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

Administration of Parameter Value Assignments for cdma2000 Spread Spectrum Standards

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CONTENTS

FOREWORD	vi
1 Scope	1-1
1.1 Requirements Language	1-1
1.2 Informative References	1-2
2 ADMINISTRATION OF PARAMETER VALUE ASSIGNMENTS.....	2-1
2.1 Request for Parameter Value Assignments	2-1
2.2 Selection of Parameter Value Assignments	2-1
2.3 Use of Proprietary Parameter Value Assignments	2-1
2.4 Inquiries.....	2-2
3 SERVICE OPTION NUMBER ASSIGNMENTS	3-1
3.1 Standard Service Option Number Assignments.....	3-1
3.2 Proprietary Service Option Number Assignments	3-7
3.3 Service Option Group Assignments	3-9
4 <i>DATA BURST MESSAGE</i> BURST TYPE ASSIGNMENTS	4-1
4.1 Standard <i>Data Burst Message</i> Burst Type Assignments	4-1
4.2 Proprietary <i>Data Burst Message</i> Burst Type Assignments.....	4-2
5 MULTIPLEX OPTION NUMBER ASSIGNMENTS.....	5-1
5.1 Standard Multiplex Option Number Assignments	5-1
5.2 Proprietary Multiplex Option Number Assignments.....	5-1
6 BAND CLASS VALUE ASSIGNMENTS	6-1
6.1 Band Class Value Assignments.....	6-1
7 MANUFACTURER-SPECIFIC OTASP ASSIGNMENTS.....	7-1
7.1 Reverse Link Message Type Assignments	7-2
7.2 Result Code Assignments.....	7-2
7.3 Feature Identifier Assignments.....	7-2
7.4 Reverse Link NAM Parameter Block Type Assignments	7-3
7.5 Reverse Link SSPR Parameter Block Type Assignments	7-3
7.6 Reverse Link PUZL Parameter Block Type Assignments.....	7-3
7.7 Reverse Link 3GPD Parameter Block Type Assignments.....	7-3
7.8 Forward Link Message Type Assignments	7-3
7.9 Forward Link NAM Parameter Block Type Assignments	7-4

7.10 Forward Link SSPR Parameter Block Type Assignments.....	7-4
7.11 Forward Link Validation Parameter Block Type Assignments.....	7-4
7.12 Forward Link PUZL Parameter Block Type Assignments	7-4
7.13 Forward Link 3GPD Parameter Block Type Assignments	7-4
7.14 System Tag Parameter Block Type Assignments.....	7-4
8 ROAMING DISPLAY INDICATOR ASSIGNMENTS	8-1
8.1 Standard Enhanced Roaming Indicator Number Assignments.....	8-1
8.2 Non-Standard Enhanced Roaming Indicator Number Assignments.....	8-2
9 SHORT MESSAGE SERVICES ASSIGNMENTS	9-1
9.1 Data Field Encoding Assignments.....	9-2
9.2 Language Indicator Value Assignments.....	9-3
9.3 Service Category Assignments	9-5
9.3.1 Standard Service Category Assignments.....	9-5
9.3.2 Proprietary Service Category Assignments	9-7
9.3.3 Commercial Mobile Alert Service (CMAS)	9-7
10 ANALOG FAX ASSIGNMENTS	10-1
11 PROTOCOL AND APPLICATION ASSIGNMENTS.....	11-1
11.1 Protocol Type and Protocol Subtype Assignments.....	11-1
11.2 Application Subtype Assignments.....	11-5
11.3 Higher Layer Protocol Identifier Value Assignments	11-7
11.4 QoS ProfileType and ProfileValue Assignments.....	11-9
11.5 MaskPurpose Field Value Assignments.....	11-10
11.6 Packet Zone Identifier (PZID) Assignments.....	11-10
11.7 HardwareIDType Field Value Assignments	11-11
11.8 RATTtype Field Value Assignments	11-11
11.9 Radio Interface Type Value Assignments.....	11-12
11.10 Additional APersistence Classes	11-13
12 MANUFACTURER-SPECIFIC POSITION LOCATION ASSIGNMENTS	12-1
12.1 Reverse Link Message Type Assignments	12-1
12.2 Forward Link Message Type Assignments.....	12-1
13 FLOW PROFILE IDENTIFIER ASSIGNMENTS	13-1
13.1 Standard Flow Profile Identifier Assignments	13-1
13.1.1 Generic Data Service Flow Profile Identifier Assignments.....	13-1

