3GPP2 S.P0052-0
Ver.0.2.7
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System Release Guide for the Release <ALPHA> of the cdma2000® System Specifications

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Executive Summary

The System Release Guide (SRG) for the Release <ALPHA> provides an overview for and reference to the Release <ALPHA> of the 3GPP2 wireless telecommunication system (cdma2000®) capabilities, features, and services. This document is intended for use by persons and /or companies who are developing and / or deploying cdma2000 systems or by persons who are otherwise interested in cdma2000 systems.

Air interface support for HRPD and enhanced IOS are included and provide high-speed forward link data rate service capability up to 2.4576 Mbps in a 1.25 MHz. Since cdma2000 uses many IP based protocols to a large degree, it offers various features of IP based services. The system in this release contains support for the Legacy System, and limited support for the 3GPP2 Legacy Mobile Station Domain, making use of IP-based transport and signaling.

This release covers a wide range of new feature and service capabilities. Major features and/or capabilities in the release include the following:

- Legacy MS Domain (LMSD) Step1
- HRPD Phase-II capabilities
- Packet data flow control and handoff capability to support high speed packet data
- BS, PCF, PDSN interface version control for the IOS standard
- Enhanced cdma2000 Supplemental Channel operation
- Inter-standard roaming capability between cdma2000 and GSM systems
- Selectable mode vocoder and supporting functions
- QoS control to support multiple service instances and IP transport
- Header compression for voice over IP service
- Voice over IP
- IP Broadcast and IP Multicast
- Other enhanced features in Revision-C of the cdma2000air interface

The features and capabilities provided by this cdma2000 System Release are listed and provided. Also references and specifications numbers for the features are provided for readers' review.

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REVISION HISTORY

VERSION	DESCRIPTION	DATE
Version 0.0.1	Initial Draft	19 November 2001
Version 0.0.2	Added draft figure 1, text to section 1, and text in section 4	30 November 2001
Version 0.0.3	Additional editorial changes from the December 2001 TSG-S meeting.	20 February 2002
Version 0.0.4	Some editorial corrections, cleared the large table in section 5 of misleading information.	27 February 2002
Version 0.0.5	Adjusted headings in section 4.	5 March 2002
Version 0.0.6	Incorporated changes proposed at the 12 March 2002 meeting session.	13 March 2002
Version 0.0.7	Corrected the 3GPP2 TSG-S Document number to S.P0052.	14 March 2002
Version 0.0.8	Added feature content information in section 5 tables.	25 March 2002
Version 0.0.9	Added more feature content and descriptions to sections 5 and 6.	15 April 2002
Version 0.0.10	Added more feature content and descriptions to sections 5 and 6.	25 April 2002
Version 0.0.11	Comments accepted at the May 6 teleconference are applied.	13 May 2002
Version 0.0.12	Decisions at the 3GPP2 TSG-S Meeting in Newport Beach are applied.	16 May 2002
Version 0.0.13	Decisions at the 3GPP2 TSG-S Meeting in Shenzhen and conference call on 6/25 are applied.	8 July 2002
Version 0.0.14	Inherited features were deleted. Added feature descriptions in sections 5 and 6. Some editorial changes in section 3.	26 August 2002
Version 0.0.15	Added more feature content and descriptions to sections 5 and 6. Deleted column “Specification Title” in table and added reference. Deleted inherited date “March 31, 2001”.	28 August 2002

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Version 0.0.16	Added Nokia comments (S30-20021028-012/012A). Executive Summary (S30-20021028-007), WI numbers, feature descriptions, and specification numbers. Deleted retired and <Beta> release features (as V.0.0.16)	9 December, 2002 13 January, 2003 (as V.0.0.16.1)
Version 0.0.17	Title was changed. Features were updated in accordance with the latest Work plan (as of 2003/01/13)	16 January, 2003
Version 0.1	cdma2000 is used instead of that without ®. In Fig.1, ref pt# 26 is replaced by #13 as in the NAM documents. Feature names and descriptions, WI#, specifications in section 5 and 6 are imported from the Work plan and updated to keep consistency with it.	12 May, 2003
Version 0.2	Modified with SC comments (deletion of DV, location and security service). Reference section and the feature table are totally updated. Those are straightforward exported from the Work plan. Added acronyms from IOS docs.	July 14, 2003
Version 0.21	Incorporated TSG-X comments.	July 16, 2003
Version 0.22	Editorial update on the change in Ver.0.21	July 17, 2003
Version 0.23	TIA nomenclatures were deleted. Some feature descriptions prepared by the editor were added, except for those not having WI descriptions in the Work plan.	July 17, 2003
Version 0.24	CDMA2000® -> cdma2000® <Alpha> Release -> Release <Alpha>	July 17, 2003
Version 0.25	Incorporated Motorola comments as Annex: All IP Responsibility Matrix-draft	July 24, 2003

