**3RD GENERATION**
**PARTNERSHIP**
**PROJECT 2**
**"3GPP2"**

# Administration of Parameter Value Assignments for cdma2000 Spread Spectrum Standards

## *Revision History*

| Revision | Description of Changes | Date |
|---|---|---|
| C.R1001-0 | Release 0 | December 1999 |
| C.R1001-A v1.0 | Release A | February 2000 |
| C.R1001-A v2.0 | Release A point release | July 2000 |
| C.R1001-B v1.0 | Release B | February 2001 |
| C.R1001-B v2.0 | Release B point release | May 2001 |
| C.R1001-C v1.0 | Release C | January 2002 |
| C.R1001-D v1.0 | Release D | April 2003 |
| C.R1001-E v1.0 | Release E | September 2005 |
| C.R1001-F v1.0 | Release F | December 2006 |
| C.R1001-G v1.0 | Release G | June 2009 |
| C.R1001-H v1.0 | Release H | July 2011 |
| C.P1001-I 1.0 | Release I | September 2013 |
| C.P1001-I v2.0 | Corrections to GCSNA Revision | TBD |

# CONTENTS

**FIGURES**

**TABLES**

**FOREWORD**

(This foreword is not part of this specification)

This document contains the parameter value assignments used in the cdma2000®[1] family of standards.

---

[1] cdma2000® is a trademark for the technical nomenclature for certain specifications and standards of the Organizational Partners (OPs) of 3GPP2. Geographically (and as of the date of publications), cdma2000® is a registered trademark of the Telecommunications Industry Association (TIA-USA) in the United States.

# 1 SCOPE

The cdma2000 family of standards specify the operating and performance characteristics of cdma2000 digital spread spectrum systems. These standards contain certain parameter values (e.g., service options and *Data Burst Message* burst types) that have been reserved for either standard or for proprietary (non-standard) usage. As new voice and non-voice-related services are defined, it is necessary to assign values to these parameters. To avoid confusion resulting from multiple assignments, 3GPP2 Technical Specification Group C (TSG-C) recognized the need to provide this single master registry of parameter values that it has authorized for use.

This document assigns values to parameters within certain cdma2000 specifications for standard and for proprietary usage. The affected standards are listed in the References section of this document. As assignments are identified, this document will be revised to accommodate the new parameter assignments. Manufacturers, service providers, and others wishing to use values for parameters that have not been assigned should refer to Section 2 of this document for parameter value assignment administration procedures. Services using proprietary parameter value assignments are not subject to standardization within TSG-C, but are to be interoperable with the requirements within the respective cdma2000 specifications.

In addition to the parameter values assigned in this document, TSG-C may assign parameter values to new services or to certain organizations according to the procedures described in Section 2. Parameter values that are not assigned in this document or that are not assigned according to the procedures in Section 2 are undefined; and, therefore, have not been approved by TSG-C. Organizations should not use unassigned parameter values, and are cautioned that use of unassigned parameter values may affect future compatibility.

The terms "Manufacturer-Specific" and "Proprietary" are used interchangeably, as are the terms "Standard" and "Specification."

This document may contain provisional value assignments for specifications under development. These specifications may not be approved by the date of publication of this document.

## 1.1 Requirements Language

"Shall" and "shall not" identify requirements to be followed strictly to conform to this document 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 document. "Can" and "cannot" are used for statements of possibility and capability, whether material, physical or causal.

## 1.2 Informative References

The following standards are referenced in this text. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based upon this document are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. ANSI and TIA maintain registers of currently valid national standards published by them.

1. Reserved.

2. 3GPP2 C.S0002-F v1.0, *Physical Layer Standard for cdma2000 Spread Spectrum Systems*, December 2012.

3. 3GPP2 C.S0003-F v1.0, *Medium Access Control (MAC) Standard for cdma2000 Spread Spectrum Systems*, December 2012.

4. Reserved.

5. 3GPP2 C.S0005-F v1.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems*, December 2012.

6. Reserved.

7. 3GPP2 C.S0008-0 v1.0, *Multi-Carrier Specification for Spread Spectrum Systems on GSM MAP (MC-MAP)*, June 2000.

8. 3GPP2 C.S0009-0 v1.0, *Speech Service Option Standard for Wideband Spread Spectrum System*, December 1999.

9. 3GPP2 C.S0013-B v1.0, *Mobile Station Loopback Service Options Standard*, January 2011.

10. 3GPP2 C.S0014-E vv1.0, *Enhanced Variable Rate Codec, Speech Service Options 3, 68, 70, 73, and 77 for Wideband Spread Spectrum Digital Cellular System*, December 2011.

11. 3GPP2 C.S0015-C v1.0, *Short Message Services for Wideband Spread Spectrum Systems*, November 2012.

12. 3GPP2 C.S0016-D v2.0, *Over-the-Air Service Provisioning of Mobile Stations in Wideband Spread Spectrum Systems*, April 2012.

13. TIA/EIA/IS-707-A, *Data Services Options for Wideband Spread Spectrum Systems*, April 1999.

14. Reserved.

15. 3GPP2 C.S0017-0 v5.0, *Data Services Standard for Wideband Spread Spectrum Systems – Addendum 2*, February 2003.

16. 3GPP2 C.S0020-A v1.0, *High Rate Speech Service Option 17 for Wideband Spread Spectrum Communication Systems*, April 2004.

17. 3GPP2 C.S0022-B v2.0, *Position Determination Service Standard for cdma2000 Spread Spectrum Systems*, April 2012.

18. 3GPP2 C.S0026-A v1.0, *Test Data Service Option (TDSO) for cdma2000 Spread Spectrum Systems*, December 2004.

19. 3GPP2 C.S0025-A v1.0, *Markov Service Option (MSO) for cdma2000 Spread Spectrum Systems*, June 2012.

20. 3GPP2 X.S0004, *Mobile Application Part (MAP)*.

21. TIA/EIA/IS-91-A, *Base Station – Mobile Station Compatibility Specification for 800 MHz Cellular, Auxiliary, and Residential Services*, November 1999.

22. Reserved.

23. Reserved.

24. Reserved.

25. ANSI INCITS 4-1986 (R2007), *Information Systems - Coded Character Sets - 7-Bit American National Standard Code for Information Interchange (7-Bit ASCII)*.

26. Reserved.

27. ISO/IEC 8859-1:1998, *Information Technology – 8-Bit Single-Byte Coded Graphic Character Sets – Part 1. Latin Alphabet No. 1*.

28. ISO/IEC 8859-8:1999, *Information Technology – 8-Bit Single-Byte Coded Graphic Character Sets*.

29. ISO/IEC 10646:2003, *Information Technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane*.

30. JIS X 0201:1997 (R2007), *7-bit and 8-bit coded character sets for information interchange*.

31. ITU-T T.50, *International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) Information Technology – 7-Bit Coded Character Set for Information Interchange*, September 1992.

32. TTA.KO-006.0013, *Air Interface between Personal Station-Base Station Radio Interface Standard for 1.7 to 1.9GHz CDMA PCS*, July 1997.

33. KS X 1001, *The coded character set for information interchange – Korean and Chinese character*, 1998.

34. Reserved.

35. 3GPP2 C.S0029-B v1.0, Test Application Specification (TAS) for High Rate Packet Data Air Interface, March 2008.

36. 3GPP2 C.S0030-0 v3.0, Selectable Mode Vocoder Service Option for Wideband Spread Spectrum Communication Systems, January 2004.

37. 3GPP TS 23.038, Alphabets and language-specific information.

38. Reserved.

39. 3GPP2 A.S0008-D v1.0, *Interoperability Specification (IOS) for High Rate Packet Data (HRPD) Radio Access Network Interfaces with Session Control in the Access Network*, March 2013.

40. 3GPP2 C.S0047-0 v1.0, *Link-Layer Assisted Service Options for Voice-over-IP: Header Removal (SO 60) and Robust Header Compression (SO 61)*, April 2003.

41. 3GPP2 C.S0052-A v1.0, *Source-Controlled Variable-Rate Multimode Wideband Speech Codec (VMR-WB) Service Option 62 and 63 for Spread Spectrum Systems*, April 2005.

42. 3GPP2 C.S0039-0 v2.0, *Enhanced Subscriber Privacy for cdma2000 High Rate Packet Data*, May 2006.

43. 3GPP2 C.S0063-B v1.0, *cdma2000 High Rate Packet Data Supplemental Services*, April 2010.

44. 3GPP2 C.S0017-004-A v1.0, *Data Service Options for Spread Spectrum Systems: Async Data and Fax Services*, November 2009.

45. 3GPP2 C.S0017-005-A v1.0, *Data Service Options for Spread Spectrum Systems: Packet Data Services*, July 2004.

46. 3GPP2 C.S0017-007-A v1.0, *Data Service Options for Spread Spectrum Systems: Analog Fax Service*, July 2004.

47. 3GPP2 C.S0017-009-A v1.0, *Data Service Options for Spread Spectrum Systems: High Speed Packet Data Services*, July 2004.

48. 3GPP2 C.S0017-011-A v1.0, *Data Service Options for Spread Spectrum Systems: Service Option 34*, July 2004.

49. 3GPP2 C.S0017-012-A v2.0, *Data Service Options for Spread Spectrum Systems: Service Options 33 and 66*, May 2006.

50. 3GPP2 C.S0057-E v1.0, *Band Class Specification for cdma2000 Spread Spectrum Systems*, October 2010.

51. RFC 791, *Internet Protocol*, September 1981.

52. RFC 1662, *PPP in HDLC-like Framing*, July 1994

53. RFC 2460, *Internet Protocol, Version 6 (IPv6) Specification*, December 1998

54. RFC 3095, *Robust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP, and uncompressed*, July 2001

55. 3GPP2 C.S0077-0 v1.0, *Broadcast Multicast Service for cdma2000 1x* Systems, March 2006

56. 3GPP2 A.S0009-D v1.0, *Interoperability Specification (IOS) for High Rate Packet Data (HRPD) Access Network Interfaces With Session Control in the Packet Control Function*, March 2013.

57. 3GPP2 C.S0054-A v1.0, *cdma2000 High Rate Broadcast-Multicast Packet Data Air Interface Specification*, March 2006.

58. 3GPP2 C.S0067-A v1.0, *Key Exchange Protocols for cdma2000 High Rate Packet Data Air Interface*, February 2009.

59. 3GPP2 C.S0082-0 v1.0, *Circuit Services Notification Application Specification for cdma2000 High Rate Packet Data*, December 2006.

60. 3GPP2 C.S0075-0 v1.0, *Interworking Specification for cdma2000 1x and High Rate Packet Data Systems*, March 2006.

61. RFC 1661, *The Point-to-Point Protocol (PPP)*, July, 1994.

62. 3GPP2 X.S0040-0 v1.0, *PPP-Alternative Protocol (AltPPP) for cdma2000® Wireless IP Network Standard*, January 2007.

63. TIA-1149-0, *Commercial Mobile Alert Service (CMAS) Over CDMA Systems*, October 2008.

64. 3GPP2 C.S0087-A v2.0, *E-UTRAN - cdma2000 HRPD Connectivity and Inter-working: Air Interface*, June 2012.

65. 3GPP2 X.S0057-B v1.0, *E-UTRAN - eHRPD Connectivity and Interworking: Core Network Aspects*, October 2012.

66. 3GPP2 C.S0093-0 v1.0, *High Detectable Pilot Specification for the CDMA2000 High Rate Packet Data Air Interface*, October 2008.

67. 3GPP2 A.S0022-B v1.0, *Interoperability Specification (IOS) for Evolved High Rate Packet Data (eHRPD) Radio Access Network Interfaces and Interworking with Enhanced Universal Terrestrial Radio Access Network (E-UTRAN)*, April 2012.

68. 3GPP2 C.S0097-0 v3.0, *E-UTRAN – cdma2000 1x Connectivity and Interworking: Air Interface Specification, October 2012.*

69. 3GPP2 C.S0024-200-C v2.0, *cdma2000 High Rate Packet Data Air Interface Physical Layer Specification*, December 2011.

70. 3GPP2 C.S0024-300-C v2.0, *Medium Access Control Layer for cdma2000 High Rate Packet Data Air Interface Specification*, July 2011.

71. 3GPP2 C.S0024-400-C v2.0, *Connection and Security Layers for cdma2000 High Rate Packet Data Air interface Specification*, July 2011.

72. 3GPP2 C.S0024-500-C v2.0, *Application, Stream and Session Layers for cdma2000 High Rate Packet Data Air Interface Specification*, July 2011.

73. 3GPP2 C.S0086-0 v1.0, *WiMAX™ – HRPD Interworking: Air Interface Specification*, September 2010.

74. 3GPP TS23.272, *Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage 2.*

75. 3GPP TS23.216, *Single Radio Voice Call Continuity (SRVCC); Stage 2.*

76. 3GPP2 X.S0022-A v2.0, *Broadcast and Multicast Service in cdma2000 Wireless IP Network*, May 2011.

77. 3GPP2 A.S0014-D v4.0, *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces – Part 4 (A1, A1p, A2, and A5 Interfaces)*, August 2012.

78. 3GPP2 X.S0065-0 v1.0, *cdma2000 Unstructured Supplementary Service Data (USSD)*, April 2012.

79. 3GPP2 C.S0102-0 v1.0, *Air Interface Application Layer Security for High Rate Packet Data Systems*, April 2011.

80. 3GPP2 C.S0105-A v1.0, *Unstructured Supplementary Service Data (USSD) Service Options for Spread Spectrum Systems: Service Options 78 and 79*, June 2013.

81. 3GPP TS 23.040, *Technical Realization of the Short Message Service (SMS).*

**2 ADMINISTRATION OF PARAMETER VALUE ASSIGNMENTS**

Assignment of parameter values are governed by the administrative procedures contained in this section.