13.1.2 Speech Service Flow Profile Identifier Assignments	13-7
13.1.3 Audio Service Flow Profile Identifier Assignments.....	13-10
13.1.4 Video Service Flow Profile Identifier Assignments	13-11
13.1.5 Text Service Flow Profile Identifier Assignments.....	13-12
13.1.6 Signaling Service Flow Profile Identifier Assignments	13-13
13.1.7 Gaming Service Flow Profile Identifier Assignments	13-14
13.1.8 Bursty Data Service Profile Identifier Assignments.....	13-14
13.2 Proprietary Flow Profile Identifier Assignments	13-15
14 GCSNA REVISIONS	14-1

FIGURES

Figure 3-1 Service Option Number Format	3-1
Figure 13-1 FlowProfileID Format.....	13-1

TABLES

Table 3.1-1. Standard Service Option Number Assignments (part 1 of 5).....	3-2
Table 3.1-1. Standard Service Option Number Assignments (part 2 of 5).....	3-3
Table 3.1-1. Standard Service Option Number Assignments (part 3 of 5).....	3-4
Table 3.1-1. Standard Service Option Number Assignments (part 4 of 5).....	3-5
Table 3.1-1. Standard Service Option Number Assignments (part 5 of 5).....	3-6
Table 3.2-1. Proprietary Service Option Number Assignments	3-8
Table 3.3-1. Service Option Group Assignments (part 1 of 2)	3-10
Table 3.3-1. Service Option Group Assignments (part 2 of 2)	3-11
Table 4.1-1. Standard <i>Data Burst Message</i> Burst Type Assignments	4-1
Table 4.1-2. Standard <i>Data Burst Message</i> Extended Burst Type Assignments	4-2
Table 4.2-1. Proprietary <i>Data Burst Message</i> Extended Burst Type Assignments	4-2
Table 7-1. Manufacturer-specific OTASP Assignments	7-1
Table 7.1-1. Proprietary Assignments of Reverse Link Message Type	7-2
Table 7.2-1. Proprietary Assignments of Result Code	7-2
Table 7.3-1. Proprietary Assignments of Feature Identifier	7-2
Table 7.4-1. Proprietary Assignments of Reverse Link NAM Parameter Block Types.....	7-3
Table 7.8-1. Proprietary Assignments of Forward Link Message Type.....	7-3

Table 7.9-1. Proprietary Assignments of Forward Link NAM Parameter Block Types	7-4
Table 8.1-1. Enhanced Roaming Indicator Number Assignments	8-1
Table 9.1-1. Data Field Encoding Assignments.....	9-2
Table 9.2-1. Language Indicator Value Assignments (Part 1 of 2).....	9-3
Table 9.2-1. Language Indicator Value Assignments (Part 2 of 2).....	9-4
Table 9.3.1-1. Standard Service Categories (Part 2 of 2).....	9-6
Table 10-1. Analog Fax Inter-working Function Manufacturer Code Assignments	10-1
Table 11.1-1. Protocol Type and Protocol Subtype Assignments (part 1 of 3)	11-2
Table 11.1-1. Protocol Type and Protocol Subtype Assignments (part 2 of 3)	11-3
Table 11.1-1. Protocol Type and Protocol Subtype Assignments (part 3 of 3)	11-4
Table 11.2-1. Application Subtype Assignments	11-6
Table 11.3-1. Value Assignments for Higher Layer Protocol Identifier.....	11-8
Table 11.4-1. ProfileType and ProfileValue Assignments.....	11-9
Table 11.5-1. MaskPurpose field Value Assignments	11-10
Table 11.6-1. Packet Zone Identifier (PZID) Assignments	11-10
Table 11.7-1. HardwareIDType Field Value Assignments.....	11-11
Table 11.8-1. RATType Field Value Assignments	11-11
Table 11.9-1. Radio Interface Type Value Assignments.....	11-12
Table 11.10-1. Apersistence Class Usage.....	11-13
Table 12-1. Manufacturer-specific Position Location Assignments	12-1
Table 12.2-1. Proprietary Assignments of Forward Link Message Type.....	12-1
Table 13-1. FlowProfileID Type Values	13-1
Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 1 of 5).....	13-2
Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 2 of 5).....	13-3
Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 3 of 5).....	13-4
Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 4 of 5).....	13-5
Table 13.1.1-1. Generic Data Service Profile Identifier Assignments (Part 5 of 5).....	13-6
Table 13.1.2-1. Speech Service Profile Identifier Assignments (Part 1 of 3)	13-7
Table 13.1.2-1. Speech Service Profile Identifier Assignments (Part 2 of 3)	13-8
Table 13.1.2-1. Speech Service Profile Identifier Assignments (Part 3 of 3)	13-9
Table 13.1.3-1. Audio Service Profile Identifier Assignments.....	13-10
Table 13.1.4-1. Video Service Profile Identifier Assignments.....	13-11
Table 13.1.5-1. Text Service Profile Identifier Assignments	13-12

