EXTRA_PARMS - Extra parameters included.

If the mobile station is to change FRAME_OFFSET, PRIVATE_LCM, ENCRYPT_MODE, NOM_PWR, BAND_CLASS, or CDMA_FREQ, or the mobile station is to perform a reset of the acknowledgment procedures, or the mobile station is to reset Forward Traffic Channel power control counters, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

P_REV - Protocol revision level.

If EXTRA_PARMS is set to ‘1’, 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; otherwise, the base station shall omit this field.

PACKET_ZONE_ID - Packet data services zone identifier.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field PACKET_ZONE_ID and set this field as described below; otherwise, the base station shall omit this field.

If the base station supports a packet data service zone, the base station shall set this field to the non-zero packet data services zone identifier that the mobile station is to use after completion of the handoff.

If the base station does not support a packet data service zone, the base station shall set this field to ‘00000000’.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET × 1.25 ms relative to system timing (see of [2]).

If EXTRA_PARMS is set to ‘1’, the base station shall include the field FRAME_OFFSET and set this field to the Forward and Reverse Traffic Channel frame offset; otherwise, the base station shall omit this field.

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’.

ENCRYPT_MODE - Message encryption mode.

If EXTRA_PARMS is set to '1', the base station shall include the field ENCRYPT_MODE and set this field to the ENCRYPT_MODE value shown in Table 3.7.2.3.2.8-2 corresponding to the encryption mode that is to be used for messages sent on the Forward and Reverse Traffic Channels, as specified in 2.3.12.2; otherwise, the base station shall omit this field.

NOM_PWR_EXT - Extended nominal transmit power.

If EXTRA_PARMS is set to '1', the base station shall include this field and set this field as described below; otherwise, the base station shall omit this field.

If this field is included, a Band Class 0 base station shall set this field to '0'.

If this field is included, a Band Class 1 base station shall set this field to '1' if the correction factor to be used by the mobile station in the open loop power estimate is between -24 dB and -9 dB inclusive; otherwise (the correction factor is in the range -8 dB to 7 dB inclusive), the base station shall set this field to '0'.

NOM_PWR - Nominal transmit power offset.

If EXTRA_PARMS is set to '1', the base station shall include the field NOM_PWR and set this field 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 EXTRA_PARMS 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.

BAND_CLASS - Band class.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field BAND_CLASS and set this field 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 EXTRA_PARMS is set to ‘1’, the base station shall include the field CDMA_FREQ and set this field 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.

RETURN_IF_HANDOFF-_FAIL - Return on failure flag.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field RETURN_IF_HANDOFF_FAIL 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 resume the use of the Active Set on the Serving Frequency following an unsuccessful hard handoff attempt, as specified in 2.6.6.2.8.2; otherwise, the base station shall set this field to ‘0’.

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 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.

If SCR_INCLUDED is included and is set to '1', the base station shall include the field RECORD_LEN and shall set this field to the number of octets included in the type-specific fields of the Service Configuration information record.

Type-specific fields - Type-specific fields.

If SCR_INCLUDED is included and is set to '1', the base station shall include the type specific fields and shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

SUP_CHAN_PARAMS-_INCLUDED - Supplemental channel parameters included indicator.

The base station shall set this field to '1' if the base station includes the FOR_INCLUDED, REV_INCLUDED, and REV_PARMS_INCLUDED fields in the message; otherwise, the 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.

If FOR_SUP_CONFIG is included and is set to ‘10’ or ‘11’, the base station shall include the field NUM_FOR_SUP and set it to the number of Forward Supplemental Code Channels assigned to the mobile station; otherwise, the base station shall omit this field. NUM_FOR_SUP shall not exceed the maximum number of Forward Supplemental Code Channels for the negotiated multiplex option.

USE_FOR_DURATION - Use forward duration indicator.

If FOR_SUP_CONFIG is included and is set to ‘01’ or ‘11’ the base station shall include the field USE_FOR_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 FOR_DURATION field is included in the message and the mobile station is to process the Forward Supplemental Code Channels for a time duration indicated by FOR_DURATION.

The base station shall set this field to ‘0’ if the mobile station is to process the Forward Supplemental Code Channels for an indefinite duration (i.e., the mobile station is to continue processing Forward Supplemental Code Channels until it receives a subsequent *Supplemental Channel Assignment Message* or a *General Handoff Direction Message* that specifies a different Forward Supplemental Code Channel assignment.

FOR_DURATION - Duration of Forward Supplemental Code Channel assignment.

If USE_FOR_DURATION is included and is set to ‘1’ the base station shall include the field FOR_DURATION and set this field to the allocated duration, in units of 80 ms, for which the mobile station is to process the Forward Supplemental Code Channels; otherwise, the base station shall omit this field.

REV_INCLUDED - Reverse assignment information included indicator.

If SUP_CHAN_PARMS_INCLUDED is set to ‘1’, the base station shall include the field REV_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 Reverse Supplemental Code Channel assignment information is included in the message; otherwise, the base station shall set this field to ‘0’.

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.

REV_DURATION - Duration of Reverse Supplemental Code Channel Assignment.

If USE_REV_DURATION is included and is set to '1', the base station shall include the field REV_DURATION and set this field to the allocated duration, in units of 80 ms, for which the mobile station may transmit on Reverse Supplemental Code Channels; otherwise the base station shall omit this field.

NUM_REV_CODES - Number of Reverse Supplemental Code Channels.

If REV_INCLUDED is included and is set to '1', the base station shall include the field NUM_REV_CODES and set this field to the number of Reverse Supplemental Code Channels which are assigned to the mobile station; otherwise the base station shall omit this field.

USE_T_ADD_ABORT - Reverse use T_ADD abort indicator.

If REV_INCLUDED is included and is set to '1', the base station shall include the field USE_T_ADD_ABORT 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 use the T_ADD Reverse Supplemental Code Channel abort feature for this reverse assignment; otherwise, the base station shall set this field to '0'.

REV_PARMS-_INCLUDED - Reverse assignment parameters included indicator.

If SUP_CHAN_PARMS_INCLUDED is set to '1', the base station shall include the field REV_PARMS_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 the following three fields are included in the message; otherwise, the base station shall set this field to '0'.

T_MULCHAN - *Supplemental Channel Request Message* pilot strength reporting offset.

If REV_PARMS_INCLUDED is included and is set to '1', the base station shall include the field T_MULCHAN and set this field as described below; otherwise the base station shall omit this field.

The base station shall set this field to the threshold offset that the mobile station is to use when reporting neighbor pilot strength measurements in a *Supplemental Channel Request Message*. The mobile station is to interpret this field as an offset to T_ADD ranging from 0.5 dB (corresponding to T_MULCHAN = '000') to 4.0 dB (corresponding to T_MULCHAN = '111'), in 0.5 dB increments.

BEGIN_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the beginning of transmission on Reverse Supplemental Code Channel.

If REV_PARMS_INCLUDED is included and is set to '1', the base station shall include the field BEGIN_PREAMBLE and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when beginning transmission on Reverse Supplemental Code Channels; otherwise the base station shall omit this field.

RESUME_PREAMBLE - Number of preamble frames on Reverse Supplemental Code Channels at the resumption of transmission.

If REV_PARMS_INCLUDED is included and is set to '1', the base station shall include the field RESUME_PREAMBLE and set this field to the number of Reverse Supplemental Code Channel preamble frames that the mobile station is to send when resuming transmission on a Reverse Supplemental Code Channel following an autonomous suspension of transmission on an allocated Supplemental Code Channel; otherwise the base station shall omit this field.

USE_PWR_CNTL_STEP - Power control step size indicator.

The base station shall set this field to '1' if the field PWR_CNTL_STEP is included in the message.

PWR_CNTL_STEP - Power control step size.

If USE_PWR_CNTL_STEP is set to '1', then the base station shall include the field PWR_CNTL_STEP and set this field to the step size that the mobile station is to use for closed loop power control, according to Table 3.7.3.3.2.25-1; otherwise, the base station shall omit this field.

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.

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 ith entry in the list indicates the code channel index to be used for the ith 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 ith 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.

The base station shall set the ith occurrence of this field to the code channel index (see [2]), in the range 1 to 63 inclusive, that the mobile station is to use for the ith Forward Code Channel associated with this pilot.

FPC_SUBCHAN_GAIN - Forward power control subchannel relative gain.

The base station shall set FPC_SUBCHAN_GAIN equal to the power level of the forward link power control subchannel relative to that of 20 ms frames at a 9600 bps or 14400 bps rate on the Forward Fundamental Channel or the Forward Dedicated Control Channel that the Forward Power Control Subchannel is punctured on. The base station shall set the value in units of 0.25 dB.

USE_PC_TIME - Use power control action time indicator.

This field indicates whether an explicit time [PC_ACTION_TIME] at which a new value for Power Control Subchannel to traffic ratio (FPC_SUBCHAN_GAIN] takes effect is specified in the 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’.

PC_ACTION_TIME - Power Control Subchannel gain action time.

If the USE_PC_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 FPC_SUBCHAN_GAIN specified in this message is to take effect. If the USE_PC_TIME field is set to ‘0’ the base station shall omit this field.

RLGAIN_TRAFFIC-_PILOT - Gain adjustment of the Reverse Traffic Channel relative to the Reverse Pilot Channel power for Radio Configurations greater than 2.

If EXTRA_PARMS is set to ‘1’, the base station shall include this field and set it to the correction factor to be used by mobile stations in setting the power of a code channel, expressed as a two’s complement value in units of 0.125 dB (see 2.1.2.3.3 of [2]); otherwise, the base station shall omit this field.

DEFAULT_RLAG - Default reverse link attribute gain used indicator.

If EXTRA_PARMS is set to ‘0’, the base station shall omit this field; otherwise, the base station set this field as follows.

If the mobile station is to use the default values for the reverse link attribute gain, as specified in Table 2.1.2.3.3-1 of [2] after completion of handoff, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

NNSCR_INCLUDED - Non-negotiable Service Configuration Record included indicator.