**2.1 Request for Parameter Value Assignments**

Requests for one or more parameter value assignments may be made by any 3GPP2 Technical Specification Group, as well as by individual manufacturers, service providers, and others. This includes requests for assignments within existing sections of this document, as well as requests for the inclusion of new parameters as the need arises. External requests are to be made by way of written correspondence to the 3GPP2 Secretariat (see 2.4).

Upon receipt of a request, TSG-C will discuss the matter; upon approval, if granted, the TSG will designate a new parameter value assignment and, if necessary, will designate an appropriate new section within this document. This assignment will be considered as an addendum to this document and will be added to the next published revision.

TSG-C will decide the appropriate time for releasing an update of this document. If requested in a correspondence to the 3GPP2 Secretariat, the requester will be notified of the TSG-C decision on a proprietary parameter value assignment request prior to publication.

**2.2 Selection of Parameter Value Assignments**

The selection of any parameter value assignments will be at the sole discretion of TSG-C. Where the requester has a need for a specific parameter value assignment, such a request will be included in the written correspondence to the 3GPP2 Secretariat, and the request will be considered by the TSG during its discussions.

**2.3 Use of Proprietary Parameter Value Assignments**

Use of all proprietary parameter value assignments is subject to the restrictions of this section.

Organizations that have been assigned proprietary parameter value assignments may use them to designate proprietary services, features, or options without further notification to 3GPP2 or TSG-C. Such services, features, or options will conform to all applicable requirements of the cdma2000 specifications.

Any organization wishing to use a parameter value assignment that has been designated to another organization (the "assignee") will obtain permission to use the parameter value assignment from the assignee and will conform to all requirements imposed by the assignee regarding the corresponding parameter value assignment. In this case, the organization requesting use of the assignee's parameter value assignment will also conform to all applicable requirements of the cdma2000 specifications.

A parameter value assignment that has been in proprietary use may, at the request of an assignee, be incorporated into a cdma2000 specification. At that time, 3GPP2 TSG-C may assign the parameter a new, non-proprietary value or may use the assignee's related

1 parameter value assignment. If the assignee's parameter value assignment is used, then

2 permission from the assignee for its use is no longer required.

3 When a parameter value assignment is no longer needed for proprietary use, the assignee

4 should notify the 3GPP2 Secretariat through written correspondence.

5 **2.4 Inquiries**

6 All inquiries and requests regarding this document should be addressed via e-mail to the

7 3GPP2 Secretariat at secretariat@3gpp2.org.

8 In the event e-mail communication is unavailable or deemed undesirable, printed

9 correspondence may be addressed to the 3GPP2 Secretariat as follows:

10 3GPP2 Secretariat

11 c/o Telecommunications Industry Association

12 2500 Wilson Boulevard

13 Suite 300

14 Arlington, Virginia 22201

1 **3 SERVICE OPTION NUMBER ASSIGNMENTS**

2 The cdma2000 specifications support the concept of service options on both the control and
3 on the traffic channels. Service options allow various voice and non-voice services to be
4 defined and to be specified independently within the confines of the physical layer and the
5 multiplex sub-layer interface. Each service option is identified by a unique service option
6 number to facilitate proper processing within the network and mobile stations. Service
7 option numbers may be used for standard services, as well as for proprietary (non-
8 standard) services.

9 A service option number may indicate a service option revision. For this interpretation, the
10 16-bit service option number is composed of three fields: the Proprietary Indicator field, the
11 Service Option Revision field, and the Base Service Option Number field, as shown in
12 Figure 3-1.

13

| Service Option | | |
|---|---|---|
| Proprietary Indicator | Service Option Revision | Base Service Option Number |
| 1 bit | 3 bits | 12 bits |

14 **Figure 3-1 Service Option Number Format**

15 A service option may also be used to identify a service reference identifier (SR_ID) instead of
16 a specific service. For this interpretation, eight standard service option numbers are used to
17 identify the eight possible service reference identifiers, with the low order 3 bits in each
18 service option number matching one of the service reference identifiers.

19 **3.1 Standard Service Option Number Assignments**

20 The Proprietary Indicator of standard service option numbers is set to '0'.

21 Table 3.1-1 shows the service option number assignments that have been made and
22 approved as of the date of this publication. It also identifies the service option group for
23 each service option that has been assigned to a service option group.

24

1 **Table 3.1-1. Standard Service Option Number Assignments (part 1 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 1 | 0 | Basic Variable Rate Voice Service (8 kbps) | [8] |
| 2 | None | Mobile Station Loopback (8 kbps) | [9] |
| 3 | 0 | Enhanced Variable Rate Voice Service (8 kbps) | [10] |
| 4 | 1 | Asynchronous Data Service (9.6 kbps) | [44] |
| 5 | 2 | Group 3 Facsimile (9.6 kbps) | [44] |
| 6 | 6 | Short Message Services (Rate Set 1) | [11] |
| 7 | 4 | Packet Data Service: Internet or ISO Protocol Stack (9.6 kbps) | [45] |
| 8 | 5 | Packet Data Service: CDPD Protocol Stack (9.6 kbps) | [45] |
| 9 | None | Mobile Station Loopback (13 kbps) | [9] |
| 10 | None | STU-III-Transparent Service | [13] |
| 11 | None | STU-III Non-Transparent Service | [13] |
| 12 | 1 | Asynchronous Data Service (14.4 or 9.6 kbps) | [44] |
| 13 | 2 | Group 3 Facsimile (14.4 or 9.6 kbps) | [44] |
| 14 | 6 | Short Message Services (Rate Set 2) | [11] |
| 15 | 4 | Packet Data Service: Internet or ISO Protocol Stack (14.4 kbps) | [45] |
| 16 | 5 | Packet Data Service: CDPD Protocol Stack (14.4 kbps) | [45] |
| 17 | 0 | High Rate Voice Service (13 kbps) | [16] |
| 18 | 7 | Over-the-Air Parameter Administration (Rate Set 1) | [12] |
| 19 | 7 | Over-the-Air Parameter Administration (Rate Set 2) | [12] |
| 20 | 3 | Group 3 Analog Facsimile (Rate Set 1) | [46] |
| 21 | 3 | Group 3 Analog Facsimile (Rate Set 2) | [46] |
| 22 | 4 | High Speed Packet Data Service: Internet or ISO Protocol Stack (RS1 forward, RS1 reverse) | [47] |
| 23 | 4 | High Speed Packet Data Service: Internet or ISO Protocol Stack (RS1 forward, RS2 reverse) | [47] |

2

3

1 **Table 3.1-1.  Standard Service Option Number Assignments (part 2 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 24 | 4 | High Speed Packet Data Service: Internet or ISO Protocol Stack (RS2 forward, RS1 reverse) | [47] |
| 25 | 4 | High Speed Packet Data Service: Internet or ISO Protocol Stack (RS2 forward, RS2 reverse) | [47] |
| 26 | 5 | High Speed Packet Data Service: CDPD Protocol Stack (RS1 forward, RS1 reverse) | [47] |
| 27 | 5 | High Speed Packet Data Service: CDPD Protocol Stack (RS1 forward, RS2 reverse) | [47] |
| 28 | 5 | High Speed Packet Data Service: CDPD Protocol Stack (RS2 forward, RS1 reverse) | [47] |
| 29 | 5 | High Speed Packet Data Service: CDPD Protocol Stack (RS2 forward, RS2 reverse) | [47] |
| 30 | None | Supplemental Channel Loopback Test for Rate Set 1 | [9] |
| 31 | None | Supplemental Channel Loopback Test for Rate Set 2 | [9] |
| 32 | None | Test Data Service Option (TDSO) | [18] |
| 33 | 4 | cdma2000 High Speed Packet Data Service, Internet or ISO Protocol Stack | [49] |
| 34 | 5 | cdma2000 High Speed Packet Data Service, CDPD Protocol Stack | [48] |
| 35 | 8 | Location Services, Rate Set 1 (9.6 kbps) | [17] |
| 36 | 8 | Location Services, Rate Set 2 (14.4 kbps) | [17] |
| 37 | None | ISDN Interworking Service (64 kbps) | [15] |
| 38 | None | GSM Voice | [7] |
| 39 | None | GSM Circuit Data | [7] |
| 40 | None | GSM Packet Data | [7] |
| 41 | None | GSM Short Message Service | [7] |
| 42 – 53 | None | Reserved for MC-MAP standard service options | [7] |
| 54 | None | Markov Service Option (MSO) | [19] |
| 55 | None | Loopback Service Option (LSO) | [9] |
| 56 | 0 | Selectable Mode Vocoder | [36] |

2

1 **Table 3.1-1.  Standard Service Option Number Assignments (part 3 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 57 | None | 32 kbps Circuit Video Conferencing | [38] |
| 58 | None | 64 kbps Circuit Video Conferencing | [38] |
| 59 | None | HRPD Packet Data Service, which when used in paging over the 1x air interface, a page response is not required | [39][56][60][67] |
| 60 | None | Link Layer Assisted Robust Header Compression (LLA ROHC) – Header Removal | [40] |
| 61 | None | Link Layer Assisted Robust Header Compression (LLA ROHC) – Header Compression | [40] |
| 62 | 0 | Source-Controlled Variable-Rate Multimode Wideband Speech Codec (VMR-WB) Rate Set 2 | [41] |
| 63 | 0 | Source-Controlled Variable-Rate Multimode Wideband Speech Codec (VMR-WB) Rate Set 1 | [41] |
| 64[2] | None | HRPD auxiliary Packet Data Service instance | [39][56][67] |
| 65 | None | cdma2000/GPRS Inter-working | None |
| 66 | None | cdma2000 High Speed Packet Data Service, Internet or ISO Protocol Stack | [49] |
| 67[3] | None | HRPD Packet Data IP Service where Higher Layer Protocol is IP or ROHC | [39][56][67] |
| 68 | 0 | Enhanced Variable Rate Voice Service (EVRC-B) | [10] |
| 69 | None | HRPD Packet Data Service, which when used in paging over the 1x air interface, a page response is required | [39][56][60] |
| 70 | 0 | Enhanced Variable Rate Voice Service (EVRC-WB) | [10] |
| 71[4] | None | HRPD Packet Data Service for altPPP | [39][56][62] |

2

---

[2] This service option assignment made for identification defined in the Radio Access Network is not carried over the air interface.

[3] This service option assignment made for identification defined in the Radio Access Network is not carried over the air interface.

[4] This service option assignment made for identification defined in the Radio Access Network is not carried over the air interface.

1 **Table 3.1-1.  Standard Service Option Number Assignments (part 4 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 72[5] | None | HRPD auxiliary Packet Data IP Service with PDN multiplexing header | [39][56][65] [67] |
| 73[6] | 9 | Enhanced Variable Rate Voice Service (EVRC-NW with NB, optional WB capacity operating points, and DTX) | [10] |
| | | EVRC-NW without capacity operating point 0 support over the A1 interface | [77] |
| 74 | None | Flexible Markov Service Option | [19] |
| 75 | None | Enhanced Loopback Service Option | [9] |
| 76 | None | Tunneled forward link SMS based on Application Data Delivery Service (i.e. ADDS Deliver in [77]) trigger support in E-UTRAN - 1x Interworking | [68] |
| 77 | 9 | EVRC-NW2k, EVRC-NW including a 2kbps maximum mode | [10] |
| 78 | 10 | Unstructured Supplementary Service Data, Rate Set 1 (9.6 kbps) | [78][80] |
| 79 | 10 | Unstructured Supplementary Service Data, Rate Set 2 (14.4 kbps) | [78][80] |
| 80 – 4099 | None | Reserved for standard service options. | None |
| 4100 | 1 | Asynchronous Data Service, Revision 1 (9.6 or 14.4 kbps) | [44] |
| 4101 | 2 | Group 3 Facsimile, Revision 1 (9.6 or 14.4 kbps) | [44] |
| 4102 | None | Reserved for standard service option. | None |

2

[5] This service option assignment made for identification defined in the Radio Access Network is not carried over the air interface.

[6] There are two subentries for SO 73, one for the air interface [10] and the other for the Radio Access Network [77].  When used over the air interface, SO 73 indicates EVRC-NW may support COP 0.  When used within the Radio Access Network, SO 73 means EVRC-NW with NB and does not support COP 0.

**Table 3.1-1. Standard Service Option Number Assignments (part 5 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 4103 | 4 | Packet Data Service: Internet or ISO Protocol Stack, Revision 1 (9.6 or 14.4 kbps) | [45] |
| 4104 | 5 | Packet Data Service: CDPD Protocol Stack, Revision 1 (9.6 or 14.4 kbps) | [45] |
| 4105 – 4168 | None | Reserved for standard service options. | None |
| 4169[7] | 9 | EVRC-NW with capacity operating point 0 support over the A1 interface | [77] |
| 4170 – 22,783 | None | Reserved for standard service options. | None |
| 22,784 – 23,039 | None | HRPD Packet Data Service, which, when used in a 1x page, indicates that a page response is not required.<br>The service option number represents x'59zz' where zz is the 8-bit value of an assigned HRPD ReservationLabel. | [39][56][60] |
| 23,040 – 26,879 | None | Reserved for standard service options | None |
| 26,880 – 27,135 | None | HRPD Packet Data Service, which, when used in a 1x page, indicates that a page response is required.<br>The service option number represents x'69zz' where zz is the 8-bit value of an assigned HRPD ReservationLabel. | [39][56][60] |
| 27,136 – 32,759 | None | Reserved for standard service options | None |
| 32, 760 | None | Identifies service reference identifier 0 | None |
| 32,761 | None | Identifies service reference identifier 1 | None |
| 32,762 | None | Identifies service reference identifier 2 | None |
| 32,763 | None | Identifies service reference identifier 3 | None |
| 32,764 | None | Identifies service reference identifier 4 | None |
| 32,765 | None | Identifies service reference identifier 5 | None |

[7] This service option assignment is for the Radio Access Network only and is not carried over the air interface.