Table 13.1.6-1. Signaling Service Profile Identifier Assignments	13-13
Table 13.1.7-1. Gaming Service Profile Identifier Assignments	13-14
Table 13.1.8-1. Bursty Data Service Profile Identifier Assignments	13-14
Table 13.2-1. Proprietary Flow Profile Identifier Assignments	13-15
Table 14-1. GCSNAClass Definitions	14-1
Table 14-2. 1x Messages List for GCSNAClass 0 (Part 1 of 2)	14-2
Table 14-2. 1x Messages List for GCSNAClass 0 (Part 2 of 2)	14-3
Table 14-3. 1x Messages List for GCSNAClass 1	14-3

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-E v2.0, *Physical Layer Standard for cdma2000 Spread Spectrum Systems*, June 2010.
3. 3GPP2 C.S0003-E v2.0, *Medium Access Control (MAC) Standard for cdma2000 Spread Spectrum Systems*, June 2010.
4. Reserved.
5. 3GPP2 C.S0005-E v2.0, *Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems*, June 2010.
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 2010.
10. 3GPP2 C.S0014-D v3.0, *Enhanced Variable Rate Codec, Speech Service Options 3, 68, 70, and 73 for Wideband Spread Spectrum Digital Cellular System*, October 2010.
11. 3GPP2 C.S0015-B v2.0, *Short Message Services for Wideband Spread Spectrum Systems*, October 2005.
12. 3GPP2 C.S0016-D v1.0, *Over-the-Air Service Provisioning of Mobile Stations in Wideband Spread Spectrum Systems*, January 2010.
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*, October 2010.
18. 3GPP2 C.S0026-A v1.0, *Test Data Service Option (TDSO) for cdma2000 Spread Spectrum Systems*, December 2004.

- 1 19. 3GPP2 C.S0025-A v1.0, *Markov Service Option (MSO) for cdma2000 Spread Spectrum*
2 *Systems*, April 2011.
- 3 20. 3GPP2 N.S0005, *Cellular Radiotelecommunications Intersystem Operations*,
4 December 1999.
- 5 21. TIA/EIA/IS-91-A, *Base Station – Mobile Station Compatibility Specification for 800*
6 *MHz Cellular, Auxiliary, and Residential Services*, November 1999.
- 7 22. Reserved.
- 8 23. Reserved.
- 9 24. Reserved.
- 10 25. ANSI INCITS 4-1986 (R2007), *Information Systems - Coded Character Sets - 7-Bit*
11 *American National Standard Code for Information Interchange (7-Bit ASCII)*.
- 12 26. Reserved.
- 13 27. ISO/IEC 8859-1:1998, *Information Technology – 8-Bit Single-Byte Coded Graphic*
14 *Character Sets – Part 1. Latin Alphabet No. 1*.
- 15 28. ISO/IEC 8859-8:1999, *Information Technology – 8-Bit Single-Byte Coded Graphic*
16 *Character Sets*.
- 17 29. ISO/IEC 10646:2003, *Information Technology – Universal Multiple-Octet Coded*
18 *Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane*.
- 19 30. JIS X 0201:1997 (R2007), *7-bit and 8-bit coded character sets for information*
20 *interchange*.
- 21 31. ITU-T T.50, *International Reference Alphabet (IRA) (Formerly International Alphabet*
22 *No. 5 or IA5) Information Technology – 7-Bit Coded Character Set for Information*
23 *Interchange*, September 1992.
- 24 32. TTA.KO-006.0013, *Air Interface between Personal Station-Base Station Radio*
25 *Interface Standard for 1.7 to 1.9GHz CDMA PCS*, July 1997.
- 26 33. KS X 1001, *The coded character set for information interchange – Korean and Chinese*
27 *character*, 1998.
- 28 34. Reserved.
- 29 35. 3GPP2 C.S0029-B v1.0, *Test Application Specification (TAS) for High Rate Packet*
30 *Data Air Interface*, March 2008.
- 31 36. 3GPP2 C.S0030-0 v3.0, *Selectable Mode Vocoder Service Option for Wideband*
32 *Spread Spectrum Communication Systems*, January 2004.
- 33 37. 3GPP TS 23.038, *Alphabets and language-specific information*.
- 34 38. Reserved.
- 35 39. 3GPP2 A.S0008-C v4.0, *Interoperability Specification (IOS) for High Rate Packet Data*
36 *(HRPD) Radio Access Network Interfaces with Session Control in the Access Network*,
37 April 2011.