The base station shall omit this field, if EXTRA_PARMS is set to '0'; otherwise, the base station shall include this field and set this field as described below:

The base station shall set this field to '1', if the Non-negotiable Service Configuration record is included in this message; otherwise, the base station shall set this field to '0'.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include one occurrence of the following three-field record to specify the non-negotiable service configuration parameters.

RECORD_TYPE - Information record type.

If NNSCR_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 Non-Negotiable Service Configuration information record.

RECORD_LEN - Information record length.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include the field RECORD_LEN and shall set this field to the number of octets included in the type-specific fields of the Non-Negotiable Service Configuration information record.

Type-specific fields - Type-specific fields.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include the type specific fields and shall set these fields as specified in 3.7.5.20 for the Non-Negotiable Service Configuration information record.

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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’.

REV_PWR-
_CNTL_DELAY - The reverse power control delay.

If REV_PWR_CNTL_DELAY_INCL 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 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]) used by the mobile station after handoff, in units of 1.25 ms. To disable the gating on the reverse Fundamental Channel, the base station shall set this field to ‘000’.

KEY_SIZE - Encryption key size indication.

If EXTRA_PARMS is set to ‘1’, the base station shall include this field and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the encryption key size, as shown in Table 3.7.4.5-2.

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.

CC_INFO_INCL - Call Control information included indicator.

If the SCR_INCLUDED 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 ‘1’ if Call Control related parameters (to assign new call(s)) are included in this message; otherwise, the base station shall set this field to ‘0’.

NUM_CALLS_ASSIGN - Number of call assignments.

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 occurences 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’.

3.7.3.3.2.32 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 ½
10	Gating rate ¼
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.

3.7.3.3.2.36 Universal Handoff Direction Message

MSG_TAG: UHDM

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)

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)

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)

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

If CH_IND = ‘101’, the ACTIVE_SET_REC_FIELDS shall be:

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 × 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)

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

RESERVED	0 - 7 (as needed)

If CH_IND = '010' or '110', the ACTIVE_SET_REC_FIELDS shall be:

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 × 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)

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
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)

If CH_IND = '111', the ACTIVE_SET_REC_FIELDS shall be:

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 × 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

(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)

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 omit this field.

HDM_SEQ - *Universal 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 to the handoff message sequence number, as specified in 2.6.6.2.2.10.

PARMS_INCL - Parameters included indicator.

The base station shall set this field to '1', if P_REV and SERV_NEG_TYPE are included; otherwise, the base station shall set this field '0'.

P_REV - Protocol revision level.

If PARMS_INCL is set to '1', 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; otherwise, the base station shall omit this field.

SERV_NEG_TYPE - Service negotiation type.

If PARMS_INCL 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'.

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 the Candidate Set; otherwise, the base station shall omit this field.

SRCH_WIN_N - Search window size for the Neighbor Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field SRCH_WIN_N and set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the search window size to by used by mobile stations for the Neighbor Set after completion of the handoff; otherwise, the base station shall omit this field.

SRCH_WIN_R - Search window size for the Remaining Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field SRCH_WIN_R and set this field to the window size parameter shown in Table 2.6.6.2.1-1 corresponding to the search window size to by used by mobile stations for the Remaining Set after completion of the handoff; otherwise, the base station shall omit this field.

T_ADD - Pilot detection threshold.

This value is used by the mobile station to trigger the transfer of a pilot from the Neighbor Set or Remaining Set to the Candidate Set (see 2.6.6.2.6) and to trigger the sending of the *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* initiating the handoff process (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_ADD and set this field to the pilot detection threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_DROP - Pilot drop threshold.

This value is used by mobile stations to start a handoff drop timer for pilots in the Active Set and the Candidate Set (see 2.6.6.2.3).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_DROP and set this field to the pilot drop threshold, expressed as an unsigned binary number equal to $\lfloor -2 \times 10 \times \log_{10} E_c/I_o \rfloor$; otherwise, the base station shall omit this field.

T_COMP - Active Set versus Candidate Set comparison threshold.

The mobile station transmits a *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* when the strength of a pilot in the Candidate Set exceeds that of a pilot in the Active Set by this margin (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_COMP and set this field to the threshold Candidate Set pilot to Active Set pilot ratio, in units of 0.5 dB; otherwise, the base station shall omit this field.

T_TDROP - Drop timer value.

Timer value after which an action is taken by the mobile station for a pilot that is a member of the Active Set or Candidate Set, and whose strength has not become greater than T_DROP. If the pilot is a member of the Active Set, a *Pilot Strength Measurement Message* or *Extended Pilot Strength Measurement Message* is issued. If the pilot is a member of the Candidate Set, it will be moved to the Neighbor Set.

If SEARCH_INCLUDED is set to '1', the base station shall include the field T_TDROP and set this field to the T_TDROP value shown in Table 2.6.6.2.3-1 corresponding to the drop timer value to be used by the mobile station; otherwise, the base station shall omit this field.

SOFT_SLOPE - The slope in the inequality criterion for adding a pilot to the Active Set, or dropping a pilot from the Active Set (see 2.6.6.2.3 and 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field SOFT_SLOPE in the additional fields and set this field as an unsigned binary number; otherwise, the base station shall omit this field.

ADD_INTERCEPT - The intercept in the inequality criterion for adding a pilot to the Active Set (see 2.6.6.2.5.2).

If SEARCH_INCLUDED is set to '1', the base station shall include the field ADD_INTERCEPT in the additional fields and set this field as a two's complement signed binary number; otherwise, the base station shall omit this field.

DROP_INTERCEPT - The intercept in the inequality criterion for dropping a pilot from the Active Set (see 2.6.6.2.3).

If SEARCH_INCLUDED is set to ‘1’, the base station shall include the field DROP_INTERCEPT in the additional fields and set this field as a two's complement signed binary number; otherwise, the base station shall omit this field.

EXTRA_PARMS - Extra parameters included.

If the base station includes the fields PACKET_ZONE_ID, FRAME_OFFSET, PRIVATE_LCM, RESET_L2, RESET_FPC, SERV_NEG_TYPE, ENCRPPT_MODE, NOM_PWR_EXT, NOM_PWR, RLGAIN_TRAFFIC_PILOT, UI_ENCRYPT_MODE, KEY_SIZE, DEFAULT_RLAG, NUM_PREAMBLE, BAND_CLASS, PERIODIC_SEARCH, or CDMA_FREQ in this message, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

PACKET_ZONE_ID - Packet data services zone identifier.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field PACKET_ZONE_ID and set this field as described below; otherwise, the base station shall omit this field.

If the base station supports a packet data service zone, the base station shall set this field to the non-zero packet data services zone identifier that the mobile station is to use after completion of the handoff.

If the base station does not support a packet data service zone, the base station shall set this field to ‘00000000’.

FRAME_OFFSET - Frame offset.

The Forward and Reverse Traffic Channel frames are delayed FRAME_OFFSET $\times$ 1.25 ms relative to system timing (see [2]).

If EXTRA_PARMS is set to ‘1’, the base station shall include the field FRAME_OFFSET and set this field to the Forward and Reverse Traffic Channel frame offset; otherwise, the base station shall omit this field.

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’.

ENCRYPT_MODE - Message encryption mode.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field ENCRYPT_MODE and set this field to the ENCRYPT_MODE value shown in Table 3.7.2.3.2.8-2 corresponding to the encryption mode that is to be used for messages sent on the Forward and Reverse Traffic Channels, as specified in 2.3.12.2; otherwise, the base station shall omit this field.

NOM_PWR_EXT - Extended nominal transmit power.

If EXTRA_PARMS is set to ‘1’, the base station shall include this field and set this field as described below; otherwise, the base station shall omit this field.

If this field is included, a Band Class 0 base station shall set this field to ‘0’.

If this field is included, a Band Class 1 base station shall set this field to ‘1’ if the correction factor to be used by the mobile station in the open loop power estimate is between -24 dB and -9 dB inclusive; otherwise (the correction factor is in the range -8 dB to 7 dB inclusive), the base station shall set this field to ‘0’.

NOM_PWR - Nominal transmit power offset.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field NOM_PWR and set this field 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.

RLGAIN_TRAFFIC_PILOT - Gain adjustment of the Reverse Traffic Channel relative to the Reverse Pilot Channel power for Radio configurations greater than 2.

If EXTRA_PARMS is set to ‘1’, the base station shall include this field and set it to the correction factor to be used by mobile stations in setting the power of a reverse traffic channel, expressed as a two’s complement value in units of 0.125 dB (see 2.1.2.3.3 of [2]; otherwise, the base station shall omit this field.

DEFAULT_RLAG - Default reverse link attribute gain used indicator.

If EXTRA_PARMS is set to ‘0’, the base station shall omit this field; otherwise, the base station set this field as follows:

If the mobile station is to use the default values for the reverse link attribute gain, as specified in Table 2.1.2.3.3-1 of [2] after completion of handoff, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

NUM_PREAMBLE - Number of Traffic Channel preamble.

If EXTRA_PARMS 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.

BAND_CLASS - Band class.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field BAND_CLASS and set this field 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 EXTRA_PARMS is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

If a Radio Configuration associated with Spreading Rate 1 is used, 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 as specified in [2]. If a Radio Configuration associated with Spreading Rate 3 is used, the base station shall include the field CDMA_FREQ and set this field to the CDMA Channel number, in the specified CDMA band class, corresponding to the CDMA center SR3 frequency assignment for the CDMA Channel..

RETURN_IF-

_HANDOFF_FAIL - Return on failure flag.

If EXTRA_PARMS is set to ‘1’, the base station shall include the field RETURN_IF_HANDOFF_FAIL 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 resume the use of the Active Set on the Serving Frequency following an unsuccessful hard handoff attempt, as specified in 2.6.6.2.8.2; otherwise, the base station shall set this field to ‘0’.

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.

If SCR_INCLUDED is included and is set to '1', the base station shall include the field RECORD_LEN and shall set this field to the number of octets included in the type-specific fields of the Service Configuration information record.

Type-specific fields - Type-specific fields.

If SCR_INCLUDED is included and is set to '1', the base station shall include the type specific fields and shall set these fields as specified in 3.7.5.7 for the Service Configuration information record.