1 **Table 3.1-1. Standard Service Option Number Assignments (part 6 of 6)**

| Service Option Number (Decimal) | Service Option Group (Decimal) | Designated Use/Type of Service | Associated Standard |
|---|---|---|---|
| 32,766 | None | Identifies service reference identifier 6 | None |
| 32,767 | None | Identifies service reference identifier 7 | None |

2

1 **3.2 Proprietary Service Option Number Assignments**

2 The Proprietary Indicator of proprietary service option numbers is set to '1'.

3 Table 3.2-1 shows the proprietary service option number assignments made and approved

4 as of the date of this publication.  An 'x' represents either a zero or a one.

5

1 **Table 3.2-1.  Proprietary Service Option Number Assignments**

| Organization | Service Option Number (Decimal) | Service Option Number (Binary) |
|---|---|---|
| QUALCOMM Incorporated | 32,768 – 32,771 | 1000 0000 0000 00xx |
| OKI telecom | 32,772 – 32,775 | 1000 0000 0000 01xx |
| Lucent Technologies | 32,776 – 32,779 | 1000 0000 0000 10xx |
| Nokia | 32,780 – 32,783 | 1000 0000 0000 11xx |
| NORTEL NETWORKS | 32,784 – 32,787 | 1000 0000 0001 00xx |
| Sony Electronics Inc. | 32,788 – 32,791 | 1000 0000 0001 01xx |
| Motorola | 32,792 – 32,795 | 1000 0000 0001 10xx |
| QUALCOMM Incorporated | 32,796 – 32,799 | 1000 0000 0001 11xx |
| QUALCOMM Incorporated | 32,800 – 32,803 | 1000 0000 0010 00xx |
| QUALCOMM Incorporated | 32,804 – 32,807 | 1000 0000 0010 01xx |
| QUALCOMM Incorporated | 32,808 – 32,811 | 1000 0000 0010 10xx |
| Lucent Technologies | 32,812 – 32,815 | 1000 0000 0010 11xx |
| Denso International | 32,816 – 32,819 | 1000 0000 0011 00xx |
| Motorola | 32,820 – 32,823 | 1000 0000 0011 01xx |
| Denso International | 32,824 – 32,827 | 1000 0000 0011 10xx |
| Denso International | 32,828 – 32,831 | 1000 0000 0011 11xx |
| Denso International | 32,832 – 32,835 | 1000 0000 0100 00xx |
| NEC America | 32,836 – 32,839 | 1000 0000 0100 01xx |
| Samsung Electronics | 32,840 – 32,843 | 1000 0000 0100 10xx |
| Texas Instruments Incorporated | 32,844 – 32,847 | 1000 0000 0100 11xx |
| Toshiba Corporation | 32,848 – 32,851 | 1000 0000 0101 00xx |
| LG Electronics Inc. | 32,852 – 32,855 | 1000 0000 0101 01xx |
| VIA Telecom Inc. | 32,856 – 32,859 | 1000 0000 0101 10xx |
| Verizon Wireless | 32,860 – 32,863 | 1000 0000 0101 11xx |
| Huawei Technologies | 32,864 – 32,867 | 1000 0000 0110 00xx |
| QUALCOMM Incorporated | 32,868 – 32,871 | 1000 0000 0110 01xx |
| ZTE Corporation | 32,872 – 32,875 | 1000 0000 0110 10xx |
| China Telecom | 32,876  –32,879 | 1000 0000 0110 11xx |
| Reserved | 32,880 – 65,535 | 1000 0000 0111 0000 through 1111 1111 1111 1111 |

2

1 **3.3 Service Option Group Assignments**

2 A service option group is a bit map that identifies a logically related set of service options.
3 The bit map may contain 4, 8, or 12 bits, depending upon the number of logically related
4 service options in the group. Each bit in the bit map corresponds to one service option.

5 A mobile station or a base station indicates that it supports a service option in the group by
6 setting the bit corresponding to the service option to '1'. A mobile station or base station
7 can also indicate that it does not support a service option by setting the bit to '0'. All
8 reserved bits are set to '0'.

9 Table 3.3-1 shows the service option group numbers that have been made and approved as
10 of the date of this publication. The most significant bit of the service option group map is
11 on the left, and the least significant bit is on the right.

12

1          **Table 3.3-1.  Service Option Group Assignments (part 1 of 2)**

| Service Option Group (Decimal) | Type of Services in the Group | Service Option Group Bit Map and Associated Service Option Assignments | |
|---|---|---|---|
| 0 | Voice Services | - - - - - - - x | SO 1 |
| | | - - - - - - x - | SO 3 |
| | | - - - - - x - - | SO 17 |
| | | - - - - x - - - | SO 56 |
| | | - - - x - - - - | SO 68 |
| | | - - x - - - - - | SO 62 |
| | | - x - - - - - - | SO 63 |
| | | x - - - - - - - | SO 70 |
| 1 | Low Speed Async Data Services | - - - x | SO 4 |
| | | - - x - | SO 12 |
| | | - x - - | SO 4100 |
| | | x - - - | Reserved |
| 2 | Digital Facsimile Services | - - - x | SO 5 |
| | | - - x - | SO 13 |
| | | - x - - | SO 4101 |
| | | x - - - | Reserved |
| 3 | Analog Facsimile Services | - - - x | SO 20 |
| | | - - x - | SO 21 |
| | | - x - - | Reserved |
| | | x - - - | Reserved |
| 4 | Non-CDPD Packet Data Services | - - - - - - - x | SO 7 |
| | | - - - - - - x - | SO 15 |
| | | - - - - - x - - | SO 4103 |
| | | - - - - x - - - | SO 22 |
| | | - - - x - - - - | SO 23 |
| | | - - x - - - - - | SO 24 |
| | | - x - - - - - - | SO 25 |
| | | x - - - - - - - | SO 33/SO 66 |
| 5 | CDPD Packet Data Services | - - - - - - - x | SO 8 |
| | | - - - - - - x - | SO 16 |
| | | - - - - - x - - | SO 4104 |
| | | - - - - x - - - | SO 26 |
| | | - - - x - - - - | SO 27 |
| | | - - x - - - - - | SO 28 |
| | | - x - - - - - - | SO 29 |
| | | x - - - - - - - | SO 34 |

2

1

2 **Table 3.3-1.  Service Option Group Assignments (part 2 of 2)**

| Service Option Group (Decimal) | Type of Services in the Group | Service Option Group Bit Map and Associated Service Option Assignments | |
|---|---|---|---|
| 6 | SMS Services | - - - x | SO 6 |
| | | - - x - | SO 14 |
| | | - x - - | Reserved |
| | | x - - - | Reserved |
| 7 | OTAPA Services | - - - x | SO 18 |
| | | - - x - | SO 19 |
| | | - x - - | Reserved |
| | | x - - - | Reserved |
| 8 | Location Services | - - - x | SO 35 |
| | | - - x - | SO 36 |
| | | - x - - | Reserved |
| | | x - - - | Reserved |
| 9 | Enhanced Voice Services | - - - x | S0 73[8] |
| | | - - x - | SO 4169[9] |
| | | - x - - | S0 77 |
| | | x - - - | Reserved |
| 10 | Unstructured Supplementary Service Data | - - - x | S0 78 |
| | | - - x - | SO 79 |
| | | - x - - | Reserved |
| | | x - - - | Reserved |
| 10 – 30 | Reserved | | |
| 31 | Reserved for future extension | | |

3

4

5

---

[8] SO 73 is used over the air interface to indicate EVRC-NW with NB, optional WB capacity operating points, and DTX [10], and within the A1 interface to indicate EVRC-NW without capacity operating point 0 support [77].

[9] SO 4169 used within the A1 interface to indicate EVRC-NW with capacity operating point 0 support [77].

1  **4 *DATA BURST MESSAGE* BURST TYPE ASSIGNMENTS**

2  The cdma2000 specifications support the use of *Data Burst Messages* on both the control
3  channel and the traffic channel. *Data Burst Messages* can be sent by mobile stations over
4  either the Reverse Control Channel or the Reverse Dedicated Channel, and can be sent by
5  base stations over either the Forward Control Channel or the Forward Dedicated Channel.
6  The burst types (values of the BURST_TYPE field) for mobile-station-originated and base-
7  station-originated *Data Burst Messages* are defined in this section.

8  With the addition of other service options (e.g., asynchronous data and Group-3 fax) to the
9  basic voice service, the use of the *Data Burst Message* is being defined to support specific
10 service options. *Data Burst Messages* may be used for standard services, as well as for
11 proprietary (non-standard) services. Thus, the need arises to distinguish the data burst
12 types associated with individual service options, especially when multiple service options
13 are allowed to be active simultaneously.

14 **4.1 Standard *Data Burst Message* Burst Type Assignments**

15 Table 4.1-1 shows the standard burst type assignments made and approved as of the date
16 of this publication.

17  **Table 4.1-1.  Standard *Data Burst Message* Burst Type Assignments**

| Burst Type (Binary) | Designated Use/Type of Service | Associated Standards |
|---|---|---|
| 000000 | Unknown burst type | [2] |
| 000001 | Asynchronous Data Services | [45] |
| 000010 | Group-3 Facsimile | [45] |
| 000011 | Short Message Services | [11] |
| 000100 | Over-the-Air Service Provisioning | [12] |
| 000101 | Position Determination Services | [17] |
| 000110 | Short Data Bursts | [49] |
| 000111 | HRPD Packet Data Service Notification | None |
| 001000 | Broadcast Multicast Service | [55] |
| 001001 | Unstructured Supplementary Service Data | [78] |
| 001010 – 111101 | Reserved | Not applicable |
| 111110 | Extended Burst Type – International | See Below |
| 111111 | Extended Burst Type | See Below |

18

19

1 Burst type '111110' indicates that an "Extended Burst Type – International" is contained in
2 the first two octets of the CHARi field of the *Data Burst Message*.  The first ten bits of
3 "Extended Burst Type – International" contain a binary mapping of the Mobile Country
4 Code (MCC) associated with the national standards organization administering the use of
5 the remaining octets of the message.  Encoding of the MCC is specified in 2.3.1.3 of [5].
6 The remaining six bits of the "Extended Burst Type – International" specifies the country-
7 specific burst type.

8 Burst type '111111' indicates that an extended burst type is contained in the first two
9 octets of the CHARi field of the *Data Burst Message*.  Table 4.1-2 shows the standard
10 extended burst type assignments (assigned values of the first two octets of the CHARi field)
11 made and approved as of the date of this publication.

12 **Table 4.1-2.  Standard *Data Burst Message* Extended Burst Type Assignments**

| Extended Burst Type (Binary) | Designated Use/Type of Service | Associated Standards |
|---|---|---|
| 0000 0000 0000 0000 – 0111 1111 1111 1111 | Reserved for standard data burst types. | [5] |
| 1000 0000 0000 0000 – 1111 1111 1111 1111 | Reserved for proprietary data burst types. | [5] |

13

14 **4.2 Proprietary *Data Burst Message* Burst Type Assignments**

15 All proprietary *Data Burst Message* burst types are assigned as extended burst types.  Table
16 4.2-1 shows the proprietary extended burst type assignments that were made and approved
17 as of the date of this publication.  An 'x' represents either a zero or a one.

18 **Table 4.2-1.  Proprietary *Data Burst Message* Extended Burst Type Assignments**

| Organization | Extended Burst Type (Binary) |
|---|---|
| Motorola | 1000 0000 0000 xxxx |
| QUALCOMM Incorporated | 1000 0000 0001 00xx |
| Nortel Networks | 1000 0000 0001 01xx |
| Verizon Wireless | 1000 0000 0001 10xx |
| Huawei Technologies | 1000 0000 0001 11xx |
| ZTE Corporation | 1000 0000 0010 00xx |
| Reserved | 1000 0000 0010 0100 – 1111 1111 1111 1111 |

19

1 **5 MULTIPLEX OPTION NUMBER ASSIGNMENTS**

2 The cdma2000 specifications allow the multiplex sublayer to be tailored so as to provide
3 special capabilities.  The multiplex sublayer is one of the conceptual layers of the system,
4 which multiplexes and demultiplexes traffic from different service option instances and
5 signaling traffic.  Each multiplex option, designated by a multiplex option number, defines
6 the specific frame format for a particular set of capabilities.

7 **5.1 Standard Multiplex Option Number Assignments**

8 Refer to [3] for Multiplex Option Number Assignments.

9 **5.2 Proprietary Multiplex Option Number Assignments**

10 No proprietary multiplex option numbers have been assigned as of the date of release of
11 this document.
12

1

2    This page intentionally left blank.

1 **6 BAND CLASS VALUE ASSIGNMENTS**

2 The cdma2000 specifications use values of the band class parameter to designate CDMA
3 frequency bands.

4 **6.1 Band Class Value Assignments**

5 The band class value assignments (assigned values of the BAND_CLASS field) are defined
6 in [50]. The standard, [50], is subject to revision, and parties to agreements based upon
7 this document are encouraged to investigate the possibility of applying the most recent
8 editions of the standard for the latest band class value assignments.
9

1

2    This page intentionally left blank.

1 **7 MANUFACTURER-SPECIFIC OTASP ASSIGNMENTS**

2 [12] reserves specific ranges of values for manufacturer-specific Over-the-Air Service
3 Provisioning (OTASP) assignments. Values in specified ranges are reserved as shown in
4 Table 7-1. Specific assignments are given in sections 7.1 through 7.9.