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Version 0.26	Updated Annex according to the Conf. Call results on 07/24/'03 Updated descriptions for TSGs-001, 002, 003. Cleaned up X.P00xx, except X.P(S)0017 as now pending in SC review process.	August 7, 2003
Version 0.27	TSG-S, X comments to feature descriptions on TSGs-001 to 003, and TSGN-005 were incorporated. According to Workplan 3.2, "Multiple Service Instances", "Fast Handoff", "Packet Prepaid Service", "Flexible Rate Data", "VoIP" are now 3GPP2-00039.1, 3GPP2-00039.2, 3GPP2-00063, 3GPP2-00065, 3GPP2-00066, respectively. Updated Annex, according to Motorola contribution. Reference version numbers are updated.	August 21, 2003

1

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TABLE OF CONTENTS

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1 INTRODUCTION

This document is the System Release Guide (SRG) for the 3GPP2 wireless telecommunication system. It is developed and maintained under the auspices of 3GPP2 TSG-S, the TSG for Services and Systems Aspects for 3GPP2.

1.1 DOCUMENT PURPOSE

The objective of this document is to provide an informative overview for and reference to the Release <ALPHA> of the 3GPP2 wireless telecommunication system (cdma2000) capabilities, features, and services. This document is intended for use by persons and/or companies who are developing or deploying cdma2000 systems or by persons who are otherwise interested in 3GPP2 wireless telecommunication systems.

In order to be compliant with this 3GPP2 System Release, mandatory features must be implemented. However, the set of optional features implemented in a given system is decided by the operators and manufacturers. The individual specifications indicate the mandatory and optional nature of features. This System Release includes only features and capabilities that are part of a published 3GPP2 speciation(s).cdma2000

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2 DOCUMENT REFERENCES

The following documents are referenced in this document.

Editor's Note:

All document need to have revision numbers.

Confirm publication of S.R0037-0, S.S0084-0, X.S0011-C and X.S0017-0.

2.1 3GPP2 Release <ALPHA> Specifications and Reports

The documents in this section are the Release <Alpha> specifications and reports essential to this release.

[1] A.S0004-A v2.0, *3GPP2 Tandem Free Operation Specification - Release A*, January 2001

[2] A.S0004-B v2.0, *CDMA Tandem Free Operation*, August 2002

[3] [Reserved]

[4] A.S0007-A v2.0 *Interoperability Specification (IOS) for High Rate Packet Data (HRPD) Access Network Interfaces - Rev A*, May 2003

[5] A.S0008-0 V3.*0 Interoperability Specification (IOS) for High Rate Packet Data (HRPD) Access Network Interfaces*, May 2003

[6] A.S0011-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces -Part 1 Overview (IOSv4.2)*, May 2002

[7] A.S0012-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces -Part 2 Transport (IOSv4.2)*, May 2002

[8] A.S0013-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 3 Features (IOSv4.2)*, May 2002

[9] A.S0014-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 4 (A1, A2 and A5 Interfaces) (IOSv4.2)*, May 2002

[10] A.S0015-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 5 (A3 and A7 Interfaces) (IOSv4.2)* May 2002

[11] A.S0016-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 6 (A8 and A9 Interfaces) (IOSv4.2)* May 2002

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[12] A.S0017-0 v2.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 7 (A10 and A11 Interfaces) (IOSv4.2)*, October 2002

[13] A.S0011-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces -Part 1 Overview (IOSv4.3)*, October 2002

[14] A.S0012-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces -Part 2 Transport (IOSv4.3)*, October 2002

[15] A.S0013-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 3 Features (IOSv4.3)*, October 2002

[16] A.S0014-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 4 (A1, A2 and A5 Interfaces) (IOSv4.3)*, October 2002

[17] A.S0015-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 5 (A3 and A7 Interfaces) (IOSv4.3)*, October 2002

[18] A.S0016-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 6 (A8 and A9 Interfaces) (IOSv4.3)*, October 2002

[19] A.S0017-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 7 (A10 and A11 Interfaces) (IOSv4.3)*, October 2002

[20] C.R1001-D v1.0 *Administration of Parameter Value Assignments for cdma2000® Spread Spectrum Standards - Release D*, April 2003

[21] C.S0001-C v1.0 *cdma2000® - Introduction Release C*, May 2002

[22] C.S0002-C v1.0 *Physical Layer Standard for cdma2000® Spread Spectrum Systems Release C*, May 2002

[23] C.S0003-C v1.0 *Medium Access Control (MAC) Standard for cdma2000® Spread Spectrum Systems, Release C*, May 2002

[24] C.S0004-C v1.0 *Signaling Link Access Control (LAC) Standard for cdma2000® Spread Spectrum Systems, Release C*, May 2002

[25] C.S0005-C v1.0 *Upper Layer (Layer 3) Signaling Standard for cdma2000® Spread Spectrum Systems, Release C*, May 2002

[26] C.S0006-C v1.0 Analog Signaling Standard for cdma2000® Spread Spectrum Systems - Release C, May 2002