NNSCR_INCLUDED - Non-negotiable Service Configuration Record Included indicator

The base station shall omit this field, if EXTRA_PARMS is set to '0'; otherwise, the base station shall include this field and set this field as described below:

The base station shall set this field to '1', if the Non-negotiable Service Configuration record is included in this message; otherwise, the base station shall set this field to '0'.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include one occurrence of the following three-field record to specify the non-negotiable service configuration.

RECORD_TYPE - Information record type.

If NNSCR_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 Non-Negotiable Service Configuration information record.

RECORD_LEN - Information record length.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include the field RECORD_LEN and shall set this field to the number of octets included in the type-specific fields of the Non-Negotiable Service Configuration information record.

Type-specific fields - Type-specific fields.

If NNSCR_INCLUDED is included and is set to '1', the base station shall include the type specific fields and shall set these fields as specified in 3.7.5.20 for the Non-Negotiable Service Configuration information record.

USE_PWR_CNTL_STEP - Power control step size indicator.

The base station shall set this field to ‘1’ if the field PWR_CNTL_STEP is included in the message.

PWR_CNTL_STEP - Power control step size.

If USE_PWR_CNTL_STEP is set to ‘1’, then the base station shall include the field PWR_CNTL_STEP and set this field to the step size that the mobile station is to use for closed loop power control, according to Table 3.7.3.3.2.25-1; otherwise, the base station shall omit this field.

CLEAR_RETRY_DELAY - Clear retry delay indicator.

The base station shall set this field to ‘1’ if 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’.

SCH_INCL - SCH related parameters included indicator.

The base station shall set this field to '1' if this message include the NUM_FOR_ASSIGN, NUM_REV_ASSIGN, NUM_FOR_SCH, NUM_REV_SCH, and NUM_SCH fields. Otherwise, the base station shall set this field to '0'.

NUM_FOR-_ASSIGN - Number of Forward 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 Forward Supplemental Channel assigned.

The base station shall include NUM_FOR_ASSIGN occurrences of the following five fields (FOR_SCH_ID, FOR_SCH_DURATION, FOR_SCH_START_TIME_INCL, FOR_SCH_START_TIME, 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.

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_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:

The base station shall set this field to ‘1’ if FOR_SCH_START_TIME is included in this message; otherwise, the base station shall set this field to ‘0’.

FOR_SCH_START_TIME - Start time for Forward Supplemental Channel Assignment.

If FOR_SCH_START_TIME INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this 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.

SCCL_INDEX - Supplemental Channel Code list index.

The base station shall set this field to the index of the record in the Forward Supplemental Channel Code list corresponding to the FOR_SCH_ID.

NUM_REV-_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’.

REV_SCH_START_TIME - Start time for Reverse Supplemental Channel Assignment.

If REV_SCH_START_TIME_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this 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

$$(\lfloor t/(START\_TIME\_UNIT_S+1)\rfloor - REV\_SCH\_START\_TIME) \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

REV_SCH-_NUM_BITS_IDX - Reverse Supplemental Channel number of bits per frame index granted by the base station.

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, that the mobile station may transmit on the reverse Supplemental Channel identified by REV_SCH_ID.

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 that the mobile station may transmit on the Reverse Supplemental Channel identified by REV_SCH_ID to be NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX].
The REV_SCH_NUM_BITS_IDX field also specifies the number of CRC bits per frame for the Reverse Supplemental Channel identified by REV_SCH_ID. The number of CRC bits per frame is specified by CRC_LEN_IDX[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX] and Table 3.7.5.20-4.

FPC_SUBCHAN_GAIN - Forward power control subchannel relative gain.

The base station shall set FPC_SUBCHAN_GAIN equal to the power level of the forward link power control subchannel relative to that of 20 ms frames at a 9600 bps or 14400 bps rate on the Forward Fundamental Channel or the Forward Dedicated Control Channel that the Forward Power Control Subchannel is punctured on. The base station shall set the value in units of 0.25 dB.

USE_PC_TIME - Use power control action time indicator.

This field indicates whether an explicit time [PC_ACTION_TIME] at which a new value for power control sub-channel to traffic ratio (FPC_SUBCHAN_GAIN] takes effect is specified in the 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’.

PC_ACTION_TIME - Power Control Subchannel gain action time.

If the USE_PC_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 FPC_SUBCHAN_GAIN specified in this message is to take effect. If the USE_PC_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 3.7.3.3.2.36-1.

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’.

REV_PWR-
_CNTL_DELAY - The reverse power control delay.

If REV_PWR_CNTL_DELAY_INCL 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 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]) used by the mobile station after handoff, in units of 1.25 ms.

KEY_SIZE - Encryption key size indication.

If EXTRA_PARMS is set to ‘1’, the base station shall include this field and set this field as described below; otherwise, the base station shall omit this field.

The base station shall set this field to the encryption key size, as shown in Table 3.7.4.5-2.

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.

3XFL_1XRL_INCL - 3X Forward Link and 1X Reverse Link indicator.

The base station shall set this field to ‘1’ if the base station is assigning 3X traffic channel on the Forward Link and 1X traffic channel on the Reverse Link; otherwise, the base 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.

CC_INFO_INCL - Call Control information included indicator.

If the SCR_INCLUDED 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 ‘1’ if Call Control related parameters (to assign new call(s)) are included in this message; otherwise, the base station shall set this field to ‘0’.

NUM_CALLS_ASSIGN - Number of call assignments.

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 occurences 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’.

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.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to ‘0000’, then the base station shall set this field according to Table 3.7.3.3.2.37-4 to indicate the number of information bits per frame and the length of the CRC field for the Forward Supplemental Channel identified by FOR_SCH_ID 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.

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.

SRCH_OFFSET - Target pilot channel search window offset.

If SRCH_OFFSET_INCL equals to '1', then the base station shall set this field to the value shown in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by the mobile station for this target pilot. Otherwise, the base station shall omit this field.

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 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_FCH - Code channel on the Fundamental 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 Fundamental Channel of the Forward Traffic Channel. If a Radio Configuration associated with Spreading Rate 3 is used, the base station shall set this field to the code channel index that the mobile station is to use for the Fundamental 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 index on the Fundamental 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 on the center SR3 frequency.

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 occurrence of the following five fields:

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.

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.

PILOT_INCL - The corresponding pilot included in Supplemental Channel Active Set indicator.

The base station shall set this field to '1' if the corresponding pilot is included in the Active Set of Supplemental Channel; otherwise, the base station shall set this field to '0'.

CODE_CHAN_SCH - Code channel on the Supplemental Channel.

If PILOT_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 Supplemental Channel of the Forward Traffic Channel indexed by SCCL_INDEX.

QOF_MASK_ID_SCH - Quasi-orthogonal function index on the Supplemental Channel.

If PILOT_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]).

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 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_LOW – QOF index 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 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:

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.

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.

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.

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.

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:

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 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.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to ‘0000’, then the base station shall set this field according to Table 3.7.3.3.2.37-4 to indicate the number of information bits per frame and the length of the CRC field for the Forward Supplemental Channel identified by FOR_SCH_ID 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.

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.

SRCH_OFFSET - Target pilot channel search window offset.

If SRCH_OFFSET_INCL equals to '1', then the base station shall set this field to the value shown in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by the mobile station for this target pilot. Otherwise, the base station shall omit this field.

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 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

occurrence of the following five fields:

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.

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.

PILOT_INCL - The corresponding pilot included in Supplemental Channel Active Set indicator.

The base station shall set this field to ‘1’ if the corresponding pilot is included in the Active Set of Supplemental Channel; otherwise, the base station shall set this field to ‘0’.

CODE_CHAN_SCH - Code channel on the Supplemental Channel.

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 Supplemental Channel of the Forward Traffic Channel indexed by SCCL_INDEX.

QOF_MASK_ID_SCH - Quasi-orthogonal function index on the Supplemental Channel.

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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

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’.

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.

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.

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.

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.

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.

If the CH_IND field is set to ‘111’, 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.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to ‘0000’, then the base station shall set this field according to Table 3.7.3.3.2.37-4 to indicate the number of information bits per frame and the length of the CRC field for the Forward Supplemental Channel identified by FOR_SCH_ID 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.

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.

SRCH_OFFSET - Target pilot channel search window offset.

If SRCH_OFFSET_INCL equals to ‘1’, then the base station shall set this field to the value shown in Table 2.6.6.2.1-2 corresponding to the search window offset to be used by the mobile station for this target pilot. Otherwise, the base station shall omit this field.

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 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_FCH - Code Channel on the Fundamental 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 Fundamental Channel of the Forward Traffic Channel. If a Radio Configuration associated with Spreading Rate 3 is used, the base station shall set this field to the code channel index that the mobile station is to use for the Fundamental 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 index on the Fundamental 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 on the center SR3 frequency.

CODE_CHAN_DCCH - Code channel on the DCCH.

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 is used, the base station shall set this field to the code channel index 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 DCCH.

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 1 is used, the base station shall set this field to the index of the Quasi-orthogonal function on the center SR3 frequency.

NUM_SCH - Number of Supplemental Channel records.

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 occurrence of the following fields:

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.

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 Table.

PILOT_INCL - The corresponding pilot included in Supplemental Channel Active Set indicator.

The base station shall set this field to '1' if the corresponding pilot is included in the Active Set of Supplemental Channel; otherwise, the base station shall set this field to '0'.

CODE_CHAN_SCH - Code Channel on the Supplemental Channel.

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 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 Supplemental Channel of the Forward Traffic Channel indexed by SCCL_INDEX.

QOF_MASK_ID_SCH - Quasi-orthogonal function index on the Supplemental Channel.

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 index of the Quasi-orthogonal function (see Table 3.1.3.1.12-2 of [2]).

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’.

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’.

The base station shall include NUM_PILOTS plus one occurrence of the following record if 3X_FCH_INFO_INCL or 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 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’.

QOF_MASK_ID-
_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.

CODE_CHAN-
_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:

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 3X_FCH_INFO_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

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 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 highest SR3 frequency.