- 1 40. 3GPP2 C.S0047-0 v1.0, *Link-Layer Assisted Service Options for Voice-over-IP: Header*
2 *Removal (SO 60) and Robust Header Compression (SO 61)*, April 2003.
- 3 41. 3GPP2 C.S0052-A v1.0, *Source-Controlled Variable-Rate Multimode Wideband Speech*
4 *Codec (VMR-WB) Service Option 62 and 63 for Spread Spectrum Systems*, April 2005.
- 5 42. 3GPP2 C.S0039-0 v2.0, *Enhanced Subscriber Privacy for cdma2000 High Rate Packet*
6 *Data*, May 2006.
- 7 43. 3GPP2 C.S0063-B v1.0, *cdma2000 High Rate Packet Data Supplemental Services*,
8 April 2010.
- 9 44. 3GPP2 C.S0017-004-A v1.0, *Data Service Options for Spread Spectrum Systems:*
10 *Async Data and Fax Services*, November 2009.
- 11 45. 3GPP2 C.S0017-005-A v1.0, *Data Service Options for Spread Spectrum Systems:*
12 *Packet Data Services*, July 2004.
- 13 46. 3GPP2 C.S0017-007-A v1.0, *Data Service Options for Spread Spectrum Systems:*
14 *Analog Fax Service*, July 2004.
- 15 47. 3GPP2 C.S0017-009-A v1.0, *Data Service Options for Spread Spectrum Systems: High*
16 *Speed Packet Data Services*, July 2004.
- 17 48. 3GPP2 C.S0017-011-A v1.0, *Data Service Options for Spread Spectrum Systems:*
18 *Service Option 34*, July 2004.
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- 21 50. 3GPP2 C.S0057-E v1.0, *Band Class Specification for cdma2000 Spread Spectrum*
22 *Systems*, October 2010.
- 23 51. RFC 791, *Internet Protocol*, September 1981.
- 24 52. RFC 1662, *PPP in HDLC-like Framing*, July 1994
- 25 53. RFC 2460, *Internet Protocol, Version 6 (IPv6) Specification*, December 1998
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27 *UDP, ESP, and uncompressed*, July 2001
- 28 55. 3GPP2 C.S0077-0 v1.0, *Broadcast Multicast Service for cdma2000 1x Systems*, March
29 2006
- 30 56. 3GPP2 A.S0009-C v4.0, *Interoperability Specification (IOS) for High Rate Packet Data*
31 *(HRPD) Access Network Interfaces With Session Control in the Packet Control*
32 *Function*, April 2011.
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34 *Interface Specification*, March 2006.
- 35 58. 3GPP2 C.S0067-A v1.0, *Key Exchange Protocols for cdma2000 High Rate Packet Data*
36 *Air Interface*, February 2009.
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- 1 60. 3GPP2 C.S0075-0 v1.0, *Interworking Specification for cdma2000 1x and High Rate*
2 *Packet Data Systems*, March 2006.
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- 4 62. 3GPP2 X.S0040-0 v1.0, *PPP-Alternative Protocol (AltPPP) for cdma2000® Wireless IP*
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7 2008.
- 8 64. 3GPP2 C.S0087-0 v2.0, *E-UTRAN - cdma2000 HRPD Connectivity and Inter-working:*
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- 10 65. 3GPP2 X.S0057-0 v3.0, *E-UTRAN - eHRPD Connectivity and Interworking: Core*
11 *Network Aspects*, September 2010.
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- 17 68. 3GPP2 C.S0097-0 v2.0, *E-UTRAN – cdma2000 1x Connectivity and Interworking: Air*
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- 19 69. 3GPP2 C.S0024-200-C v1.0, *cdma2000 High Rate Packet Data Air Interface Physical*
20 *Layer Specification*, April 2010.
- 21 70. 3GPP2 C.S0024-300-C v1.0, *Medium Access Control Layer for cdma2000 High Rate*
22 *Packet Data Air Interface Specification*, April 2010.
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- 25 72. 3GPP2 C.S0024-500-C v1.0, *Application, Stream and Session Layers for cdma2000*
26 *High Rate Packet Data Air Interface Specification*, April 2010.
- 27 73. 3GPP2 C.S0086-0 v1.0, *WiMAX™ – HRPD Interworking: Air Interface Specification*,
28 May 2009.
- 29 74. 3GPP TS23.272, *Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage*
30 *2*.
- 31 75. 3GPP TS23.216, *Single Radio Voice Call Continuity (SRVCC); Stage 2*.
- 32 76. 3GPP2 X.S0022-A v1.0, *Broadcast and Multicast Service in cdma2000 Wireless IP*
33 *Network*, February 2007.
- 34 77. 3GPP2 A.S0014-D v3.0, *Interoperability Specification (IOS) for cdma2000 Access*
35 *Network Interfaces – Part 4 (A1, A1p, A2, and A5 Interfaces)*.