5 **Table 7-1. Manufacturer-specific OTASP Assignments**

| OTASP Value | Reserved Manufacturer-Specific Range | Reference in [12] |
|---|---|---|
| Reverse Link Message Types (OTASP_MSG_TYPE) | 10000000 <br> 11000000 – 11111110 | 3.5 |
| Result Codes (RESULT_CODE) | 10000000 – 11111110 | 3.5.1.2 |
| Feature Identifier (FEATURE_ID) | 11000000 – 11111110 | 3.5.1.7 |
| Reverse Link NAM Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 3.5.2 |
| Reverse Link SSPR Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 3.5.3 |
| Reverse Link PUZL Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 3.5.6 |
| Reverse Link 3GPD Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 3.5.8 |
| Forward Link Message Types (OTASP_MSG_TYPE) | 10000000 <br> 11000000 – 11111110 | 4.5 |
| Forward Link NAM Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 4.5.2 |
| Forward Link SSPR Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 4.5.3 |
| Forward Link Validation Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 4.5.4 |
| Forward Link PUZL Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 4.5.6 |
| Forward Link 3GPD Parameter Block Types (BLOCK_ID) | 10000000 – 11111110 | 4.5.7 |
| System Tag Parameter Block Types (BLOCK_ID) | 10000000 - 11111110 | 4.5.9 |

1 **7.1 Reverse Link Message Type Assignments**

2 Table 7.1-1 shows the proprietary assignments of Reverse Link Message Type. These
3 assignments were made and approved as of the date of this publication. All block type
4 values in the table are binary. An 'x' represents either a zero or a one.

5 **Table 7.1-1. Proprietary Assignments of Reverse Link Message Type**

| Organization | Block Type (Binary) |
|---|---|
| Verizon Wireless | 1000 0000 |
| Reserved | 1100 0000 - 1111 1110 |

6

7 **7.2 Result Code Assignments**

8 Table 7.2-1 shows the proprietary assignments of Result Code. These assignments were
9 made and approved as of the date of this publication. All block type values in the table are
10 binary. An 'x' represents either a zero or a one.

11 **Table 7.2-1. Proprietary Assignments of Result Code**

| Organization | Block Type (Binary) |
|---|---|
| QUALCOMM Incorporated | 1000 00xx |
| Verizon Wireless | 1000 01xx |
| Reserved | 1000 1000 - 1111 1110 |

12

13 **7.3 Feature Identifier Assignments**

14 Table 7.3-1 shows the proprietary assignments of Feature Identifier. These assignments
15 were made and approved as of the date of this publication. All block type values in the
16 table are binary. An 'x' represents either a zero or a one.

17

18 **Table 7.3-1. Proprietary Assignments of Feature Identifier**

| Organization | Block Type (Binary) |
|---|---|
| QUALCOMM Incorporated | 1100 00xx |
| Verizon Wireless | 1100 010x |
| Reserved | 1100 0110 - 1111 1110 |

19

1 **7.4 Reverse Link NAM Parameter Block Type Assignments**

2 Table 7.4-1 shows the proprietary assignments of Reverse Link NAM Parameter Block Type.
3 These assignments were made and approved as of the date of this publication.  All block
4 type values in the table are binary.  An 'x' represents either a zero or a one.

5

6 **Table 7.4-1.  Proprietary Assignments of Reverse Link NAM Parameter Block Types**

| Organization | Block Type (Binary) |
|---|---|
| QUALCOMM Incorporated | 1000 00xx |
| Reserved | 1000 0100 - 1111 1110 |

7

8 **7.5 Reverse Link SSPR Parameter Block Type Assignments**

9 No manufacturer-specific Reverse Link SSPR Parameter Block Type (BLOCK_ID) values
10 have been assigned as of the date of release of this document.

11 **7.6 Reverse Link PUZL Parameter Block Type Assignments**

12 No manufacturer-specific Reverse Link PUZL Parameter Block Type (BLOCK_ID) values
13 have been assigned as of the date of release of this document.

14 **7.7 Reverse Link 3GPD Parameter Block Type Assignments**

15 No manufacturer-specific Reverse Link 3GPD Parameter Block Type (BLOCK_ID) values
16 have been assigned as of the date of release of this document.

17 **7.8 Forward Link Message Type Assignments**

18 Table 7.8-1 shows the proprietary assignments of Forward Link Message Type.  These
19 assignments were made and approved as of the date of this publication.  All block type
20 values in the table are binary.  An 'x' represents either a zero or a one.

21

22 **Table 7.8-1.  Proprietary Assignments of Forward Link Message Type**

| Organization | Block Type (Binary) |
|---|---|
| Verizon Wireless | 1000 0000 |
| Reserved | 1100 0000 - 1111 1110 |

23

**7.9 Forward Link NAM Parameter Block Type Assignments**

Table 7.7-1 shows the proprietary assignments of Forward Link NAM Parameter Block Type. These assignments were made and approved as of the date of this publication. All block type values in the table are binary. An 'x' represents either a zero or a one.

**Table 7.9-1. Proprietary Assignments of Forward Link NAM Parameter Block Types**

| Organization | Block Type (Binary) |
|---|---|
| QUALCOMM Incorporated | 1000 00xx |
| Reserved | 1000 0100 **-** 1111 1110 |

**7.10 Forward Link SSPR Parameter Block Type Assignments**

No manufacturer-specific Forward Link SSPR Parameter Block Type (BLOCK_ID) values have been assigned as of the date of release of this document.

**7.11 Forward Link Validation Parameter Block Type Assignments**

No manufacturer-specific Forward Link Validation Parameter Block Type (BLOCK_ID) values have been assigned as of the date of release of this document.

**7.12 Forward Link PUZL Parameter Block Type Assignments**

No manufacturer-specific Forward Link PUZL Parameter Block Type (BLOCK_ID) values have been assigned as of the date of release of this document.

**7.13 Forward Link 3GPD Parameter Block Type Assignments**

No manufacturer-specific Forward Link 3GPD Parameter Block Type (BLOCK_ID) values have been assigned as of the date of release of this document.

**7.14 System Tag Parameter Block Type Assignments**

No manufacturer-specific System Tag Parameter Block Type (BLOCK_ID) values have been assigned as of the date of release of this document.

1  **8 ROAMING DISPLAY INDICATOR ASSIGNMENTS**

2  The cdma2000 specifications support the concept of roaming display indicator on the
3  control channels.   Roaming display indicator allows the network to indicate to the
4  subscriber the roaming condition of the mobile station.  Each roaming display indicator is
5  identified by a unique roaming display number to facilitate proper processing within the
6  network and mobile stations.  Roaming display numbers may be used for standard services
7  as well as for non-standard services.

8  **8.1 Standard Enhanced Roaming Indicator Number Assignments**

9  Table 8.1-1 shows the standard enhanced roaming indicator number assignments made
10  and approved as of the date of this publication.

11  **Table 8.1-1.  Enhanced Roaming Indicator Number Assignments**

| Roaming Display Number (Binary) | Roaming Display Indication |
|---|---|
| 00000000 | Roaming Indicator On |
| 00000001 | Roaming Indicator Off |
| 00000010 | Roaming Indicator Flashing |
| 00000011 | Out of Neighborhood |
| 00000100 | Out of Building |
| 00000101 | Roaming - Preferred System |
| 00000110 | Roaming - Available System |
| 00000111 | Roaming - Alliance Partner |
| 00001000 | Roaming - Premium Partner |
| 00001001 | Roaming - Full Service Functionality |
| 00001010 | Roaming - Partial Service Functionality |
| 00001011 | Roaming Banner On |
| 00001100 | Roaming Banner Off |
| 00001101 through 00111111 | Reserved for Standard Enhanced Roaming Indicator Numbers |
| 01000000 through 01111111 | Reserved for Non-Standard Enhanced Roaming Indicator Numbers |
| 10000000 through 11111111 | Reserved |

1 **8.2 Non-Standard Enhanced Roaming Indicator Number Assignments**

2 No manufacturer-specific Non-Standard Enhanced Roaming Indicator values have been
3 assigned as of the date of release of this document.

4

1 **9 SHORT MESSAGE SERVICES ASSIGNMENTS**

2 [11] defines the protocol and procedures associated with exchange of Short Message
3 Services (SMS). The protocol defined in [11] allows use of various data encoding schemes,
4 various language indicators and various Service Categories for the Broadcast Messaging
5 Service.

1   **9.1 Data Field Encoding Assignments**

2   Table 9.1-1 shows the data encoding scheme assignments that were made and approved as
3   of the date of this publication.

4               **Table 9.1-1.  Data Field Encoding Assignments**

| CHARi Encoding Type | MSG_ENCODING Field[v] | Length of CHARi, bits |
|---|---|---|
| Octet, unspecified | 00000 | 8 |
| Extended Protocol Message [21] | 00001 | (see iv) |
| 7-bit ASCII [25] | 00010 | 7 |
| IA5 (Table 11 of [31]) | 00011 | 7 |
| UNICODE [29][i] | 00100 | 16 |
| Shift-JIS [30][ii] | 00101 | 8 or 16 |
| Korean [33][iii] | 00110 | 8 or 16 |
| Latin/Hebrew [28] | 00111 | 8 |
| Latin [27] | 01000 | 8 |
| GSM 7-bit default alphabet [37] | 01001 | 7 |
| GSM Data-Coding-Scheme [37][vi] | 01010 | (see vi) |
| All other values are reserved. | | |

[i] UNICODE is a fixed 2-byte encoding method intended as an international character encoding scheme. It encodes most of the national character sets of most countries, including support of local diacritical marks, and it unifies character sets across national boundaries. It is supported by many computer and telecommunication systems worldwide. UNICODE is a trademark of Unicode, Inc.

[ii] Shift-JIS is a variable 1-2 byte non-modal encoding method widely implemented in Japan on a variety of computer platforms and pagers. It is used for the encoding of Kanji, Kana and Latin character sets defined in [30].

[iii] [33] is a variable 1-2 byte encoding method widely used in Korea.

[iv] Length is determined by the Message Type value.  See Section 3.7.1 and Appendix B of [21].

[v] [20] uses an 8-bit field to carry short message data encoding information, so conversion to a 5-bit field is required for transmission over the air interface.

[vi] The MSG_TYPE field indicates the data coding scheme of the CHARi fields when GSM Data-Coding-Scheme is used. See Section 4 of [37].

5

1    **9.2 Language Indicator Value Assignments**

2    Table 9.2-1 shows the data encoding scheme assignments that were made and approved as
3    of the date of this publication.

4            **Table 9.2-1. Language Indicator Value Assignments (Part 1 of 2)**

| Language Indicator Value (Binary) | Language |
|---|---|
| 00000000 | Unknown or unspecified |
| 00000001 | English |
| 00000010 | French |
| 00000011 | Spanish |
| 00000100 | Japanese |
| 00000101 | Korean |
| 00000110 | Chinese |
| 00000111 | Hebrew |
| '00001000' | Portuguese |
| '00001001' | Hindi |
| '00001010' | Turkish |
| '00001011' | Hungarian |
| '00001100' | Polish |
| '00001101' | Czech |
| '00001110' | Arabic |
| '00001111' | Russian |
| '00010000' | Icelandic |
| '00010001' | German |
| '00010010' | Italian |
| '00010011' | Dutch |
| '00010100' | Swedish |
| '00010101' | Danish |
| '00010111' | Finnish |
| '00011000' | Norwegian |
| '00011001' | Greek |
| '00011010' | Bengali |
| '00011011' | Gujarati |

1    **Table 9.2-1. Language Indicator Value Assignments (Part 2 of 2)**

| Language Indicator Value (Binary) | Language |
|---|---|
| '00011100' | Kannada |
| '00011101' | Malayalam |
| '00011110' | Oriya |
| '00011111' | Punjabi |
| '00100000' | Tamil |
| '00100001' | Telugu |
| '00100010' | Urdu |
| '00100011' | Bahasa |
| '00100100' | Thai |
| '00100101' | Tagalog |
| '00100110' | Swahili |
| '00100111' | Afrikaans |
| '00101000' | Hausa |
| '00101001' | Vietnamese |
| All other values are reserved. | |
| NOTE: Table 160 of [20] specifies PreferredLanguageIndicator value assignments for intersystem operation which may be different from the values defined above. | |

2

3

1 **9.3 Service Category Assignments**

2 Service Categories for the Broadcast Messaging Service may be assigned for standard
3 Service Categories and for proprietary Service Categories.