CODE_CHAN-_FCH_HIGH – Code channel for the FCH on the highest SR3 frequency.

If 3X_FCH_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 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.

3X_DCCH_LOW_INCL – DCCH code channel on the lowest SR3 frequency included indicator.

If 3X_DCCH_INFO_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

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 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 lowest SR3 frequency.

CODE_CHAN-_DCCH_LOW - Code channel for the DCCH on the lowest SR3 frequency.

If 3X_DCCH_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 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 3X_DCCH_INFO_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this field as follows:

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 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.

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.

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.

3.7.3.3.2.37 Extended Supplemental Channel Assignment Message

MSG_TAG: ESCAM

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)

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)

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)

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

START_TIME_UNIT - Unit for start time.

The base station shall set this field to indicate the units of start time included in *Extended Supplemental Channel Assignment Message*, *Forward Supplemental Channel Assignment Mini Message*, *Reverse Supplemental Channel Assignment Mini Message*, and *Universal Handoff Direction Message*. The base station shall set this field to one less than the number of 20 ms frames that determines the START_TIME_UNIT.

REV_SCH_DTX-_DURATION - Discontinuous Transmission on Reverse Supplemental Channel.

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 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 Channel once it has stopped transmitting on that Reverse Supplemental Channel. The base shall set this field to '1111' if the mobile station is allowed to resume transmission on a Reverse Supplemental Channel at any time within the reverse assignment duration.

USE_T_ADD_ABORT - Reverse use T_ADD abort indicator.

The base station shall set this field to '1' to indicate that the mobile station is to utilize the T_ADD Reverse Supplemental Channel abort feature for this reverse assignment; otherwise, the base station shall set this field to '0'.

USE_SCRM-_SEQ_NUM - Use Supplemental Channel Request Message sequence number indicator.

The base station shall set this field to '1' if the SCRM_SEQ_NUM field is included in this message; otherwise, the base station shall set this field to '0'.

SCRM_SEQ_NUM - Supplemental Channel Request Message sequence number.

If USE_SCRM_SEQ_NUM is set to ‘1’, the base station shall set this field to the sequence number corresponding to the SCRM_SEQ_NUM field in a Supplemental Channel Request Message to which the mobile station is to match this message; otherwise, the base station shall omit this field.

ADD_INFO_INCL - Additional information included indicator.

If the message is to contain the FPC_PRI_CHAN field, 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’ if the message does not contain any Supplemental Channel assignment.

FPC_PRI_CHAN - Power Control Subchannel Indicator.

If the ADD_INFO_INCL field 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 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’.

REV_CFG_INCLUDED- Reverse Supplemental Channel configuration included.

The base station shall set this field to '1' if this message contains a Reverse Supplemental Channel configuration. Otherwise, the base station shall set this field to '0'.

NUM_REV_CFG_RECS - Number of the Reverse Supplemental Channel configuration 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_DURITION (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

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’.

REV_SCH-
_START_TIME - Start time for Reverse Supplemental Channel assignment.

If REV_SCH_START_TIME_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this 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

$$(\lfloor t/(\text{START\_TIME\_UNIT}_S+1)\rfloor - \text{REV\_SCH\_START\_TIME}) \bmod 32 = 0,$$

where t is the System Time in units of 20 ms.

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].

FOR_CFG_INCLUDED- Forward Supplemental Channel configuration included.

The base station shall set this field to '1' if this message contains a Forward Supplemental Channel configuration. Otherwise, the base station shall set this field to '0'.

NUM_FOR_CFG_RECS - Number of the Forward Supplemental Channel configuration Records.

The base station shall set this field to one less than the number of forward supplemental channel configuration records consisting of the following three fields that are included in this message.

The base station shall include NUM_FOR_CFG_RECS occurrences of the following fields only if the FOR_CFG_INCLUDED field is set to ‘1’.

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.

If USE_FLEX_NUM_BITS is equal to '0' or if USE_FLEX_NUM_BITS is equal to '1' and FSCH_NBIT_TABLE_ID for FOR_SCH_ID is equal to ‘0000’, then the base station shall set this field according to Table 3.7.3.3.2.37-4 to indicate the number of information bits per frame and the length of the CRC field for the Forward Supplemental Channel identified by FOR_SCH_ID 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:

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 ACTIVE_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.
CODE_CHAN_SCH	-	Code channel on the Supplemental Channel. 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 Supplemental Channel of the Forward Traffic Channel indexed by SCCL_INDEX.
QOF_MASK_ID_SCH	-	Quasi-orthogonal function index on the Supplemental 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:

The base station shall set this field to ‘1’ if FOR_SCH_START_TIME is included in this message; otherwise, the base station shall set this field to ‘0’.

FOR_SCH-_START_TIME - Start time for Forward Supplemental Channel assignment.

If FOR_SCH_START_TIME_INCL is set to ‘0’, the base station shall omit this field; otherwise, the base station shall set this 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 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.

FOR_SCH_FER_REP - Forward Supplemental Channel FER report indicator.

The base station shall set this field to ‘1’ if the mobile station is to report the Supplemental Channel frame counts (see 2.6.4.1.1); otherwise, the base station shall set this field to ‘0’.

SCCL_INDEX - Supplemental Channel Code list index.

The base station shall set this field to the index of the record in the Forward Supplemental Channel Code list corresponding to the FOR_SCH_ID.

FPC_INCL - Forward Link Power Control parameter included indicator.

If the forward power control related information is included in this message, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

FPC_MODE_SCH - Forward Power Control operational mode indicator used during forward Supplemental Channel assignment interval.

If FPC_INCL is set to ‘1’, the base station shall set the value to the forward power control operation mode as specified in Table 2.1.3.1.11-1 of [2]; otherwise, the base station shall omit this field.

FPC_SCH-_INIT_SETPT_OP - Initial Supplemental Channel Outer Loop Eb/Nt setpoint option.

If FPC_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 ‘0’ to indicate that FPC_SCH_INIT_SETPT contains the absolute value of the initial F-SCH Eb/Nt setpoint. The base station shall set this field to ‘1’ to indicate that FPC_SCH_INIT_SETPT contains the offset value of the initial F-SCH Eb/Nt setpoint relative to the current value used in the mobile station for the channel carrying the Forward Power Control Subchannel.

FPC_SEC_CHAN - Master Supplemental channel index.

If FPC_OLPC_SCH_INCL is included and set to ‘1’, the base station shall set this field to the master Supplemental Channel index; otherwise, the base station shall omit this field.

NUM_SUP - Number of Supplemental Channels.

If FPC_INCL is set to ‘0’ the base station shall omit this field; otherwise, the base station shall set this field to the total number of the Supplemental Channels.

The base station shall include NUM_SUP occurrences of the following record:

SCH_ID - Supplemental channel index.

The base station shall set this field to the Supplemental Channel index.

FPC_SCH_FER - Supplemental channel target Frame Error Rate.

The base station shall set this field to the target Frame Error Rate on the Supplemental Channel, as specified in Table 3.7.3.3.2.25-2.

FPC_SCH_INIT_SETPT - Initial Supplemental Channel Output Loop Eb/Nt setpoint

The base station shall set this field to initial Supplemental Channel Outer Loop Eb/Nt setpoint (absolute value or offset value as indicated by FPC_SCH_INIT_SETPT_OP) as follows:

If FPC_SCH_INIT_SETPT_OP is set to '0', the unit is 0.125 dB;

If FPC_SCH_INIT_SETPT_OP is set to '1', the unit is 0.125 dB and the offset is expressed as two's complement signed number.

FPC_SCH_MIN_SETPT - Minimum Supplemental Channel outer loop Eb/Nt setpoint.

The base station shall set this field to minimum Supplemental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB.

FPC_SCH_MAX_SETPT - Maximum Supplemental Channel outer loop Eb/Nt setpoint.

The base station shall set this field to maximum Supplemental Channel Outer Loop Eb/Nt setpoint, in units of 0.125 dB.

FPC_THRESH_SCH_INCL - SCH Setpoint Report Threshold Included Indicator.

If FPC_INCL is set to ‘1’ and SCH setpoint report threshold is included in this message, the base station shall set this field to ‘1’; otherwise, the base station shall set this field to ‘0’.

SETPT_THRESH_SCH - SCH Setpoint Report Threshold.

If THRESH_SCH_INCL is set to ‘1’, the base station shall set the value to SETPT_THRESH_SCH (in units of 0.125 dB) above which the outer loop report message will be sent by the mobile station; otherwise, the base station shall omit this field.

RPC_INCL - Reverse Power Control parameter included indicator.

The base station shall set this field to ‘1’ if RPC_NUM_SUP is included in this message; otherwise the base station shall set this field to ‘0’.

RPC_NUM_SUP - Number of Supplemental Channels.

If RPC_INCL is set to ‘1’, the base station shall set this field to the total number of the Supplemental Channels minus one; otherwise, the base station shall omit this field.

The base station shall include RPC_NUM_SUP +1 occurrences of the following two fields record:

SCH_ID - Supplemental channel index.

The base station shall set this field to the Supplemental Channel index.

RLGAIN_SCH_PILOT - Supplemental channel power offset adjustment relative to Reverse Pilot Channel power for radio configurations greater than 2.

The base station shall set this field to the correction factor to be used by mobile stations setting the power of a supplemental channel, expressed as a two’s complement value in units of 0.125 dB.

3X_SCH_INFO_INCL – 3X SCH information included indicator.

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’.

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.

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.

3.7.3.3.2.38 Forward Supplemental Channel Assignment Mini Message

MSG_TAG: FSCAMM

Field	**Length (bits)**
FOR_SCH_ID	1
FOR_SCH_DURATION	4
FOR_SCH_START_TIME	5
SCCL_INDEX	4

FOR_SCH_ID - Forward Supplemental Channel identifier.

The base station shall set this field to the identifier of the Forward Supplemental Channel.

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 start time of the message specified by FOR_SCH_START_TIME.

The base station shall set this 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 with the same FOR_SCH_ID field is received (see 2.6.6.2.5.1.1).

FOR_SCH-

_START_TIME - Start time for Forward Supplemental Channel assignment.