36 Editor's Note: The above document is a work in progress and should not be
37 referenced unless and until it is approved and published. Until such time as
38 this Editor's Note is removed, the inclusion of the above document is for
39 informational purposes only.

1 78. 3GPP2 X.S0065-0 v1.0, *cdma2000 Unstructured Supplementary Service Data (USSD)*.

2 Editor's Note: The above document is a work in progress and should not be
3 referenced unless and until it is approved and published. Until such time as
4 this Editor's Note is removed, the inclusion of the above document is for
5 informational purposes only.

6 79. 3GPP2 C.S0102-0 v1.0, *Air Interface Application Layer Security for High Rate Packet*
7 *Data Systems*, April 2011.

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

3 SERVICE OPTION NUMBER ASSIGNMENTS

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

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

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

Figure 3-1 Service Option Number Format

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

3.1 Standard Service Option Number Assignments

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

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

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

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]

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Table 3.1-1. Standard Service Option Number Assignments (part 2 of 5)

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]

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Table 3.1-1. Standard Service Option Number Assignments (part 3 of 5)

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 ¹	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 ²	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 ³	None	HRPD Packet Data Service for altPPP	[39][56][62]

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¹ This service option assignment made for identification defined in the Radio Access Network is not carried over the air interface.

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.

1 Table 3.1-1. Standard Service Option Number Assignments (part 4 of 5)

Service Option Number (Decimal)	Service Option Group (Decimal)	Designated Use/Type of Service	Associated Standard
72 ⁴	None	HRPD auxiliary Packet Data IP Service with PDN multiplexing header	[39][56][65] [67]
73 ⁵	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 – 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
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 ⁶	9	EVRC-NW with capacity operating point 0 support over the A1 interface	[77]

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

⁵ 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.

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

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

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⁶ This service option assignment is for the Radio Access Network only and is not carried over the air interface.

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.

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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

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

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

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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

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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 SO 73 ⁷ - - x - SO 4169 ⁸ - x - - Reserved x - - - Reserved
10 – 30	Reserved	
31	Reserved for future extension	

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⁷ 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].

⁸ SO 4169 used within the A1 interface to indicate EVRC-NW with capacity operating point 0 support [77].

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4 DATA BURST MESSAGE BURST TYPE ASSIGNMENTS

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

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

4.1 Standard *Data Burst Message* Burst Type Assignments

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

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

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

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

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]

4.2 Proprietary *Data Burst Message* Burst Type Assignments

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

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

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.