4 9.3.1 Standard Service Category Assignments

5 Table 9.3.1-1 shows the standard Service Category assignments made and approved as of
6 the date of this publication.

7

8 **Table 9.3.1-1.  Standard Service Categories (Part 1 of 3)**

| Category | Description |
|---|---|
| 0x0000 | Unknown or unspecified |
| 0x0001 | Emergency Broadcasts |
| 0x0002 | Administrative |
| 0x0003 | Maintenance |
| 0x0004 | General News – Local |
| 0x0005 | General News – Regional |
| 0x0006 | General News – National |
| 0x0007 | General News – International |
| 0x0008 | Business/Financial News – Local |
| 0x0009 | Business/Financial News – Regional |
| 0x000A | Business/Financial News – National |
| 0x000B | Business/Financial News – International |
| 0x000C | Sports News – Local |
| 0x000D | Sports News – Regional |
| 0x000E | Sports News – National |
| 0x000F | Sports News – International |
| 0x0010 | Entertainment News – Local |
| 0x0011 | Entertainment News – Regional |
| 0x0012 | Entertainment News – National |
| 0x0013 | Entertainment News – International |
| 0x0014 | Local Weather |
| 0x0015 | Area Traffic Reports |

9

1          **Table 9.3.1-1.  Standard Service Categories (Part 2 of 3)**

| Category | Description |
|---|---|
| 0x0016 | Local Airport Flight Schedules |
| 0x0017 | Restaurants |
| 0x0018 | Lodgings |
| 0x0019 | Retail Directory |
| 0x001A | Advertisements |
| 0x001B | Stock Quotes |
| 0x001C | Employment Opportunities |
| 0x001D | Medical/Health/Hospitals |
| 0x001E | Technology News |
| 0x001F | Multi-category |
| 0x0020 | Card Application Toolkit Protocol Teleservice (CATPT) |
| 0x0021 – 0x003F | Proprietary Service Category Assignments (see 9.3.2) |
| 0x0040 | Enhanced Unknown or unspecified |
| 0x0041 | Enhanced Emergency Broadcasts |
| 0x0042 | Enhanced Administrative |
| 0x0043 | Enhanced Maintenance |
| 0x0044 | Enhanced General News – Local |
| 0x0045 | Enhanced General News – Regional |
| 0x0046 | Enhanced General News – National |
| 0x0047 | Enhanced General News – International |
| 0x0048 | Enhanced Business/Financial News – Local |
| 0x0049 | Enhanced Business/Financial News – Regional |
| 0x004A | Enhanced Business/Financial News – National |
| 0x004B | Enhanced Business/Financial News – International |
| 0x004C | Enhanced Sports News – Local |
| 0x004D | Enhanced Sports News – Regional |
| 0x004E | Enhanced Sports News – National |
| 0x004F | Enhanced Sports News – International |
| 0x0050 | Enhanced Entertainment News – Local |
| 0x0051 | Enhanced Entertainment News – Regional |
| 0x0052 | Enhanced Entertainment News – National |
| 0x0053 | Enhanced Entertainment News – International |
| 0x0054 | Enhanced Local Weather |

1              **Table 9.3.1-1.  Standard Service Categories (Part 3 of 3)**

| Category | Description |
|---|---|
| 0x0055 | Enhanced Area Traffic Reports |
| 0x0056 | Enhanced Local Airport Flight Schedules |
| 0x0057 | Enhanced Restaurants |
| 0x0058 | Enhanced Lodgings |
| 0x0059 | Enhanced Retail Directory |
| 0x005A | Enhanced Advertisements |
| 0x005B | Enhanced Stock Quotes |
| 0x005C | Enhanced Employment Opportunities |
| 0x005D | Enhanced Medical/Health/Hospitals |
| 0x005E | Enhanced Technology News |
| 0x005F | Enhanced Multi-category |
| 0x0060 | Enhanced Card Application Toolkit Protocol Teleservice (CATPT) |
| 0x0061 | Enhanced Broadcast Machine to Machine Triggering |
| 0x0061 0x0062 – 0x0FFF | Reserved for standard service categories |
| 0x1000 – 0x10FF | Commercial Mobile Alert Service (see 9.3.3) |
| All other values up to 0x8000 | Reserved for standard service categories |
| 0x8001 – 0x803F | Proprietary Service Category Assignments (see 9.3.2) |
| 0x8040 – 0xC0000 | Reserved for standard service categories |
| 0xC001 – 0xC03F | Proprietary Service Category Assignments (see 9.3.2) |
| 0xC040 – 0xFFFF | Reserved for standard service categories |
| NOTE: The service category starting with the wording "Enhanced" uses EMS as defined in section 9.2.3.24 of [81]. | |

2

1  9.3.2 Proprietary Service Category Assignments

2  Table 9.3.2-1 shows the proprietary Service Category assignments made and approved as of
3  the date of this publication.

4  **Table 9.3.2-1.  Proprietary Service Category Assignments**

| Organization | Category | Category (Binary) |
|---|---|---|
| KDDI Corporation | 0x0021 – 0x003F | 0000 0000 0010 0001 through 0000 0000 0011 1111 |
| KDDI Corporation | 0x8001 – 0x803F | 1000 0000 0000 0001 through 1000 0000 0011 1111 |
| Reserved | 0x8040 – 0xC0000 | 1000 0000 0100 0000 through 1100 0000 0000 0000 |
| KDDI Corporation | 0xC001 – 0xC03F | 1100 0000 0000 0001 through 1100 0000 0011 1111 |
| Reserved | 0xC040 – 0xFFFF | 1100 0000 0100 0000 through 1111 1111 1111 1111 |

5

1 9.3.3 Commercial Mobile Alert Service (CMAS)

2 Table 9.3.3-1 shows the standard CMAS Broadcast Service Category assignments made
3 and approved as of the date of this publication.

4 **Table 9.3.3-1.  CMAS Broadcast Service Category Assignments**

| Category | Description of CMA Class |
|---|---|
| 0x1000 | Presidential-Level Alert |
| 0x1001 | Extreme Threat to Life and Property |
| 0x1002 | Severe Threat to Life and Property |
| 0x1003 | AMBER (Child Abduction Emergency) |
| 0x1004 | CMAS Test Message |
| 0x1005 | Enhanced Presidential-Level Alert |
| 0x1006 | Enhanced Extreme Threat to Life and Property |
| 0x1007 | Enhanced Severe Threat to Life and Property |
| 0x1008 | Enhanced AMBER (Child Abduction Emergency) |
| 0x1009 | Enhanced CMAS Test Message |
| 0x100A – 0x10FF | RESERVED |
| NOTE: The service category starting with the wording "Enhanced" uses EMS as defined in section 9.2.3.24 of [81]. | |

1 **10 ANALOG FAX ASSIGNMENTS**

2 [46] defines the protocol for Analog Fax services that allow identification of the IWF
3 manufacturer in a tandem Analog Fax call.  Using this, IWFs from the same manufacturer
4 can invoke non-standardized protocols across the PSTN.  The IWF manufacturer code is
5 defined in Table 10-1.

6 **Table 10-1.  Analog Fax Inter-working Function Manufacturer Code Assignments**

| IWF_MANUF | Analog Fax IWF Manufacturer |
|---|---|
| 00000000 | Reserved |
| 00000001 | QUALCOMM Incorporated |
| 00000010 | CommWorks Corporation, A 3Com Company |
| 00000011 | NEC Corporation |
| All other values are reserved. ||

7

1

2 This page intentionally left blank.

1 **11 PROTOCOL AND APPLICATION ASSIGNMENTS**

2 **11.1 Protocol Type and Protocol Subtype Assignments**

3  [35], [42], [43], [57], [58], [59], [64], [66], [69], [70], [71] and [72] define a set of protocols

4 identified by protocol type. A specific instance of a protocol is identified by a protocol

5 subtype. Table 11.1-1 shows the protocol type and protocol subtype assignments that were

6 made and approved as of the date of this publication.

**Table 11.1-1.  Protocol Type and Protocol Subtype Assignments (part 1 of 3)**

| Protocol Type | | | Protocol Subtype | |
|---|---|---|---|---|
| **Name** | **ID** | **Length (bits)** | **Name** | **ID** |
| Physical Layer | 0x00 | 7 | Default Physical Layer | 0x0000 |
| Physical Layer | 0x00 | 7 | Subtype 1 Physical Layer | 0x0001 |
| Physical Layer | 0x00 | 7 | Subtype 2 Physical Layer | 0x0002 |
| Physical Layer | 0x00 | 7 | Subtype 3 Physical Layer | 0x0003 |
| Physical Layer | 0x00 | 7 | Subtype 4 Physical Layer | 0x0004 |
| Physical Layer | 0x00 | 7 | Subtype 5 Physical Layer | 0x0005 |
| Control Channel MAC | 0x01 | 7 | Default Control Channel MAC | 0x0000 |
| Control Channel MAC | 0x01 | 7 | Enhanced Control Channel MAC | 0x0001 |
| Access Channel MAC | 0x02 | 7 | Default Access Channel MAC | 0x0000 |
| Access Channel MAC | 0x02 | 7 | Enhanced Access Channel MAC | 0x0001 |
| Forward Traffic Channel MAC | 0x03 | 7 | Default Forward Traffic Channel MAC | 0x0000 |
| Forward Traffic Channel MAC | 0x03 | 7 | Enhanced Forward Traffic Channel MAC | 0x0001 |
| Forward Traffic Channel MAC | 0x03 | 7 | Subtype 2 Forward Traffic Channel MAC | 0x0002 |
| Forward Traffic Channel MAC | 0x03 | 7 | Subtype 3 Forward Traffic Channel MAC | 0x0003 |
| Reverse Traffic Channel MAC | 0x04 | 7 | Default Reverse Traffic Channel MAC | 0x0000 |
| Reverse Traffic Channel MAC | 0x04 | 7 | Subtype 1 Reverse Traffic Channel MAC | 0x0001 |
| Reverse Traffic Channel MAC | 0x04 | 7 | Subtype 2 Reverse Traffic Channel MAC | 0x0002 |
| Reverse Traffic Channel MAC | 0x04 | 7 | Subtype 3 Reverse Traffic Channel MAC | 0x0003 |
| Reverse Traffic Channel MAC | 0x04 | 7 | Subtype 4 Reverse Traffic Channel MAC | 0x0004 |
| Key Exchange | 0x05 | 7 | Default Key Exchange | 0x0000 |
| Key Exchange | 0x05 | 7 | DH Key Exchange | 0x0001 |
| Key Exchange | 0x05 | 7 | Generic Key Exchange | 0x0002 |
| Key Exchange | 0x05 | 7 | Multi-Key Key Exchange | 0x0003 |
| Authentication | 0x06 | 7 | Default Authentication | 0x0000 |
| Authentication | 0x06 | 7 | SHA-1 Authentication | 0x0001 |

1 **Table 11.1-1.  Protocol Type and Protocol Subtype Assignments (part 2 of 3)**

| Protocol Type | | | Protocol Subtype | |
|---|---|---|---|---|
| **Name** | **ID** | **Length (bits)** | **Name** | **ID** |
| Encryption | 0x07 | 7 | Default Encryption | 0x0000 |
| Encryption | 0x07 | 7 | AES Encryption | 0x0001 |
| Security | 0x08 | 7 | Default Security | 0x0000 |
| Security | 0x08 | 7 | Generic Security | 0x0001 |
| Security | 0x08 | 7 | Time-Counter-Based Security | 0x0002 |
| Packet Consolidation | 0x09 | 7 | Default Packet Consolidation | 0x0000 |
| Air-Link Management | 0x0a | 7 | Default Air-Link Management | 0x0000 |
| Initialization State | 0x0b | 7 | Default Initialization State | 0x0000 |
| Initialization State | 0x0b | 7 | Inter-RAT Initialization State | 0x0001 |
| Idle State | 0x0c | 7 | Default Idle State | 0x0000 |
| Idle State | 0x0c | 7 | Enhanced Idle State | 0x0001 |
| Idle State | 0x0c | 7 | Quick Idle State | 0x0002 |
| Idle State | 0x0c | 7 | Inter-RAT Idle State | 0x0003 |
| Idle State | 0x0c | 7 | Inter-RAT Quick Idle State | 0x0004 |
| Connected State | 0x0d | 7 | Default Connected State | 0x0000 |
| Route Update | 0x0e | 7 | Default Route Update | 0x0000 |
| Route Update | 0x0e | 7 | Subtype 1 Route Update | 0x0001 |
| Route Update | 0x0e | 7 | Inter-RAT Route Update | 0x0002 |
| Route Update | 0x0e | 7 | Subtype 1 based Inter-RAT Route Update | 0x0003 |
| Overhead Messages | 0x0f | 7 | Overhead Messages | 0x0000 |
| Overhead Messages | 0x0f | 7 | Inter-RAT Overhead Messages | 0x0001 |
| Session Management | 0x10 | 7 | Default Session Management | 0x0000 |
| Address Management | 0x11 | 7 | Default Address Management | 0x0000 |
| Session Configuration | 0x12 | 7 | Default Session Configuration | 0x0000 |
| Stream | 0x13 | 7 | Default Stream | 0x0000 |
| Stream 0 Application | 0x14 | 7 | Application Subtype as per 11.2 | See 11.2 |
| Stream 1 Application | 0x15 | 7 | Application Subtype as per 11.2 | See 11.2 |
| Stream 2 Application | 0x16 | 7 | Application Subtype as per 11.2 | See 11.2 |
| Stream 3 Application | 0x17 | 7 | Application Subtype as per 11.2 | See 11.2 |

1 **Table 11.1-1.  Protocol Type and Protocol Subtype Assignments (part 3 of 3)**

| Protocol Type | | | Protocol Subtype | |
|---|---|---|---|---|
| **Name** | **ID** | **Length (bits)** | **Name** | **ID** |
| Broadcast Protocol Suite | 0x18 | 7 | Default Broadcast Protocol Suite | 0x0000 |
| Broadcast Protocol Suite | 0x18 | 7 | Generic Broadcast Protocol Suite | 0x0001 |
| Virtual Stream | 0x19 | 7 | Default Virtual Stream | 0x0000 |
| Virtual Stream | 0x19 | 7 | Generic Virtual Stream | 0x0001 |
| Virtual Stream $VS^{10}$ Application | 0x1a$VS$ | 15 | Application Subtype as per 11.2 | See 11.2 |
| Multimode Capability Discovery | 0x1b | 7 | Default Multimode Capability Discovery | 0x0000 |
| Multimode Capability Discovery | 0x1b | 7 | Generic Multimode Capability Discovery | 0x0001 |
| HDP Protocol Suite | 0x1c | 7 | Default HDP Protocol Suite | 0x0000 |
| HDP Protocol Suite | 0x1c | 7 | Generic HDP Protocol Suite | 0x0001 |
| Signaling Adaptation | 0x1d | 7 | Default Signaling Adaptation | 0x0000 |
| Signaling Adaptation | 0x1d | 7 | Inter-RAT Signaling Adaptation | 0x0001 |

2

---

[10] VS is the two-digit hexadecimal virtual stream number in the range 0x01 to 0xff.

## 11.2 Application Subtype Assignments

An application subtype identifies the application that is bound to a [72] stream or virtual stream. Table 11.2-1 shows the application subtype assignments that were made and approved as of the date of this publication.