The base station shall set this 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 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.

SCCL_INDEX - Supplemental Channel Code list index.

The base station shall set this field to the index of the record in the Forward Supplemental Channel Code list corresponding to the FOR_SCH_ID.

3.7.3.3.2.39 Reverse Supplemental Channel Assignment Mini Message

MSG_TAG: RSAMM

Field	Length (bits)
REV_SCH_ID	1
REV_SCH_DURATION	4
REV_SCH_START_TIME	5
REV_SCH_NUM_BITS_IDX	4

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 start time specified by 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 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 - Start time for *Reverse Supplemental Channel Assignment Mini Message*.

The base station shall set this 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.

REV_SCH-_NUM_BITS_IDX - Reverse Supplemental Channel number of information 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, that the mobile station may transmit on the reverse Supplemental Channel identified by REV_SCH_ID.

If USE_FLEX_NUM_BITS$_S$ 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 that the mobile station may transmit on the Reverse Supplemental Channel identified by REV_SCH_ID to be NUM_BITS[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX].
The REV_SCH_NUM_BITS_IDX field also specifies the number of CRC bits per frame for the Reverse Supplemental Channel identified by REV_SCH_ID. The number of CRC bits per frame is specified by CRC_LEN_IDX[RSCH_NBIT_TABLE_ID[REV_SCH_ID]][REV_SCH_NUM_BITS_IDX] and Table 3.7.5.20-4.

3.7.3.3.2.40 Mobile Assisted Burst Operation Parameters Message

MSG_TAG: MABOPM

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 Message*s 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 Message*s 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 Message*s 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.

The base station shall set this field to the number of pilots for which the mobile station is to send *Pilot Strength Measurement Mini Messages* when the periodic mode is enabled.

PERIODIC_INTERVAL - Periodic interval.

The base station shall set this field to the interval (in 20 ms units) between *Pilot Strength Measurement Mini Messages* when the periodic mode is enabled.

THRESHOLD_FLAG - Threshold reporting flag.

The base station shall set this field to '1' to indicate that the mobile station is to send *Pilot Strength Measurement Mini Messages* whenever a measured pilot crosses below a lower bound or exceeds an upper bound during Supplemental channel burst operations; otherwise the base station shall set this field to '0'.

If THRESHOLD_FLAG is set to '1', the base station shall include the following five-field record:

PS_FLOOR_HIGH - Lower bound reporting high water mark.

The base station shall set this field to the high water mark for the lower bound below which the mobile station is to send *Pilot Strength Measurement Mini Messages* when the threshold mode is enabled.

PS_FLOOR_LOW - Lower bound reporting low water mark.

The base station shall set this field to the low water mark for the lower bound below which the mobile station is to send *Pilot Strength Measurement Mini Messages* when the threshold mode is enabled.

PS_CEILING_HIGH - Upper bound reporting high water mark.

The base station shall set this field to the high water mark for the upper bound above which the mobile station is to send *Pilot Strength Measurement Mini Messages* when the threshold mode is enabled.

PS_CEILING_LOW - Upper bound reporting low water mark.

The base station shall set this field to the low water mark for the upper bound above which the mobile station is to send *Pilot Strength Measurement Mini Messages* when the threshold mode is enabled.

THRESHOLD-

_INTERVAL - Threshold reporting interval.

The base station shall set this field to the interval (in 20 ms units) between *Pilot Strength Measurement Mini Messages* when the threshold reporting mode is enabled.

3.7.3.3.2.41 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 3.7.5.19-1 corresponding to the User Zone rejection action field to identify the mobile station action.

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’.

ASSIGN_UZID - Assigned User Zone identifiers.

The base station shall set this field to the User Zone identifier of the User Zone assigned to the mobile station.

3.7.3.3.2.42 User Zone Update Message

MSG_TAG: UZUM

Specific Field	Length (bits)
UZID	16

UZID - User Zone identifier.

The base station shall set this field to the User Zone identifier supported by the base station.

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’.

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 that was/will be assigned to the service option connection corresponding to this call.

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 × 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.

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.

3.7.3.3.2.45 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 × 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.

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.

3.7.3.3.2.46 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

CON_REF - Connection reference corresponding to the service option connection requesting for encryption.

If this field is included, the base station shall set this field to the connection reference of the service option connection corresponding to this user information encryption.

UI_ENCRYPT_MODE - Encryption mode indicator for user information privacy.

The base station shall set this field to user information encryption mode for the service option connection identified by CON_REF as shown in Table 3.7.5.7-3.

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.

3.7.4 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, ORDER (binary)	Order Qual-ification Code, ORDQ (binary)	ACTION_TIME can be specified	Addi-tional Fields other than ORDQ	Name/Function
Y	N	000001	00000000	N	N	*Abbreviated Alert Order*
Y	Y	000010	00000000	N	Y	*Base Station Challenge Confirmation Order* (see 3.7.4.1)
N	Y	000011	000000nn	Y	N	*Message Encryption Mode Order* (where nn is the mode per Table 3.7.2.3.2.8-2)
Y	N	000100	00000000	N	N	*Reorder Order*
N	Y	000101	0000nnnn	N	N	*Parameter Update Order* (where 'nnnn' is the Request Number)
Y	Y	000110	00000000	N	N	*Audit Order*
Y	N	001001	00000000	N	N	*Intercept Order*
N	Y	001010	00000000	N	N	*Maintenance Order*
Y	Y	010000	00000000	N	N	*Base Station Acknowledgment Order* (see [4])
N	Y	010001	00000000	N	N	*Pilot Measurement Request Order*
N	Y	010001	nnnnnnnn (in the range of 00000001 to 11111111)	N	Y	*Periodic Pilot Measurement Request Order* (see 3.7.4.6)
Y	Y	010010	0001nnnn	N	N	*Lock Until Power-Cycled Order* (where nnnn is the lock reason)

Y	Y	010010	0010nnnn	N	N	*Maintenance Required Order* (where nnnn is the maintenance reason)
Y	N	010010	11111111	N	N	*Unlock Order*

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, ORDER (binary)	Order Qual-ification Code, ORDQ (binary)	ACTION_TIME can be specified	Addi-tional Fields other than ORDQ	Name/Function
N	Y	010011	00000000	Y	Y	*Service Option Request Order* (Band Class 0 only) (see 3.7.4.2)
N	Y	010100	00000000	Y	Y	*Service Option Response Order* (Band Class 0 only; see 3.7.4.3)
Y	Y	010101	00000000	N	N	*Release Order* (no reason given)
Y	Y	010101	00000010	N	N	*Release Order* (indicates that requested service option is rejected)
N	Y	010110	00000000	N	N	*Outer Loop Report Order*
N	Y	010111	00000000	Y	N	*Long Code Transition Request Order* (request public)
N	Y	010111	00000001	Y	N	*Long Code Transition Request Order* (request private)
N	Y	011001	0000nnnn	N	N	*Continuous DTMF Tone Order* (where the tone is designated by 'nnnn' as defined in Table 2.7.1.3.2.4-4)
N	Y	011001	11111111	N	N	*Continuous DTMF Tone Order* (stop continuous DTMF tone)
N	Y	011010	nnnnnnnn	N	N	*Status Request Order* (see 3.7.4.4)

Y	N	01101 1	00000000	N	N	*Registration Accepted Order* (ROAM_INDI not included; see 3.7.4.5)

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, ORDER (binary)	Order Qual-ification Code, ORDQ (binary)	ACTION_TIME can be specified	Additional Fields other than ORDQ	Name/Function
Y	N	011011	00000001	N	N	*Registration Request Order*
Y	N	011011	00000010	N	N	*Registration Rejected Order*
Y	N	011011	00000100	N	N	*Registration Rejected Order* (delete TMSI)
Y	N	011011	00000101	N	Y	*Registration Accepted Order* (ROAM_INDI included; see 3.7.4.5)
Y	N	011011	00000110	N	Y	*Registration Accepted Order* (ROAM_INDI, EXT_ENC_MSB, SIG_ENCRYPT_MODE, and KEY_SIZE included; see 3.7.4.5)
N	Y	011101	nnnnnnnn	Y	N	*Service Option Control Order* (Band Class 0 only) (the specific control is designated by 'nnnnnnnn' as determined by each service option)
Y	Y	011110	nnnnnnnn	N	N	*Local Control Order* (the specific order is designated by 'nnnnnnnn' as determined by each system)
Y	N	011111	00000000	N	N	*Slotted Mode Order* (transition to the slotted mode operation.)

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 specified	Additional Fields other than ORDQ	Name/Function
Y	Y	100000	00000000	N	Y	*Retry Order* (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.

RESERVED - Reserved bits.

The base station shall add reserved bits as needed in order to make the total length of the fields included in this order equal to an integer number of octets. The base station shall set these bits to ‘0’.

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:

$$\lceil (10 \times \log_{10}(pilot\_ec\_thresh) + 120) / 2 \rceil$$

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.

If the mobile station is to ignore this threshold, the base station shall set this field to '11111'; otherwise, the base station shall set this field to the total E_c/I_o threshold, expressed as an unsigned binary number equal to:

$$\lfloor -20 \times \log_{10} pilot\_streng\_thresh \rfloor,$$

where *pilot_streng_thresh* is the threshold of the total received E_c/I_o of the pilots in Active Set (see 2.6.6.2.2) below which the mobile station is to send the pilot strength measurements periodically to the base station.

INCL_SETPT - Include Setpoint information indicator.

The base station shall set this field to '1' to indicate that the mobile station shall include outer loop E_b/N_t setpoint information in the *Periodic Pilot Strength Measurement Message*; otherwise, the base station shall set this field to '0'.

RESERVED - Reserved bits.

The base station shall set this field to '000000'.

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 *Retry Order* is used to clear any existent retry delay
001	Origination	The *Retry Order* specifies the RETRY_DELAY for a Packet Data *Origination Message* or *Enhanced Origination Message*
010	Resource Request	The *Retry Order* specifies the RETRY_DELAY for a *Resource Request Message or Resource Request Mini Message*
011	Supplemental Channel Request	The *Retry Order* specifies the RETRY_DELAY for a *Supplemental Channel Request Message* or *Supplemental Channel Request Mini Message*
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

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

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 *Alert With Information Message* or the *Extended Alert With Information Message*.