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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.
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7 MANUFACTURER-SPECIFIC OTASP ASSIGNMENTS

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

Table 7-1. Manufacturer-specific OTASP Assignments

OTASP Value	Reserved Manufacturer-Specific Range	Reference in [12]
Reverse Link Message Types (OTASP_MSG_TYPE)	10000000 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 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

7.1 Reverse Link Message Type Assignments

Table 7.1-1 shows the proprietary assignments of Reverse Link Message 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 7.1-1. Proprietary Assignments of Reverse Link Message Type

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

7.2 Result Code Assignments

Table 7.2-1 shows the proprietary assignments of Result Code. 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 7.2-1. Proprietary Assignments of Result Code

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

7.3 Feature Identifier Assignments

Table 7.3-1 shows the proprietary assignments of Feature Identifier. 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 7.3-1. Proprietary Assignments of Feature Identifier

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

7.4 Reverse Link NAM Parameter Block Type Assignments

Table 7.4-1 shows the proprietary assignments of Reverse 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 7.4-1. Proprietary Assignments of Reverse Link NAM Parameter Block Types

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

7.5 Reverse Link SSPR Parameter Block Type Assignments

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

7.6 Reverse Link PUZL Parameter Block Type Assignments

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

7.7 Reverse Link 3GPD Parameter Block Type Assignments

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

7.8 Forward Link Message Type Assignments

Table 7.8-1 shows the proprietary assignments of Forward Link Message 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 7.8-1. Proprietary Assignments of Forward Link Message Type

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

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.

8 ROAMING DISPLAY INDICATOR ASSIGNMENTS

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

8.1 Standard Enhanced Roaming Indicator Number Assignments

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

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.

9.1 Data Field Encoding Assignments

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

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.		
<p>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.</p> <p>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].</p> <p>ⁱⁱⁱ [33] is a variable 1-2 byte encoding method widely used in Korea.</p> <p>^{iv} Length is determined by the Message Type value. See Section 3.7.1 and Appendix B of [21].</p> <p>^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.</p> <p>^{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].</p>		

1 **9.2 Language Indicator Value Assignments**

2 Table 9.2-1 shows the data encoding scheme assignments that were made and approved
3 as 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

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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.	

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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 2)

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

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

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 – 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

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
3 of 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

6 9.3.3 Commercial Mobile Alert Service (CMAS)

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

9

10 **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 – 0x10FF	RESERVED

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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.	

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

1 **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
Encryption	0x07	7	Default Encryption	0x0000
Encryption	0x07	7	AES Encryption	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
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
Broadcast Protocol Suite	0x18	7	Default Broadcast Protocol Suite	0x0000
Broadcast Protocol Suite	0x18	7	Generic Broadcast Protocol Suite	0x0001

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
Virtual Stream	0x19	7	Default Virtual Stream	0x0000
Virtual Stream	0x19	7	Generic Virtual Stream	0x0001
Virtual Stream <i>VS</i> ¹ Application	0x1a <i>VS</i>	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

¹ VS is the two-digit hexadecimal virtual stream number in the range 0x01 to 0xff.

1 **11.2 Application Subtype Assignments**

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

5

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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]
<u>0x000F</u>	<u>AALS Enhanced Multi-Flow Packet Application bound to the service network</u>	[79]
<u>0x0010</u>	<u>AALS Multi-Link Multi-Flow Packet Application bound to the service network</u>	[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.		

1 11.3 Higher Layer Protocol Identifier Value Assignments

2 The FlowMMHigherLayerProtocolFwd attribute identifies the higher layer protocol that is
3 served by [72] forward link RLP flow MM. The FlowMMHigherLayerProtocolRev attribute
4 identifies the higher layer protocol that is served by [72] reverse link RLP flow MM. The
5 ProtocolIdentifier field of the SupportedHigherLayerProtocols attribute in [72] identifies
6 the higher layer protocols that are supported by the access terminal and the access
7 network. The ATSupportedFlowProtocolParametersPP attribute in [43] identifies the
8 higher layer protocols that are supported by the access terminal as Flow protocols. The
9 ATSupportedRouteProtocolParametersPP attribute in [43] identifies the Route protocols
10 that are supported by the access terminal as Route protocols. The ProtocolID field of the
11 FlowMMFlowProtocolParametersFwd attribute in [43] identifies the Flow Protocol served by
12 a forward Link Flow. The ProtocolID field of the FlowMMFlowProtocolParametersRev
13 attribute in [43] identifies the Flow Protocol served by a reverse Link Flow. The ProtocolID
14 field of the FlowMMRouteProtocolParametersFwd attribute in [43] identifies the Route
15 Protocol served by a forward Link Flow. The ProtocolID field of the
16 FlowMMRouteProtocolParametersRev attribute in [43] identifies the Route Protocol served
17 by a reverse Link Flow. Table 11.3-1 shows the value assignments that were made and
18 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