1

**Table 11.2-1. Application Subtype Assignments**

| Value | Name | Associated Standards |
|-------|------|----------------------|
| 0x0000 | Default Signaling Application | [72] |
| 0x0001 | Default Packet Application bound to the radio network. | [72] |
| 0x0002 | Default Packet Application bound to the service network. | [72] |
| 0x0003 | Test Application | [35] |
| 0x0004 | Multi-Flow Packet Application bound to the radio network | [72] |
| 0x0005 | Multi-Flow Packet Application bound to the service network | [72] |
| 0x0006 | 3G1X Circuit Services Notification Application | [59] |
| 0x0007 | Reserved | None |
| 0x0008 | Enhanced Multi-Flow Packet Application bound to the radio network | [43] |
| 0x0009 | Enhanced Multi-Flow Packet Application bound to the service network | [43] |
| 0x000A | Enhanced Test Application | [35] |
| 0x000B | Broadcast Test Application | [35] |
| 0x000C | Multi-link Multi-Flow Packet Application bound to the radio network | [43] |
| 0x000D | Multi-link Multi-Flow Packet Application bound to the service network | [43] |
| 0x000E | Multicarrier Test Application | [35] |
| 0x000F | AALS Enhanced Multi-Flow Packet Application bound to the service network | [79] |
| 0x0010 | AALS Multi-Link Multi-Flow Packet Application bound to the service network | [79] |
| 0xFFFC | Alternate Multi-link Multi-Flow Packet Application for eHRPD | [64] |
| 0xFFFD | Alternate Multi-Flow Packet Application for eHRPD | [64] |
| 0xFFFE | Alternate Enhanced Multi-Flow Packet Application for eHRPD | [64] |
| 0xFFFF | Stream not used | None |
| All other values are reserved. | | |

## 11.3 Higher Layer Protocol Identifier Value Assignments

The Flow*NN*HigherLayerProtocolFwd attribute identifies the higher layer protocol that is served by [72] forward link RLP flow *NN*. The Flow*NN*HigherLayerProtocolRev attribute identifies the higher layer protocol that is served by [72] reverse link RLP flow *NN*. The ProtocolIdentifier field of the SupportedHigherLayerProtocols attribute in [72] identifies the higher layer protocols that are supported by the access terminal and the access network. The ATSupportedFlowProtocolParameters*PP* attribute in [43] identifies the higher layer protocols that are supported by the access terminal as Flow protocols. The ATSupportedRouteProtocolParameters*PP* attribute in [43] identifies the Route protocols that are supported by the access terminal as Route protocols. The ProtocolID field of the Flow*NN*FlowProtocolParametersFwd attribute in [43] identifies the Flow Protocol served by a forward Link Flow. The ProtocolID field of the Flow*NN*FlowProtocolParametersRev attribute in [43] identifies the Flow Protocol served by a reverse Link Flow. The ProtocolID field of the Flow*NN*RouteProtocolParametersFwd attribute in [43] identifies the Route Protocol served by a forward Link Flow. The ProtocolID field of the Flow*NN*RouteProtocolParametersRev attribute in [43] identifies the Route Protocol served by a reverse Link Flow. Table 11.3-1 shows the value assignments that were made and approved as of the date of this publication.

1

**Table 11.3-1. Value Assignments for Higher Layer Protocol Identifier**

| Value | Name when the field refers to a higher layer protocol in Multi-Flow Packet Application in [72] | Name when the field refers to a Flow Protocol in [43] | Name when the field refers to a Route Protocol in [43] |
|---|---|---|---|
| 0x00 | NULL | NULL | NULL |
| 0x01 | Octet-based HDLC-like framing (as defined in [52]) with PPP [61] | Octet-based HDLC-like framing (as defined in [52]) with PPP [61] | Reserved |
| 0x02 | Reserved | Internet Protocol (IP) version 4 as defined in [51] | Reserved |
| 0x03 | Reserved | Internet Protocol (IP) version 6 as defined in [53] | Reserved |
| 0x04 | Reserved | Robust Header Compression (RoHC) as defined in [54] | Robust Header Compression (RoHC) as defined in [54] |
| 0x05 | Reserved | Internet Protocol (IP) version 4 as defined in [51] and version 6 as defined in [53] | Reserved |
| 0x06 | Octet-based HDLC-like framing (as defined in [52]) with AltPPP (see [61] and [62]) | Octet-based HDLC-like framing (as defined in [52]) with AltPPP (see [61] and [62]) | Reserved |
| 0x07 | Octet based HDLC like framing supporting multiple PDNs [65], [64]. | Octet based HDLC like framing supporting multiple PDNs [65], [64]. | Reserved |
| 0x08 | Reserved | PDN-Mux (One octet PDN-ID prefix) for Internet Protocol (IP) PDNs [65], [64]. | Reserved |
| 0x09 | BCMCS over Unicast with HDLC-Like framing [76] | BCMCS over Unicast with HDLC-Like framing [76] | Reserved |
| 0x0A | Reserved | BCMCS over Unicast with Segment-based framing [76] | Reserved |
| All other values | Reserved | Reserved | Reserved |

2

3

**11-8**

1 **11.4 QoS ProfileType and ProfileValue Assignments**

2 The ProfileType and ProfileValue fields of the ATSupportedQoSProfiles,

3 ANSupportedQoSProfiles, Reservation*KK*QoSRequestFwd, Reservation*KK*QoSRequestRev,

4 Reservation*KK*QoSResponseFwd, and Reservation*KK*QoSResponseRev attributes in [43]

5 and [72] identify the associated QoS profile type and value.

6

7 **Table 11.4-1. ProfileType and ProfileValue Assignments**

| ProfileType | ProfileValue | Allowed in QoS Requests | Allowed in QoS Grants | Allowed in Attributes Specifying Supported QoS Profiles for AT and AN |
|---|---|---|---|---|
| 0x00 | NULL | Yes | Yes | No |
| 0x01 | R_QoS_SUB_BLOB with all VERBOSE set to '0' | Yes | No | No |
| 0x02 | R_QoS_SUB_BLOB with all VERBOSE set to '1' | Yes | No | No |
| 0x03 | G_QoS_SUB_BLOB | No | Yes | No |
| 0x04 | FlowProfileID as defined in Section 13 of this document | No | No | Yes |
| All other values | Reserved | N/A | N/A | N/A |

8

9

<sub>1</sub> **11.5 MaskPurpose Field Value Assignments**

<sub>2</sub> The MaskPurpose field of the PagingMask attribute defined in [71] identifies the purpose of
<sub>3</sub> a paging mask. Table 11.5-1 shows the field value assignments that were made and
<sub>4</sub> approved as of the date of this publication.

<sub>5</sub> **Table 11.5-1. MaskPurpose field Value Assignments**

| Value | Name | Associated Standards |
|:---:|:---|:---:|
| 0x00 | Unspecified purpose | [71] |
| 0x01 | The paging mask is associated with monitoring the 1x system | [5] |
| All other values are reserved. | | |

<sub>6</sub>

<sub>7</sub> **11.6 Packet Zone Identifier (PZID) Assignments**

<sub>8</sub> [5] uses a packet zone identifier (PZID) to identify the boundaries of an area which is served
<sub>9</sub> as a single geographic area for purposes of packet data service. [15] and [49] include mobile
<sub>10</sub> station procedures that specify actions associated with the PZID. Table 11.6-1 shows the
<sub>11</sub> PZID value assignments that were made and approved as of the date of this publication.

<sub>12</sub> **Table 11.6-1. Packet Zone Identifier (PZID) Assignments**

| Value | Meaning |
|:---:|:---|
| 0 | The network does not support the packet zone reconnection control feature. |
| 1-253 | Values that can be used to identify a packet zone. |
| 254 | Value reserved for use as the *null* packet zone identifier. |
| 255 | Value that can be used to identify a packet zone. |

1  **11.7 HardwareIDType Field Value Assignments**

2  The HardwareIDType field defined in [72] identifies the type of hardware ID of access
3  terminal.  Table 11.7-1 shows the field value assignments that were made and approved as
4  of the date of this publication.

5                    **Table 11.7-1. HardwareIDType Field Value Assignments**

| HardwareIDType field value | Meaning |
|---|---|
| 0x010000 | Electronic Serial Number (ESN); see [5] |
| 0x00ffff | Mobile Equipment Identifier (MEID); see [5]. |
| 0x00NNNN, where NNNN is in the range 0x0000 to 0xfffe, inclusive. | Reserved |
| 0xffffff | Null |
| All other values | Invalid |

6

7  **11.8 RATType Field Value Assignments**

8  The RATType field defined in [64], [72] and [73] identifies the radio access technology type
9  for interworking.  Table 11.8-1 shows the field value assignments that were made and
10  approved as of the date of this publication.

11                    **Table 11.8-1. RATType Field Value Assignments**

| Value | Name | Associated Standards |
|---|---|---|
| 0x00 | E-UTRAN | [64] |
| 0x01 | WiMax | [73] |
| All other values are reserved. | | |

1 **11.9 Radio Interface Type Value Assignments**

2 The RADIO_INTERFACE_TYPE field defined in [5], [68] and [73] identifies the radio interface
3 type for interworking.  Table 11.9-1 shows the field value assignments that were made and
4 approved as of the date of this publication.

5 **Table 11.9-1. Radio Interface Type Value Assignments**

| Value | Name | Associated Standards |
|:-----:|------|:--------------------:|
| 0000 | MC system | [5] |
| 0001 | Reserved (Previously; Analog system) | - |
| 0010 | HRPD | [5] |
| 0011 | E-UTRAN | [68] |
| 0100 | WiMAX | [73] |
| All other values are reserved. | | |

1 **11.10 Additional APersistence Classes**

2 Eight additional Apersistence classes – 0x04 through 0x0b - are defined in [70]. Access
3 network uses APersistence value in AccessParameters message to control persistence
4 probability.  Table 11.10-1 shows how these values are used.

5 **Table 11.10-1. Apersistence Class Usage**

| Value | Usage |
|-------|-------|
| 0x04 | Manufacturer Specific, or Service Provider Specific use[11] |
| 0x05 | Reserved |
| 0x06 | Manufacturer Specific, or Service Provider Specific use |
| 0x07 | Reserved |
| 0x08 | Manufacturer Specific, or Service Provider Specific use |
| 0x09 | Reserved |
| 0x0a | Manufacturer Specific, or Service Provider Specific use |
| 0x0b | Reserved |

6
7

---

[11] The Apersistence Class assigned to "Manufacturer Specific, or  Service Provider Specific use" can
be used by a Manufacturer or Service Provider as needed. Service Providers may use the same class
value assigned to "Manufacturer Specific, or  Service Provider Specific use" for a completely different
use case.

1

2    This page intentionally left blank.

1   **12 MANUFACTURER-SPECIFIC POSITION LOCATION ASSIGNMENTS**

2   [17] reserves specific ranges of values for manufacturer-specific Position Location
3   assignments. Values in specified ranges are reserved as shown in Table 12-1. Specific
4   assignments are given in sections 12.1 through 12.2.

5   **Table 12-1.  Manufacturer-specific Position Location Assignments**

| Position Location Value | Reserved Manufacturer-Specific Range | Reference in [17] |
|---|---|---|
| Reverse Link Message Types (PD_MSG_TYPE) | 11000000 – 11111110 | 3.2.4 |
| Forward Link Message Types (PD_MSG_TYPE) | 11000000 – 11111110 | 4.2.4 |

6   **12.1 Reverse Link Message Type Assignments**

7   Table 12.1-1 shows the proprietary assignments of Reverse Link Message Type
8   (PD_MSG_TYPE). These assignments were made and approved as of the date of this
9   publication. All message type values in the table are binary. An 'x' represents either a zero
10  or a one.

11  **Table 12.1-1. Proprietary Assignments of Reverse Link Message Type**

| Organization | PD_MSG_TYPE (Binary) |
|---|---|
| QUALCOMM Incorporated | 1100 00xx |
| Reserved | 1100 0100 - 1111 1110 |

12  **12.2 Forward Link Message Type Assignments**

13  Table 12.2-1 shows the proprietary assignments of Forward Link Message Type
14  (PD_MSG_TYPE). These assignments were made and approved as of the date of this
15  publication. All message type values in the table are binary. An 'x' represents either a zero
16  or a one.

17  **Table 12.2-1. Proprietary Assignments of Forward Link Message Type**

| Organization | PD_MSG_TYPE (Binary) |
|---|---|
| QUALCOMM Incorporated | 1100 00xx |
| Reserved | 1100 0100 - 1111 1110 |

18
19

1

2    This page intentionally left blank.

1  **13 FLOW PROFILE IDENTIFIER ASSIGNMENTS**

2  The FlowProfileID for cdma2000 networks identifies the service needs for an application
3  flow. The service for which flow requirements are being indicated by the FlowProfileID is
4  explicitly defined in order to utilize it as a short hand method for specifying all relevant air
5  interface parameters necessary to support a particular multimedia packet data service.
6  Each flow profile is identified by a unique FlowProfileID to facilitate proper processing
7  within the network and mobile stations. FlowProfileID may be used for standard services,
8  as well as for proprietary (non-standard) services. For this interpretation, the 16-bit
9  FlowProfileID is composed of two fields: the FlowProfileID Type field, and the FlowProfileID
10  Level field, as shown in Figure 13-1.

11

| FlowProfileID | |
|---|---|
| FlowProfileID Type | FlowProfileID Level |
| 2 bits | 14 bits |

12  **Figure 13-1 FlowProfileID Format**

13  The FlowProfileID Type specifies whether that identifier is defined as standard or
14  proprietary. Including a type identifier allows for different FlowProfileID structures in the
15  future. Table 13-1 shows the FlowProfileID Type Values.