"FWI" refers to either the *Flash With Information Message* or the *Extended Flash With Information Message*.

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.

CHARi - Character.

The base stations shall include one occurrence of this field for each character in the calling 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 ‘00000’.

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.

CHARi - Character.

The base station shall include one occurrence of this field for each character in the connected 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 ‘00000’.

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.

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	

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	

Table 3.7.5.5-5. IS-54B Alerting (SIGNAL_TYPE = '10')

Description	**SIGNAL (binary)**
No Tone: Off	000000
Long: 2.0 s on, 4.0 s off, repeating (standard alert)	000001
Short-Short: 0.8 s on, 0.4 s off, 0.8 s on, 4.0 s off, repeating	000010
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	000011
Short-Short-2: 1.0 s on, 1.0 s off, 1.0 s on, 3.0 s off, repeating.	000100
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.	000101
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.	000110
PBX Long: 1.0 s on, 2.0 s off, repeating.	000111
PBX Short-Short: 0.4 s on, 0.2 s off, 0.4 s on, 2.0 off, repeating.	001000
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.	001001
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.	001010
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.	001011
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.	001100
All other SIGNAL values are reserved	

RESERVED - Reserved bits.

The base station shall set this field to '000000'.

3.7.5.6 Message Waiting

This information record conveys to the user the number of messages waiting.

Type-Specific Field	Length (bits)
MSG_COUNT	8

MSG_COUNT - Number of waiting messages.

The base station shall set this field to the number of messages waiting.

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)

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)

FOR_MUX_OPTION - Forward Fundamental and Dedicated Control Channel multiplex option.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to the number of the multiplex option for the Forward Fundamental Channel, Forward Dedicated Control Channel, or both, if both present (e.g., 1 corresponds to Multiplex Option 1).

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field to the number of the multiplex option for the Forward Fundamental Channel, Forward Dedicated Control Channel, or both, if both present.

The base station shall set this field as follows:

For a *Service Request Message* and a *Service Response Message*, the base station shall set this field to the number of the multiplex option for the Forward Fundamental Channel, Forward Dedicated Control Channel, or both, if both present.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set this field to the number of multiplex option for the Forward Fundamental Channel, Forward Dedicated Control Channel, or both, if both present.

REV_MUX_OPTION - Reverse Fundamental and Dedicated Control Channel multiplex option.

The mobile station shall set this field as follows:

For a *Status Response Message*, the mobile station shall set this field to the number of the multiplex option for the Reverse Fundamental Channel, Reverse Dedicated Control Channel, or both, if both present(e.g., 1 corresponds to Multiplex Option 1).

For a *Service Request Message* and a *Service Response Message*, the mobile station shall set this field to the number of the multiplex option for the Reverse Fundamental Channel, Reverse Dedicated Control Channel, or both, if both present.

The base station shall set this field as follows:

For a *Service Request Message* and a *Service Response Message*, the base station shall set this field to the number of the multiplex option for the Reverse Fundamental Channel, Reverse Dedicated Control Channel, or both, if both present.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set this field to the number of the multiplex option for the Reverse Fundamental Channel, Reverse Dedicated Control Channel, or both, if both present.

FOR_NUM_BITS - Set of number of bits per frame of the Forward Fundamental Channel.

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.

For a *Service Request Message* and a *Service Response Message*, if the service option connection is part of the current service configuration, the mobile station shall set this field to the service option connection reference; otherwise, the mobile station shall set this field to '00000000'.

The base station shall set this field as follows:

For a *Service Request Message* or a *Service Response Message*: if the service option connection is part of the current service configuration, the base station shall set this field to the service option connection reference; otherwise, the base station shall set this field to '00000000'.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set this field to the service option connection reference assigned to the service option connection.

SERVICE_OPTION - Service option.

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 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 service option 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 service option to be used with the service option connection.

FOR_TRAFFIC - Forward 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 FOR_TRAFFIC code shown in Table 3.7.5.7-1 corresponding to the Forward 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 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:

If the service option connection is a part of the current service configuration, the base station shall set this field to the service reference identifier in use; otherwise, the base station shall set this field to the service reference identifier to be used for the service instance corresponding to this record.

For a *Service Connect Message*, *General Handoff Direction Message*, and a *Universal Handoff Direction Message*, the base station shall set this field to the service reference identifier to be used for the service instance corresponding to this record.

RLP_INFO_INCL - RLP information included indicator.

The mobile station shall set this field as follows:

The mobile station shall set this field to '1' if the RLP_BLOB field is included in this record; otherwise, it 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 RLP_BLOB field is included in this record; otherwise, it shall set this field to '0'.

RLP_BLOB_LEN - RLP information block of bits length.

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, it shall include this field and set it as follows:

The mobile station shall set this field to the size of the RLP_BLOB field in 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, it shall include this field and set it as follows:

The base station shall set this field to the size of the RLP_BLOB field in integer number of octets.

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:

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.

The base station shall set this field as follows:

If QOS_PARMS_INCL is set to ‘1’, the base station shall set this field to the combined length in octets, of the QOS_PARMS field and the immediately following RESERVED field; otherwise, the base station shall omit this field.

QOS_PARMS - QoS parameters block.

The mobile station shall set this field as follows:

If QOS_PARMS_INCL is set to ‘1’, the mobile station shall include this field in the record and set it to the set of QoS parameters requested for the respective connection.

The base station shall set this field as follows:

If QOS_PARMS_INCL is set to ‘1’, the base station shall include this field in the record and set it to the set of QoS parameters requested or required for the respective connection.

QOS_RESERVED - Padding bits.

The mobile station shall set this field as follows:

If QOS_PARMS_INCL is set to ‘1’, the mobile station shall include minimum necessary 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.

The base station shall set this field as follows:

If QOS_PARMS_INCL is set to ‘1’, the base station shall include minimum necessary 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 base station shall omit this field.

RESERVED - Reserved bits.

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 Suppemental 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:

The mobile station shall set this field to the subfields of the Channel Configuration record defined in 3.7.5.7.1, for this 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 Forward Supplemental Channel.

REV_SCH_CC_INCL - Channel configuration for the Reverse Supplemental Channel included indicator.

The mobile station shall set this field as follows:

The mobile station shall set this field to ‘1’, if the Reverse 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 reverse Supplemental Channel is included in this service configuration record; otherwise, the base station shall set this field to ‘0’.

NUM_REV_SCH - Number of Reverse Supplemental Channels.

The mobile station shall set this field as follows:

If REV_SCH_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 number of Reverse Supplemental Channels for the current service configuration and include one occurrence of the following three-field record for each reverse Supplemental Channel Configuration.

For a *Service Request Message* or a *Service Response Message*, the mobile station shall set this field to the number of Reverse Supplemental Channels for the proposed service configuration and include one occurrence of the following three-field record for each reverse Supplemental Channel Configuration.

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.

RESERVED - Reserved bits.

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 information 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 the entire message equal to an integer number of octets. The base station shall set these bits to ‘0’.

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’.

If a f-dtch logical channel corresponding to the same sr_id is mapped to both forward Supplemental Channels 0 and 1, then the mobile station or base station shall specify the same frame length for both forward Supplemental Channels 0 and 1.

If a r-dtch logical channel corresponding to the same sr_id is mapped to both reverse Supplemental Channels 0 and 1, then the mobile station or base station shall specify the same frame length for both forward Supplemental Channels 0 and 1.

The base station shall not set both FRAME_40_USED and FRAME_80_USED fields set to '1'.

FRAME_80_USED - 80ms frame used indicator.

The mobile station or base station shall set this field to '1' if 80ms frame is to be used; otherwise, the mobile station or base station shall set this field to '0'.

If a f-dtch logical channel corresponding to the same sr_id is mapped to both forward Supplemental Channels 0 and 1, then the mobile station or base station shall specify the same frame length for both forward Supplemental Channels 0 and 1.

If a r-dtch logical channel corresponding to the same sr_id is mapped to both reverse Supplemental Channels 0 and 1, then the mobile station or base station shall specify the same frame length for both reverse Supplemental Channels 0 and 1.

Then the base station shall not set both FRAME_40_USED and FRAME_80_USED fields set to '1'.

MAX_RATE - Maximum supplemental channel rate

The mobile station or base station shall set this field according to Table 2.7.4.27.3-2 to indicate the maximum forward supplemental channel frame rate supported.

RESERVED - Reserved bits.

The mobile station or base station shall add reserved bits as needed in order to make the length of the entire information record equal to an integer number of octets. The mobile station or base station shall set these bits to '0'.

3.7.5.8 Called Party Subadddress

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:	
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 [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’.

CHARi - 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.

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.

3.7.5.9 Calling Party Subadddress

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:	
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 [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'.

CHARi - 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.

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.

3.7.5.10 Connected Subadddress

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 [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'.

CHARi - 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.

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.

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:

CHARi	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.

If the EXTENSION_BIT_1 is set to ‘0’ and REDIRECTION_REASON is included in this record, the base station shall set this field to ‘0’. If the EXTENSION_BIT_1 is set to ‘0’ and REDIRECTION_REASON is not included in this record, the base station shall set this field to ‘1’. If the EXTENSION_BIT_1 is set to ‘1’, the base station shall omit this field.

PI - Presentation indicator.

This field indicates whether or not the redirecting number should be displayed.

if the EXTENSION_BIT_1 is set to ‘0’, 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 ANSI T1.625 §6.1.3.7; otherwise, the base station shall omit this field.

RESERVED - Reserved bits.

If the EXTENSION_BIT_1 is set to ‘0’, the base station shall set this field to ‘000’; otherwise, the base station shall omit this field.

SI - Screening indicator.

This field indicates how the redirecting number was screened.

If the EXTENSION_BIT_1 is set to ‘0’, 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 ANSI T1.625 6.1.3.7; otherwise, the base station shall omit this field.

EXTENSION_BIT_3 - The extension bit.