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1 **11.4 QoS ProfileType and ProfileValue Assignments**

2 The ProfileType and ProfileValue fields of the ATSupportedQoSProfiles,
 3 ANSupportedQoSProfiles, ReservationKKQoSRequestFwd, ReservationKKQoSRequestRev,
 4 ReservationKKQoSResponseFwd, and ReservationKKQoSResponseRev 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

11.5 MaskPurpose Field Value Assignments

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

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.		

11.6 Packet Zone Identifier (PZID) Assignments

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

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 <i>null</i> 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
 4 as 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 0xffff, 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
3 interface type for interworking. Table 11.9-1 shows the field value assignments that were
4 made and 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 ²
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

² 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.

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12 MANUFACTURER-SPECIFIC POSITION LOCATION ASSIGNMENTS

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

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

12.1 Reverse Link Message Type Assignments

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

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

12.2 Forward Link Message Type Assignments

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

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

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13 FLOW PROFILE IDENTIFIER ASSIGNMENTS

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

FlowProfileID	
FlowProfileID Type	FlowProfileID Level
2 bits	14 bits

Figure 13-1 FlowProfileID Format

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

Table 13-1. FlowProfileID Type Values

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

13.1 Standard Flow Profile Identifier Assignments

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

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

13.1.1 Generic Data Service Flow Profile Identifier Assignments

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

1 **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 ¹ is 100msec, 1% avg. data loss rate ² .
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.

2

¹ 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.

² 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 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.
29	0x001d	Minimum Acceptable User Data Rate of 64kbps, 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
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.
44	0x002c	Minimum Acceptable User Data Rate of 384kbps, max. latency is 2000msec, 1% avg. data loss rate.

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

FlowProfileID (Decimal)	FlowProfileID (Hexadecimal)	Flow Description
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

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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

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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.

1 **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

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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

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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)
 3 traffic class. Table 13.1.5-1 shows the Text Service FlowProfileID assignments that have
 4 been 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

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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

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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

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7 13.1.8 Bursty Data Service Profile Identifier Assignments

8 Bursty data traffic is specified using the “Interactive” (medium latency, low error rate)
 9 traffic class. Table 13.1.8-1 shows the Bursty Data Service FlowProfileID assignments that
 10 have 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 ³
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

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³ 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

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1 **14 GCSNA REVISIONS**

2 The Generic Circuit Service Notification Application (GCSNA) [68] defines the
 3 GCSNAOption that is used for identifying circuit switched services provided over the
 4 GCSNA tunnel and the set of 1x messages for providing the services. The GCSNAOption is
 5 divided into two fields, GCSNAClass and GCSNAClassRevision. GCSNAClass identifies
 6 circuit switched services to be provided by certain interworking scenarios.
 7 GCSNAClassRevision identifies actual messages supported over the tunnel. The messages
 8 actually used in the implementation may be a subset of those allowed by a specific
 9 GCSNAOption. This section defines the circuit switched services and set of messages for
 10 each GCSNAOption.

11

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]
1	0	SRVCC from E-UTRAN	[75]
2 -31	NA	Reserved	

12

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

GCSNA Class Revision	Direction	1x messages	Note
0	Forward	Data Burst Message	Broadcast addressing not supported in forward link.
0	Forward	Authentication Challenge Message	
0	Forward	Shared Secret Data Update Message	
0	Forward	General Page Message	Broadcast addressing not supported in forward link.
0	Forward	Order Registration Accepted/Rejected/Request Base Station Challenge Confirmation	
0	Reverse	Registration Message	
0	Reverse	Data Burst Message	
0	Reverse	Authentication Challenge Response Message	
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.

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

GCSNA Class Revision	Direction	1x messages	Note
1	Forward	Order Release Registration Accepted/Rejected/Request Base Station Challenge Confirmation 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 Mobile Station Reject Base Station Challenge SSD Update Confirmation/Rejection Release	
2-7		Reserved	

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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 Release Reorder	
0	Reverse	Origination Message	
0	Reverse	Order Mobile Station Reject	
1-7		Reserved	

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