16

17  **Table 13-1. FlowProfileID Type Values**

| Value | FlowProfileID Type Description |
|---|---|
| 00 | Standard FlowProfileID type |
| 01 | Proprietary FlowProfileID type |
| 10-11 | Reserved |

18  **13.1 Standard Flow Profile Identifier Assignments**

19  The FlowProfileID Type of standard FlowProfileID is set to '00'.

20  The characteristics associated with each FlowProfileID have not been defined in this
21  specification.

22  13.1.1 Generic Data Service Flow Profile Identifier Assignments

23  Table 13.1.1-1 shows the Generic Data FlowProfileID assignments that have been made
24  and approved as of the date of this publication.

25

<sub>1</sub> **Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 1 of 5)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 0 | 0x0000 | best effort |
| 1 | 0x0001 | Streaming 32 kbps |
| 2 | 0x0002 | Streaming 64 kbps |
| 3 | 0x0003 | Streaming 96 kbps |
| 4 | 0x0004 | Streaming 128 kbps |
| 5 | 0x0005 | Minimum Acceptable User Data Rate of 32kbps, max. latency [12] is 100msec, 1% avg. data loss rate[13]. |
| 6 | 0x0006 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 7 | 0x0007 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 8 | 0x0008 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 9 | 0x0009 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 10 | 0x000a | Minimum Acceptable User Data Rate of 768kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 11 | 0x000b | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 100msec, 1% avg. data loss rate. |
| 12 | 0x000c | Minimum Acceptable User Data Rate of 32kbps, max. latency is 100msec, 0.1% avg. data loss rate. |
| 13 | 0x000d | Minimum Acceptable User Data Rate of 64kbps, max. latency is 100msec, 0.1% avg. data loss rate. |
| 14 | 0x000e | Minimum Acceptable User Data Rate of 96kbps, max. latency is 100msec, 0.1% avg. data loss rate. |

---

[12] Maximum latency is defined to be the maximum amount of time allowed from the time that an octet of user data is submitted to the transmitting RLP until the receiving RLP either delivers the octet or aborts its delivery.

[13] Data loss rate is defined as the ratio of the number of lost data octets to the number of transmitted data octets, measured above RLP.

1

2    **Table 13.1.1-1.  Generic Data Service Profile Identifier Assignments (Part 2 of 5)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 15 | 0x000f | Minimum Acceptable User Data Rate of 144kbps, max. latency is 100msec, 0.1% avg. data loss rate. |
| 16 | 0x0010 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 100msec, 0.1% avg. data loss rate. |
| 17 | 0x0011 | Minimum Acceptable User Data Rate of 32kbps, max. latency is 100msec, 0.0001% avg. data loss rate. |
| 18 | 0x0012 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 100msec, 0.0001% avg. data loss rate. |
| 19 | 0x0013 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 100msec, 0.0001% avg. data loss rate. |
| 20 | 0x0014 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 100msec, 0.0001% avg. data loss rate. |
| 21 | 0x0015 | Minimum Acceptable User Data Rate of 32kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 22 | 0x0016 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 23 | 0x0017 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 24 | 0x0018 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 25 | 0x0019 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 26 | 0x001a | Minimum Acceptable User Data Rate of 768kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 27 | 0x001b | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 500msec, 1% avg. data loss rate. |
| 28 | 0x001c | Minimum Acceptable User Data Rate of 32kbps, max. latency is 500msec, 0.1% avg. data loss rate. |

1    **Table 13.1.1-1.  Generic Data Service Profile Identifier Assignments (Part 3 of 5)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 29 | 0x001d | Minimum Acceptable User Data Rate of 64kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 30 | 0x001e | Minimum Acceptable User Data Rate of 96kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 31 | 0x001f | Minimum Acceptable User Data Rate of 144kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 32 | 0x0020 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 33 | 0x0021 | Minimum Acceptable User Data Rate of 768kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 34 | 0x0022 | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 500msec, 0.1% avg. data loss rate. |
| 35 | 0x0023 | Minimum Acceptable User Data Rate of 32kbps, max. latency is 500msec, 0.0001% avg. data loss rate. |
| 36 | 0x0024 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 500msec, 0.0001% avg. data loss rate. |
| 37 | 0x0025 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 500msec, 0.0001% avg. data loss rate. |
| 38 | 0x0026 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 500msec, 0.0001% avg. data loss rate. |
| 39 | 0x0027 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 500msec, 0.0001% avg. data loss rate. |
| 40 | 0x0028 | Minimum Acceptable User Data Rate of 32kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 41 | 0x0029 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 42 | 0x002a | Minimum Acceptable User Data Rate of 96kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 43 | 0x002b | Minimum Acceptable User Data Rate of 144kbps, max. latency is 2000msec, 1% avg. data loss rate. |

Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 4 of 5)

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 44 | 0x002c | Minimum Acceptable User Data Rate of 384kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 45 | 0x002d | Minimum Acceptable User Data Rate of 768kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 46 | 0x002e | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 2000msec, 1% avg. data loss rate. |
| 47 | 0x002f | Minimum Acceptable User Data Rate of 32kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 48 | 0x0030 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 49 | 0x0031 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 50 | 0x0032 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 51 | 0x0033 | Minimum Acceptable User Data Rate of 384kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 52 | 0x0034 | Minimum Acceptable User Data Rate of 768kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 53 | 0x0035 | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 2000msec, 0.1% avg. data loss rate. |
| 54 | 0x0036 | Minimum Acceptable User Data Rate of 32kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 55 | 0x0037 | Minimum Acceptable User Data Rate of 64kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 56 | 0x0038 | Minimum Acceptable User Data Rate of 96kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 57 | 0x0039 | Minimum Acceptable User Data Rate of 144kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 58 | 0x003a | Minimum Acceptable User Data Rate of 384kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |

1    **Table 13.1.1-1.  Generic Data Service Profile Identifier Assignments (Part 5 of 5)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 59 | 0x003b | Minimum Acceptable User Data Rate of 768kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 60 | 0x003c | Minimum Acceptable User Data Rate of 1536kbps, max. latency is 2000msec, 0.0001% avg. data loss rate. |
| 61 – 255 | 0x003d – 0x00ff | Reserved |

2
3

1 13.1.2 Speech Service Flow Profile Identifier Assignments

2 Speech media services are specified using the "Conversational" (low latency, medium error
3 rate) and "Streaming" (high latency, low error rate) traffic classes. Table 13.1.2-1 shows the
4 Speech Service FlowProfileID assignments that have been made and approved as of the
5 date of this publication.

6 **Table 13.1.2-1.  Speech Service Profile Identifier Assignments (Part 1 of 3)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 256 | 0x0100 | Conversational Rate Set 1 Interactive Speech, full rate with No Frame Bundling |
| 257 | 0x0101 | Conversational Rate Set 2 Interactive Speech, full rate with No Frame Bundling |
| 258 | 0x0102 | Streaming Rate Set 1 Interactive Speech, full rate with No Frame Bundling |
| 259 | 0x0103 | Streaming Rate Set 2 Interactive Speech, full rate with No Frame Bundling |
| 260 | 0x0104 | Streaming Rate Set 2 Interactive Speech, half rate max with No Frame Bundling |
| 261 | 0x0105 | Conversational Rate Set 1 PtT Speech, full rate with No Frame Bundling |
| 262 | 0x0106 | Conversational Rate Set 2 PtT Speech, full rate with No Frame Bundling |
| 263 | 0x0107 | Streaming Rate Set 1 PtT Speech, full rate with No Frame Bundling |
| 264 | 0x0108 | Streaming Rate Set 2 PtT Speech, full rate with No Frame Bundling |
| 265 | 0x0109 | Streaming Rate Set 2 PtT Speech, half rate max with No Frame Bundling |

7
8

1    **Table 13.1.2-1.  Speech Service Profile Identifier Assignments (Part 2 of 3)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 266 | 0x010a | Conversational Rate Set 1 PtT Speech with Frame Bundling, Maximum of 5 full rate Frames Bundled |
| 267 | 0x010b | Conversational Rate Set 2 PtT Speech with Frame Bundling, Maximum of 5 full rate Frames Bundled |
| 268 | 0x010c | Streaming Rate Set 1 PtT Speech, full rate with Frame Bundling, Maximum of 5 Frames Bundled |
| 269 | 0x010d | Streaming Rate Set 2 PtT Speech, full rate with Frame Bundling, Maximum of 5 Frames Bundled |
| 270 | 0x010e | Streaming Rate Set 2 PtT Speech, half rate max with Frame Bundling, Maximum of 5 Frames Bundled |
| 271 | 0x010f | Conversational Rate Set 1 PtT Speech, full rate with Frame Bundling, Maximum of 6 Frames Bundled |
| 272 | 0x0110 | Conversational Rate Set 2 PtT Speech, full rate with Frame Bundling, Maximum of 6 Frames Bundled |
| 273 | 0x0111 | Streaming Rate Set 1 PtT Speech, full rate with Frame Bundling, Maximum of 6 Frames Bundled |
| 274 | 0x0112 | Streaming Rate Set 2 PtT Speech, full rate with Frame Bundling, Maximum of 6 Frames Bundled |
| 275 | 0x0113 | Streaming Rate Set 2 PtT Speech, half rate max with Frame Bundling, Maximum of 6 Frames Bundled |
| 276 | 0x0114 | Conversational Rate Set 1 PtT Speech, full rate with frame bundling, Maximum of 4 Frames Bundled |
| 277 | 0x0115 | Conversational Rate Set 1 PtT Speech, half rate max with no frame bundling. |
| 278 | 0x0116 | Conversational Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 4 frames bundled |
| 279 | 0x0117 | Conversational Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 5 frames bundled. |

2

**Table 13.1.2-1. Speech Service Profile Identifier Assignments (Part 3 of 3)**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 280 | 0x0118 | Conversational Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 6 frames bundled |
| 281 | 0x0119 | Streaming Rate Set 1 PtT Speech, full rate with frame bundling, maximum of 4 frames bundled |
| 282 | 0x011a | Streaming Rate Set 1 PtT Speech, half rate max with no frame bundling |
| 283 | 0x011b | Streaming Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 4 frames bundled |
| 284 | 0x011c | Streaming Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 5 frames bundled |
| 285 | 0x011d | Streaming Rate Set 1 PtT Speech, half rate max with frame bundling, maximum of 6 frames bundled |
| 286 | 0x011e | Conversational RS1, Interactive speech, No frame bundling, active speech (Non-DTX) average bit rate 5.8 kbps, peak bit rate 8.55 kbps |
| 287 | 0x011f | Conversational RS1, Interactive speech, No frame bundling, active speech (Non-DTX) average bit rate 5.11 kbps, peak bit rate 8.55 kbps |
| 288 | 0x0120 | Conversational RS1, Interactive speech, No frame bundling, active speech (Non-DTX) average bit rate 3 kbps, peak bit rate 4 kbps |
| 289 | 0x0121 | Conversational RS1, PtT speech, No frame bundling, active speech (Non-DTX) average bit rate 5.8 kbps, peak bit rate 8.55 kbps |
| 290 | 0x0122 | Conversational RS1, PtT speech, No frame bundling, active speech (Non-DTX) average bit rate 5.11 kbps, peak bit rate 8.55 kbps |
| 291 | 0x0123 | Conversational RS1, PtT speech, No frame bundling, active speech (Non-DTX) average bit rate 3 kbps, peak bit rate 4 kbps |
| 292 | 0x0124 | Conversational RS 1 Interactive Speech, with frame bundling, maximum of 3 frames bundled |
| 293 – 511 | 0x0125 – 0x01ff | Reserved |

1   13.1.3 Audio Service Flow Profile Identifier Assignments

2   The audio media service is specified using the "Streaming" (high latency, low error rate)
3   traffic class. Table 13.1.3-1 shows the Audio Service FlowProfileID assignments that have
4   been made and approved as of the date of this publication.

5               **Table 13.1.3-1.  Audio Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 512 | 0x0200 | Streaming Audio 16k |
| 513 | 0x0201 | Streaming Audio 24k |
| 514 | 0x0202 | Streaming Audio 32k |
| 515 | 0x0203 | Streaming Audio 48k |
| 516 | 0x0204 | Streaming Audio 64k |
| 517 – 767 | 0x0205 – 0x02ff | Reserved |

6

7

1 13.1.4 Video Service Flow Profile Identifier Assignments

2 Video media services are specified using the "Conversational" (low latency, low error rate)
3 and "Streaming" (high latency, low error rate) traffic classes. Table 13.1.4-1 shows the
4 Video Service FlowProfileID assignments that have been made and approved as of the date
5 of this publication.

6 **Table 13.1.4-1.  Video Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 768 | 0x0300 | Conversational Interactive Video 24k |
| 769 | 0x0301 | Conversational Interactive Video 32k |
| 770 | 0x0302 | Conversational Interactive Video 40k |
| 771 | 0x0303 | Conversational Interactive Video 48k |
| 772 | 0x0304 | Conversational Interactive Video 56k |
| 773 | 0x0305 | Conversational Interactive Video 64k |
| 774 | 0x0306 | Conversational PtT Video 24k |
| 775 | 0x0307 | Conversational PtT Video 32k |
| 776 | 0x0308 | Conversational PtT Video 40k |
| 777 | 0x0309 | Conversational PtT Video 48k |
| 778 | 0x030a | Conversational PtT Video 56k |
| 779 | 0x030b | Conversational PtT Video 64k |
| 780 | 0x030c | Streaming Video 24k |
| 781 | 0x030d | Streaming Video 48k |
| 782 | 0x030e | Streaming Video 64k |
| 783 | 0x030f | Streaming Video 96k |
| 784 | 0x0310 | Streaming Video 120k |
| 785 | 0x0311 | Streaming Video 128k |
| 786 – 1023 | 0x0312 – 0x03ff | Reserved |

7
8

1    13.1.5 Text Service Flow Profile Identifier Assignments

2    The text media service is specified using the "Streaming" (high latency, low error rate) traffic
3    class. Table 13.1.5-1 shows the Text Service FlowProfileID assignments that have been
4    made and approved as of the date of this publication.