If the EXTENSION_BIT_2 is set to ‘0’, the base station shall set this field to ‘1’; otherwise, the base station shall omit this field.

RESERVED - Reserved bits.

If the EXTENSION_BIT_2 is set to ‘0’, the base station shall set this field to ‘000’; otherwise, the base station shall omit this field.

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 Subadddress

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.

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.

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.

FREQ_2 - Tone frequency 2.

The base station shall set this field to the second frequency of the tone group in units of 5 Hz. Setting this field to zero creates a single frequency tone.

ON_TIME - On time.

The base station shall set this field to the duration of the tone group in units of 50 ms.

OFF_TIME - Off time.

The base station shall set this field to the duration of the spacing between tones in units of 50 ms.

REPEAT - Repeat.

The base station shall set this field to the number of times the tone group should repeat. The base station shall set this field to 0xFF to indicate that the tone group will repeat indefinitely.

DELAY - Delay.

The base station shall set this field to the length of time before the next tone group begins in units of 50 ms.

RESERVED - Reserved bits.

The base station shall set this field to ‘0000’.

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.

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 CHARi field, as defined in [8] Annex D.

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

DISPLAY_LEN - The display length.

The base station shall set this field to the number of octets of display text. See [8] Annex D.

CHARi - Character.

The base station shall include DISPLAY_LEN occurrences of this field, one for each character to be displayed, except for blank and skip. 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'.

3.7.5.17 Extended Record Type - International

The use of this record type is country-specific. The first ten bits of the type-specific fields shall include the Mobile Country Code (MCC) associated with the national standards organization administering the use of the record type. Encoding of the MCC shall be as specified in 2.3.1.3. The remaining six bits of the first two octets of the type-specific fields shall be used to specify the country-specific record type.

3.7.5.18 Reserved

3.7.5.19 Reserved

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)

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
FSCH0_NBIT_TABLE_ID	0 or 4

(continues on next page)

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)

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)

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
RESERVED	0-7 (as needed)

FPC_INCL - Forward power control information included indicator.

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’.

FPC_PRI_CHAN - Power Control Subchannel indicator.

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:

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.

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'.

FPC_MODE - Forward Power Control operation mode indicator.

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:

The base station shall set this field to the value of the forward power control operation mode as specified in Table 2.1.3.1.11-1 of [2].

FPC_OLPC_FCH_INCL - Fundamental Channel Outer Loop Power Control parameter included indicator.

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:

If the forward link Fundamental Channel outer loop power control parameters are included in this record, the base station shall set this field to '1'; otherwise, the base station shall set this field to '0'.

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.

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 0.125dB; otherwise, the base station shall omit this field.

FPC_ FCH_MAX_SETPT - Maximum Fundamental Channel Outer Loop Eb/Nt setpoint.

If FPC_OLPC_FCH_INCL is set to '1', the base station shall set this field to maximum Fundamental Channel Outer Loop Eb/Nt setpoint, in units of 0.125dB; otherwise, the base station shall omit this field.

FPC_OLPC_DCCH_INCL - Dedicated Control Channel Outer Loop Power Control parameter included indicator.

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:

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.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to the target Frame Error Rate on the Forward Dedicated Control Channel, as specified in Table 3.7.3.3.2.25-2; otherwise, the base station shall omit this field.

FPC_DCCH_MIN_SETPT - Minimum Dedicated Control Channel Outer Loop Eb/Nt setpoint.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to minimum Dedicated Control Channel Outer Loop Eb/Nt setpoint, in units of 0.125dB; otherwise, the base station shall omit this field.

FPC_DCCH_MAX_SETPT - Maximum Dedicated Control Channel Outer Loop Eb/Nt setpoint.

If FPC_OLPC_DCCH_INCL is included and set to ‘1’, the base station shall set this field to maximum Dedicated Control Channel Outer Loop Eb/Nt setpoint, in units of 0.125dB; otherwise, the base station shall omit this field.

GATING_RATE_INCL - Reverse Pilot Channel 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 - Reverse Pilot Channel Gating rate.

If the GATING_RATE_INCL field 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 PILOT_GATING_RATE field shown in Table 3.7.5.20-1 corresponding to the gating rate on the Reverse Pilot Channel.

Table 3.7.5.20-1. Reverse Pilot Gating rate

PILOT_GATING_RATE field (binary)	Meaning
00	Gating rate 1
01	Gating rate ½
10	Gating rate ¼
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 (FRAME_OFFSET $\times$ 1.25 + 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 tthe 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 (FRAME_OFFSET $\times$ 1.25 + 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.

The base station shall set this field to ‘1’ if the mobile station is required to omit the service option number when sending Short Data Burst (see IS-707-A-2) for this service option connection; otherwise, the base station shall set this field to ‘0’.

RESERVED - Reserved bits.

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’.

USE_FLEX_NUM_BITS - Use flexible (non-default) number of bits per frame indicator.

The base station shall set this field to '0' to indicate that the number of bits per frame shall follow the default mapping identified in Table 3.7.3.3.2.37-2 and Table 3.7.3.3.2.37-1.

The base station shall set this field to '1' to indicate a non-default mapping between the number of information bits per frame, NUM_BITS, and a four-bit index field NUM_BITS_IDX is specified in this message for at least a forward or reverse dedicated channel.

USE_OLD_FLEX_TABLE - Use the previously downloaded Flexible Rate Table indicator.

The base station shall include this field only if USE_FLEX_NUM_BITS is equal to ‘1’. 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 Flexible Rate Table. The base station shall set this field to ‘0’ if the fields related to downloading the Flexible Rate Table are included in this message.

NUM_BITS-
_TABLES_COUNT - Number of instances of the Flexible Rate Table included in this message.

The base station shall include this field only if USE_OLD_FLEX_TABLE field is included and is set to '0'. If this field is included, the base station shall set this field to one less than the number of instances of the Flexible Rate Table included in this message.

If USE_OLD_FLEX_TABLE is equal to ‘0’, the base station shall include NUM_BITS_TABLES_COUNT+1 instances of the Flexible Rate Table

NUM_BITS_TABLE_ID - Flexible Rate Table ID.

The base station shall set this field to the ID of the Flexible Rate Table that follows. The value of '0000' is reserved to indicate the default table.

NUM_RECS - Number of records in the Flexible Rate Table.

The base station shall set this field to one less than the number of three-field records that follows

The base station shall include NUM_RECS+1 instances of the following three fields:

NUM_BITS_IDX - Index to the number of bits array.

The base station shall set this field to the index to the array that identifies the number of bits per frame.

NUM_BITS - Number of bits array.

The base station shall set this field to the number of information bits per frame corresponding to the index specified by NUM_BITS_IDX. The base station shall set the number of information bits per frame in accordance with the number of information bits per frame specified by the service option numbers included in the service configuration record.

CRC_LEN_IDX - Array of Number of CRC bits.

The base station shall set this field to specify the number of CRC bits per frame corresponding to the index specified by NUM_BITS_IDX according to Table 3.7.5.20-4. The base station shall not specify more than one value of the CRC length for the same number of bits per frame for a specific channel (i.e., for a given channel, the number of information bits per frame uniquely specifies the length of the CRC field).

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

USE_VAR_RATE - Use variable rate on supplemental channels indicator.

The base station shall set this field to ‘1’ to indicate that at least one of the forward or reverse supplemental channels is to operate in the variable rate mode (i.e., the rate of the supplemental channel can be picked from a pre-determined set of rates autonomously).

The base station shall set this bit to '0' to indicate that variable rate on supplemental channels are not allowed.

USE_OLD_VAR_TABLE - Use the previously downloaded Variable Rate Table indicator.

The base station shall include this field only if USE_VAR_RATE is equal to ‘1’. 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 Variable Rate Mask Table. The base station shall set this field to ‘0’ if the fields related to downloading the Variable Rate Mask Table are included in this message.

VAR_RATE-

_TABLES_COUNT - Number of instances of the Variable Rate Mask Table included in this message.

The base station shall include this field only if USE_OLD_VAR_TABLE field is included and is set to ‘0’. If this field is included, the base station shall set this field to one less than the number of instances of the Variable Rate Mask table included in this message as follows.

If USE_OLD_VAR_TABLE is equal to ‘0’, the base station shall include VAR_RATE_TABLES_COUNT +1 instances of the Variable Rate Mask table

VAR_RATE_TABLE_ID - Variable Rate Mask table ID.

The base station shall set this field to the ID of the Variable Rate Mask table that follows. The value of '000' is reserved to indicate no variable rate operation.

NUM_RECS - Number of records in the Variable Rate Mask table.

The base station shall set this field to one less than the number of two-field records that follows

The base station shall include NUM_RECS+1 instances of the following two fields:

NUM_BITS_IDX - Index to the number of bits array.

The base station shall set this field to the index to the array that identifies the number of bits per supplemental channel frame.

MASK - Number of bits array.

The base station shall set this field to a mask that identifies the other members of the Variable Rate Set. The base station shall set the ith LSB bit (i=1, ..., NUM_BITS_IDX) of this field to '1' to indicates that the number of bits per frame specified by the index NUM_BITS_IDX-i is to be included in the Supplemental Variable Rate Set.

USE_OLD-_FLEX_MAPPING - Use the previously downloaded mapping between the channels and Flexible Rate Tables.

The base station shall include this field only if USE_FLEX_NUM_BITS field is set to '1'. 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 Flexible Rate Tables. The base station shall set this field to '0', if the following eight fields are included in this message.

FSCH0_NBIT_TABLE_ID - Forward Supplemental Channel 0 Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to '0'. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to Forward Supplemental Channel 0. The base station shall set this field to '0000' to indicate that the Flexible Rate feature is not used for Forward Supplemental 0.

RSCH0_NBIT_TABLE_ID - Reverse Supplemental Channel 0 Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to '0'. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to Reverse Supplemental Channel 0. The base station shall set this field to '0000' to indicate that the Flexible Rate feature is not used for Reverse Supplemental 0.

FSCH1_NBIT_TABLE_ID - Forward Supplemental Channel 1 Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to '0'. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to Forward Supplemental Channel 1. The base station shall set this field to '0000' to indicate that the Flexible Rate feature is not used for Forward Supplemental 1.