5                    **Table 13.1.5-1.  Text Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 1024 | 0x0400 | Streaming Text (3GPP) |
| 1025 – 1279 | 0x0401 – 0x04ff | Reserved |

6

7

1   13.1.6 Signaling Service Flow Profile Identifier Assignments

2   The signaling media service is specified using the "Conversational" (low latency, low error
3   rate) traffic class. Table 13.1.6-1 shows the Signaling Service FlowProfileID assignments
4   that have been made and approved as of the date of this publication.

5   **Table 13.1.6-1.  Signaling Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 1280 | 0x0500 | Conversational Media Control Signaling |
| 1281 | 0x0501 | Streaming Media Control Signaling |
| 1282 | 0x0502 | Interactive Media Control Signaling |
| 1283 | 0x0503 | Push-To-Talk Media Control Signaling |
| 1284 – 1535 | 0x0504 – 0x05ff | Reserved |

6
7

1  13.1.7 Gaming Service Flow Profile Identifier Assignments

2  The gaming media service is specified using the "Interactive" (low latency, medium error
3  rate) traffic class. Table 13.1.7-1 shows the Gaming Service FlowProfileID assignments that
4  have been made and approved as of the date of this publication.

5  **Table 13.1.7-1.  Gaming Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 1536 | 0x0600 | Interactive Gaming |
| 1537 – 1791 | 0x0601 – 0x06ff | Reserved |

6

7  13.1.8 Bursty Data Service Profile Identifier Assignments

8  Bursty data traffic is specified using the "Interactive" (medium latency, low error rate) traffic
9  class.  Table 13.1.8-1 shows the Bursty Data Service FlowProfileID assignments that have
10  been made and approved as of the date of this publication.

11  **Table 13.1.8-1. Bursty Data Service Profile Identifier Assignments**

| FlowProfileID (Decimal) | FlowProfileID (Hexadecimal) | Flow Description |
|---|---|---|
| 1792 | 0x0700 | Interactive with 2X link sharing weight relative to user's best effort traffic[14] |
| 1793 | 0x0701 | Interactive with 4X link sharing weight relative to user's best effort traffic |
| 1794 | 0x0702 | Interactive with 8X link sharing weight relative to user's best effort traffic |
| 1795 | 0x0703 | Interactive with 16X link sharing weight relative to user's best effort traffic |
| 1796 | 0x0704 | Interactive with 32X link sharing weight relative to user's best effort traffic |
| 1797 - 2047 | 0x0705 – 0x07ff | Reserved |

12
13

---

[14] Since the number of outstanding HTTP/TCP packets is typically small, there is usually not enough
data for the sender to receive three duplicate ACKs to enable fast recovery after a TCP packet loss.  As
a result, the TCP sender has to wait for a retransmit timeout before retransmitting lost packets.

1 **13.2 Proprietary Flow Profile Identifier Assignments**

2 The FlowProfileID Type Identifier of proprietary FlowProfileID is set to '01'.

3 Table 13.2-1 shows the proprietary flow profile identifier assignments made and approved
4 as of the date of this publication.  An 'x' represents either a zero or a one.

5 **Table 13.2-1.  Proprietary Flow Profile Identifier Assignments**

| Organization | FlowProfileID (Decimal) | FlowProfileID (Binary) |
|---|---|---|
| Lucent Technologies | 16,384 – 16,399 | 0100 0000 0000 xxxx |
| QUALCOMM Incorporated | 16,400 – 16,415 | 0100 0000 0001 xxxx |
| NORTEL NETWORKS | 16,416 – 16,431 | 0100 0000 0010 xxxx |
| LG Electronics Inc. | 16,432 – 16,447 | 0100 0000 0011 xxxx |
| Motorola | 16,448 – 16,463 | 0100 0000 0100 xxxx |
| Samsung Electronics | 16,464 – 16,479 | 0100 0000 0101 xxxx |
| Ericsson | 16,480 – 16,495 | 0100 0000 0110 xxxx |
| Hitachi | 16,496 – 16,511 | 0100 0000 0111 xxxx |
| Nokia | 16,512 – 16,527 | 0100 0000 1000 xxxx |
| KDDI Corporation | 16,528 – 16,543 | 0100 0000 1001 xxxx |
| VIA Telecom | 16,544 – 16,559 | 0100 0000 1010 xxxx |
| Verizon Wireless | 16,560 – 16,575 | 0100 0000 1011 xxxx |
| Huawei Technologies | 16,576 – 16,591 | 0100 0000 1100 xxxx |
| ZTE Corporation | 16,592 – 16,607 | 0100 0000 1101 xxxx |
| Reserved | 16,608 – 32,767 | 0100 0000 1110 0000 through 0111 1111 1111 1111 |

6

7

1

2 This page intentionally left blank.

1  **14 GCSNA REVISIONS**

2  The Generic Circuit Service Notification Application (GCSNA) [68] defines the GCSNAOption

3  that is used for identifying circuit switched services provided over the GCSNA tunnel and

4  the set of 1x messages for providing the services. The GCSNAOption is divided into two

5  fields, GCSNAClass and GCSNAClassRevision. GCSNAClass identifies circuit switched

6  services to be provided by certain interworking scenarios. GCSNAClassRevsion identifies

7  actual messages supported over the tunnel. Support of a given GCSNAOption implies

8  support of all lower GCSNAClassRevisions within the same GCSNAClass. The messages

9  actually used in the implementation may be a subset of those allowed by a specific

10 GCSNAOption. This section defines the circuit switched services and set of messages for

11 each GCSNAOption.

12  **Table 14-1. GCSNAClass Definitions**

| GCSNA Class | GCSNA ClassRevision | 1x Service | Note |
|---|---|---|---|
| 0 | 0 | Release 8 1xCSFB from E-UTRAN | [74] |
| | 1 | Release 9 e1xCSFB from E-UTRAN | [74] |
| | 2 | C.S0097-A supported eCSFB | [74] |
| 1 | 0 | SRVCC from E-UTRAN | [75] |
| 2 -31 | NA | Reserved | |

13

Table 14-2.  1x Messages List for GCSNAClass 0 and 1 (Part 1 of 2)

| GCSNA Class 0 Revision | GCSNA Class 1 Revision | Direction | 1x messages | Note |
|---|---|---|---|---|
| 0, 1, 2 | N/A | Forward | Data Burst Message | Broadcast addressing not supported in forward link. |
| 0, 1, 2 | | Forward | Authentication Challenge Message | |
| 0, 1, 2 | | Forward | Shared Secret Data Update Message | |
| 0, 1, 2 | | Forward | General Page Message | Broadcast addressing not supported in forward link. |
| 0, 1, 2 | | Forward | Order Registration Accepted/Rejected/Request Base Station Challenge Confirmation | |
| 1,2 | 0 | Forward | Order Release Reorder | |
| 1,2 | N/A | Forward | Extended Channel Assignment Message | ASSIGN_MODE = 001 only |
| 1,2 | 0 | Forward | Universal Handoff Direction Message | |
| 1,2 | 0 | Forward | MEID Universal Handoff Direction Message | |
| 1,2 | N/A | Forward | Alert With Information Message | This message can only be sent and bundled with UHDM or MUHDM. |
| 2 | N/A | Forward | Feature Notification Message | |
| 2 | N/A | Forward | Status Request Message | |
| 0, 1, 2 | N/A | Reverse | Registration Message | |
| 0, 1, 2 | N/A | Reverse | Data Burst Message | |
| 0, 1, 2 | N/A | Reverse | Authentication Challenge Response Message | |
| 0, 1, 2 | 0 | Reverse | Order Mobile Station Reject Base Station Challenge SSD Update Confirmation/Rejection | |
| 1 | | Forward | Extended Channel Assignment Message | ASSIGN_MODE = 001 only |

| 1 | Forward | Universal Handoff Direction Message | |
|---|---------|-------------------------------------|---|
| 1 | Forward | MEID Universal Handoff Direction Message | |
| 1 | Forward | Data Burst Message | Broadcast addressing not supported in forward link. |
| 1 | Forward | Authentication Challenge Message | |
| 1 | Forward | Shared Secret Data Update Message | |
| 1 | Forward | General Page Message | Broadcast addressing not supported in forward link. |

1

**Table 14-2. 1x Messages List for GCSNAClass 0 and 1 (Part 2 of 2)**

| GCSNA Class Revision | GCSNA Class 1 Revision | Direction | 1x messages | Note |
|---|---|---|---|---|
| 1 | | Forward | Order<br><br>Release<br><br>Registration Accepted/Rejected/Request<br><br>Base Station Challenge Confirmation<br><br>Reorder | |
| 1 | | Forward | Alert With Information Message | This message can only be sent and bundled with UHDM or MUHDM. |
| 1 | | Reverse | Registration Message | |
| 1 | | Reverse | Data Burst Message | |
| 1 | | Reverse | Origination Message | |
| 1 | | Reverse | Page Response Message | |
| 1 | | Reverse | Authentication Challenge Response Message | |
| 1 | | Reverse | Order<br><br>Mobile Station Reject<br><br>Base Station Challenge<br><br>SSD Update Confirmation/Rejection<br><br>Release | |
| 0, 1, 2 | N/A | Reverse | Order<br><br>Base Station Challenge<br><br>SSD Update Confirmation/Rejection | |
| 1,2 | N/A | Reverse | Order<br><br>Release | |
| 1,2 | 0 | Reverse | Origination Message | |
| 1,2 | N/A | Reverse | Page Response Message | |
| 2 | N/A | Reverse | Status Response Message<br><br>Extended Status Response Message | |
| 23-7 | | | Reserved | |

**Table 14-3. 1x Messages List for GCSNAClass 1**

| GCSNA Class Revision | Direction | 1x messages | Note |
|---|---|---|---|
| | | | |

| 0 | Forward | Universal Handoff Direction Message | |
|---|---------|-------------------------------------|---|
| 0 | Forward | MEID Universal Handoff Direction Message | |
| 0 | Forward | Order<br>Release<br>Reorder | |
| 0 | Reverse | Origination Message | |
| 0 | Reverse | Order<br>Mobile Station Reject | |
| 1–7 | | Reserved | |

1 **15 DEVICE CHARACTERISTICS ASSIGNMENTS**

2 The Device Characteristic field in the Generic Extension Message [5] is a bit map that

3 identifies characteristics of cdma2000 1x mobile stations, for example, mobility, sensitivity

4 to power consumption. Each bit in the bit map corresponds to one device characteristic. A

5 mobile station that has a Device Characteristic will sent the corresponding bit to '1'. A

6 mobile station that does not have a Device Characteristic will set the corresponding bit to

7 '0'. All reserved bits are set to '0'.

8 The Device Characteristic bit map assignments approved as of the date of publication of

9 this document are shown in Table 15-1.

10 **Table 15-1. Device Characteristics Assignments**

| Device Characteristic Bit Map | Assignment |
|---|---|
| ---- ---X | Mobility (not stationary) |
| ---- --X- | Power Sensitive |
| ---- -X-- | SO33 Default |
| ---- X--- | Reserved |
| ---X ---- | Reserved |
| --X- ---- | Reserved |
| -X-- ---- | Reserved |
| X--- ---- | Reserved |

1    **16 DEFAULT PARAMETERS FOR SERVICE OPTION SO33**

2    Table 16-1 defines a set of parameters for Service Option SO33.  These parameters are used

3    when the mobile station and base station jointly decide that they prefer to use default

4    values for the parameters of their connection, instead of negotiating them through *Service*

5    *Configuration Messages*.  The definition of these parameters are specified in [1].

6                    **Table 16-1. Default Parameters for Service Option SO33**

| Field | Value |
|-------|-------|
| FOR_MUX_OPTION | 0x1 |
| REV_MUX_OPTION | 0x1 |
| FOR_RATES | 0xF0 |
| REV_RATES | 0xF0 |
| NUM_CON_REC | 0x1 |

CON[0]

| | |
|-------|-------|
| CONF_REF | 0x1 |
| SERVICE_OPTION | 0x21 |
| FOR_TRAFFIC | 0x1 |
| REV_TRAFFIC | 0x1 |
| UI_ENCRYPT_MODE | 0x0 |
| SR_ID | 0x1 |

RLPBLOB

| | |
|-------|-------|
| RLP_BLOB_TYPE | 0x1 |
| RLP_VERSION | 0x3 |
| RTT | 0xf |
| INIT_VAR | 0x1 |
| NAK_ROUNDS_FWD | 0x2 |
| NAK_ROUNDS_REV | 0x2 |
| NAK_PER_ROUND_FWD[0] | 0x1 |
| NAK_PER_ROUND_FWD[1] | 0x2 |
| NAK_PER_ROUND_REV[0] | 0x1 |
| NAK_PER_ROUND_REV[1] | 0x2 |
| FCH_FRAME_SIZE | 0x0 |

| FOR_FCH_RC | 0x3 |
|---|---|
| REV_FCH_RC | 0x3 |
| NUM_FOR_SCH | 0x1 |

FOR_SCH[0]

| FOR_SCH_ID | 0x0 |
|---|---|
| FOR_SCH_MUX | 0x921 |

FOR_SCH_CHN_CFG

| SCH_RC | 0x3 |
|---|---|
| CODING | 0x1 |
| NUM_REV_SCH | 0x1 |

REV_SCH[0]

| REV_SCH_ID | 0x0 |
|---|---|
| REV_SCH_MUX | 0x921 |

REV_SCH_CHN_CFG

| SCH_RC | 0x3 |
|---|---|
| CODING | 0x1 |

NON_NEG_CFG

| FPC_PRI_CHAN | 0x0 |
|---|---|

1

| FPC_MODE | 0x0 |
|---|---|
| LPM_IND | 0x0 |

2