RSCH1_NBIT_TABLE_ID - Reverse Supplemental Channel 1 Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to ‘0’. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to Reverse Supplemental Channel 1. The base station shall set this field to ‘0000’ to indicate that the Flexible Rate feature is not used for Reverse Supplemental 1.

FFCH_NBIT_TABLE_ID - Forward Fundamental Channel Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to ‘0’. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to the Forward Fundamental Channel. The base station shall set this field to ‘0000’ to indicate that the Flexible Rate feature is not used for the Forward Fundamental Channel.

RFCH_NBIT_TABLE_ID - Reverse Fundamental Channel Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to ‘0’. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to the Reverse Fundamental Channel. The base station shall set this field to ‘0000’ to indicate that the Flexible Rate feature is not used for the Reverse Fundamental Channel.

FDCCH_NBIT_TABLE_ID - Forward Dedicated Control Channel Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to ‘0’. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to the Forward Dedicated Control Channel. The base station shall set this field to ‘0000’ to indicate that the Flexible Rate feature is not used for the Forward Dedicated Control Channel.

FDCCH_NBITS_IDX - Forward Dedicated Control Channel number of information bits per frame index.

The base station shall include this field only if the FDCCH_NBITS_TABLE_ID field is included and is not equal to '0000'. If included, the base station shall set this field to indicate the number of information bits per Forward Dedicated Control Channel frame. The number of information bits per frame is specified by the Flexible Rate Table associated with Forward Dedicated Control Channel and FDCCH_NBITS_IDX as the index to the table (i.e., $NUM\_BITS_s[FDCCH\_NBITS\_TABLE\_ID_r][FDCCH\_NBITS\_IDX]$.

RDCCH_NBIT_TABLE_ID - Reverse Dedicated Control Channel Flexible Rate Table ID.

The base station shall include this field only if USE_OLD_FLEX_MAPPING field is included and is set to '0'. If this field is included, the base station shall set this field to the ID of the Flexible Rate Table corresponding to the Reverse Dedicated Control Channel. The base station shall set this field to '0000' to indicate that the Flexible Rate feature is not used for the Reverse Dedicated Control Channel.

RDCCH_NBITS_IDX - Reverse Dedicated Control Channel number of information bits per frame index.

The base station shall include this field only if the RDCCH_NBITS_TABLE_ID field is included and is not equal to '0000'. If included, the base station shall set this field to indicate the number of information bits per Reverse Dedicated Control Channel frame. The number of information bits per frame is specified by the Flexible Rate Table associated with Reverse Dedicated Control Channel and RDCCH_NBITS_IDX as the index to the table (i.e., $NUM\_BITS_s[RDCCH\_NBITS\_TABLE\_ID_r][RDCCH\_NBITS\_IDX]$.

USE_OLD_VAR_MAPPING - Use the previously downloaded mapping between the channels and Variable Rate Mask Tables.

The base station shall include this field only if USE_VAR_RATE field is set to '1'. 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 Variable Rate Mask Tables. The base station shall set this field to '0', if the following four fields are included in this message.

FSCH0_VAR_TABLE_ID - Forward 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 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.

The base station shall include this field only if USE_VAR_RATE field is included and is set to '1'. If this field is included, the base station shall set this field to ‘1’ to indicate that the mobile station is allowed to switch between any of the rates (i.e., number of bits per frame) in the Variable Rate Set for the Reverse Supplemental channels. The base station shall set this field to ‘0’ to indicate that only a downward transition in rate within the rates (i.e., number of bits per frame) in the Variable Rate Set for the Reverse Supplemental channels is allowed.

F_INC_RATE_ALLOWED - Forward increase rate within Variable Rate Set Allowed indicator.

The base station shall include this field only if USE_VAR_RATE field is included and is set to '1'. If this field is included, the base station shall set this field to ‘1’ to indicate that the base station is allowed to switch between any of the rates (i.e., number of bits per frame) in the Variable Rate Set for the Forward Supplemental channels. The base station shall set this field to ‘0’ to indicate that only a downward transition in rate within the rates (i.e., number of bits per frame) in the Variable Rate Set for the Forward Supplemental channels is possible.

LTU_INFO_INC - LTU Size Tables included indicator.

The base station shall set this field to ‘1’ to indicate that LTU Size Table information is included in this message; otherwise, the base station shall set this field to ‘0’. The base station shall include at least one LTU Size Table if USE_FLEX_NUM_BITS is equal to ‘1’ and at least one of FSCH0_NBIT_TABLE_ID, FSCH1_NBIT_TABLE_ID, RSCH0_NBIT_TABLE_ID, or RSCH1_NBIT_TABLE_ID is not equal to ‘0000’ (i.e., the base station is to specify the LTU size table for the supplemental channels that are using the flexible rate feature).

USE_OLD_LTU_TABLE - Use the previously downloaded LTU Table indicator.

The base station shall include this field only if USE_FLEX_NUM_BITS is equal to ‘1’ and LTU_INFO_INC is equal to ‘1’. 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 LTU Table. The base station shall set this field to ‘0’ if the fields related to downloading the LTU Table are included in this message.

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.

The base station shall include this field only if USE_FLEX_NUM_BITS is equal to '1' and at least one of FSCH0_NBIT_TABLE_ID, FSCH1_NBIT_TABLE_ID, RSCH0_NBIT_TABLE_ID, or RSCH1_NBIT_TABLE_ID is not equal to '0000' (i.e., the base station is to specify the LTU size table for the supplemental channels that are using the flexible rate feature). 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 LTU Tables. The base station shall set this field to '0', if the following four fields are included in this message.

FSCH0_LTU_TAB_ID - Forward 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 Forward Supplemental Channel 0. 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]).

RSCH0_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 0. 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]).

FSCH1_LTU_TAB_ID - Forward 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 Forward 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]).

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:

CATEGORY - Category number.

The base station shall set this field to the category number of the entry of the Partition Table identified by number of bits per each service as specified below. The base station shall not set this field to '00001' or '00010'. The base station shall place rows of the Partition Table corresponding to the same number of total information bits per frame consecutively. See [3].

MUX_HEADER_LEN - Multiplex Sublayer Header Length.

The base station shall set this field to the length of the multiplex sublayer header corresponding to the entry of the Partition Table identified by number of bits per each service as specified below.

MUX_HEADER - Multiplex Sublayer Header.

The base station shall set this field to the multiplex sublayer header corresponding to the entry of the Partition Table identified by number of bits per each service as specified below.

NUM_PARTITIONS - Number of partitions.

The base station shall set this field to one less than the number of partitions corresponding to each service (including signaling) included in the entry of the Partition Table identified by CATEGORY.

If USE_OLD_PARTITION_TABLE is equal to '0', then the base station shall include NUM_PARTITIONS + 1 occurrences of the following fields:

SR_ID - Service Reference ID.

The base station shall set this field to the sr_id of the service (sr_id = '000' for signaling) present in this category.

SRV_NUM_BITS - Number of bits allocated to the service.

The base station shall set this field to the number of bits allocated to the service (including signaling) identified by SR_ID.

USE_OLD-

_PART_MAPPING - Use the previously downloaded mapping between the 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.

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 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 RDCCH_NBIT_TABLE_ID field is not set to ‘0000’.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to ‘0’.

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:

CHARi	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 CHARi field, as defined in [8] Annex D.

NUM_RECORD - The number of records displaying.

The base station shall set this field to the number of records of display text.

DISPLAY_ENCODING - Display encoding.

See [30].

Support of an encoding method does not imply that the entire encodable character set must be supported. In general, once the supported character set is determined, various subsets of the character set can be supported. If a message is comprised entirely of characters from a supported subset of a character set, it can be displayed. If a message contains an unsupported character of a character set, it can be discarded.

NUM_FIELDS - Number of occurrences of the CHARi field.

The base station shall set this field to the number of characters included in this record.

CHARi - Character.

The base station shall include NUM_FIELDS occurrences of this field, one for each character to be displayed, except for blank and skip.

RESERVED - Reserved bits.

The base 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 base station shall set these bits to '0'.

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 '0000000'.

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)

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.

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.

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.

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]) on the frequency of the primary pilot.

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 on the frequency of the primary pilot.

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 on the frequency of the primary pilot.

ADD_INFO_INCL1 – Additional information included for the pilot on the lower frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the lower frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station or mobile station shall set this field to ‘0’; otherwise, the base station or mobile station shall set this field to ‘1’.

QOF1 – Quasi-orthogonal function index for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 is set to ‘0’, the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

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]) on the lower frequency of the two remaining SR3 frequencies.

WALSH_LENGTH1 - Length of the Walsh Code for the pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 is set to ‘0’, the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

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 on the lower frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH1 - Walsh Code for the Auxiliary Pilot on the lower frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL1 is set to '0', the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

The base station or mobile station shall set this field to the Walsh code corresponding to the Auxiliary pilot on the lower frequency of the two remaining SR3 frequencies.

ADD_INFO_INCL2 - Additional information included for the pilot on the higher frequency of the two remaining SR3 frequencies.

If the additional information for the pilot on the higher frequencies of the two remaining SR3 frequencies is the same as pilot on the primary frequency, the base station or mobile station shall set this field to '0'; otherwise, the base station or mobile station shall set this field to '1'.

QOF2 - Quasi-orthogonal function index for the pilot on the higher frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL2 is set to '0', the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

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]) on the higher frequency of the two remaining SR3 frequencies.

WALSH_LENGTH2 - Length of the Walsh Code for the pilot on the higher frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL2 is set to '0', the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

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 on the higher frequency of the two remaining SR3 frequencies.

AUX_PILOT_WALSH2 - Walsh Code for the Auxiliary Pilot on the higher frequency of the two remaining SR3 frequencies.

If ADD_INFO_INCL2 is set to ‘0’, the base station or mobile station shall omit this field; otherwise, the base station or mobile station shall set this field as follows:

The base station or mobile 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 or mobile station shall set all the bits of this field to ‘0’ to make the entire record octet-aligned.