[27] C.S0001-B v1.0 *cdma2000® - Introduction Release B*, April 2002

[28] C.S0002-B v1.0 *Physical Layer Standard for cdma2000® Spread Spectrum Systems Release B*, April 2002

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[29] C.S0003-B v1.0 *Medium Access Control (MAC) Standard for cdma2000® Spread Spectrum Systems, Release B*, April 2002

[30] C.S0004-B v1.0 *Signaling Link Access Control (LAC) Standard for cdma2000® Spread Spectrum Systems, Release B*, April 2002

[31] C.S0005-B v1.0 *Upper Layer (Layer 3) Signaling Standard for cdma2000® Spread Spectrum Systems, Release B*, April 2002

[32] C.S0006-B v1.0 *Analog Signaling Standard for cdma2000® Spread Spectrum Systems - Release B*, April 2002

[33] C.S0004-A-2 Version 1.1, *Signaling Link Access Control (LAC) Standard for cdma2000® Spread Spectrum Systems – Addendum 2*

[34] C.S0005-A-2 *Upper Layer (Layer 3) Signaling Standard for cdma2000® Spread Spectrum Systems, Release A Addendum-2*, February 2002

[35] C.S0015-A v1.0, *Short Message Service (SMS) for Wideband Spread Spectrum Systems Release-A*, January 2002

[36] C.S0017-0-2 v5.0, *Data Service Options for Spread Spectrum Systems* - Addendum 2, February 2003

[37] C.S0017-A, *Data Service Options for Spread Spectrum Systems*, December 2002

[38] C.S0023-A v1.0, *Removable User Identity Module for Spread Spectrum Systems*, September 2002

[39] C.S0024 v4, *cdma2000® High Rate Packet Data Air Interface Specification*, October 2002

[40] C.S0026-0 v2.0 *Test Data Service Option (TDSO) for cdma2000® Spread Spectrum Systems*, October 2002

[41] C.S0029-0 v2.0 Test Application Specification (TAS) for High Rate Packet Data Air Interface, July 2001

[42] C.S0035-0 v1.0 *CDMA Card Application Toolkit (CCAT)*, October 2002

[43] C.S0042-0 v1.0 *Circuit-Switched Video Conferencing Services*, August 2002

[44] C.S0047-0 v1.0, *Link-Layer Assisted Service Options for Voice-Over-IP: Header Removal (SO60) and Robust Header Compression (SO61)* , April 2003

[45] N.S0003-0 v1.0, *User Identity Module*, April 2001

[46] N.S0025-A v1.0, *Roamer Database Verification*, June 2002

[47] N.S0025-B v1.0, *Roamer Database Verification*, October 2002

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[48] N.S0026-A v1.0 Wireless Radio Telecommunication Intersystem Non-Signaling Data Communication DMH, Revision A, December 2001

[49] N.S0027-0 version 1.0 *Enhanced International Dialing, Calling Number Identification & Callback, Calling Party Category Identification*, May 2001

[50] N.S0028-0 v1.0 *Network Interworking Between GSM MAP and ANSI-41 MAP Rev. B*, April 2002

[51] N.S0029-0 v1.0, *TIA/EIA-41-D Based Network Enhancements for CDMA Packet Data Service (C-PDS), Phase 1, Revision: 0*, June, 2002

[52] P.S0001-B v1.0, *cdma2000® Wireless IP Network Standard*, October, 2002

[53] S.R0006-0 v1.0.0 *Cellular Feature Description*, 13 December 1999

[54] S.R0014-0 v1.0 *Tandem Free Operation (Stage 1)*, December 1999

[55] S.R0029-0 v1.0 *Access Control Based on Call Type*, October 2000

[56] S.R0033-0 v1.0, *Realm Configured Packet Data Session Dormancy Timer*, , December 2001

[57] S.R0035-0 v1.0 *Quality of Service Stage 1 Requirements*, September 2002

[58] S.R0037-0 v3.0, IP Network Architecture Model for CDMA2000® Spread Spectrum Systems, August 2003

[59] S.R0059-0 v1.0, *Legacy MS Domain – Step 1 System Requirements*, , May 2002

[60] S.R0068-0 v1.0, *Link Layer Assisted Robust header Compression*, June 2002

[61] S.S0028-A v3.0 *OAM&P for cdma2000® (3GPP Delta Specification)*, July 2001

[62] S.S0053-0 v1.0 *Common Cryptographic Algorithms*, January 2002

[63] S.S0054-0 v1.0 *Interface Specification for Common Cryptographic Algorithms*, January 2002

[64] S.S0055-0 v1.0 *Enhanced Cryptographic Algorithms*, January 2002

[65] S.S0084-0 v1.0 *Packet Pre-paid Service*, August, 2003

[66] X.S0001-0, v1.0, TIA/EIA-41-D Based Network Enhancements for CDMA Packet Data Service (C-PDS), Phase-1

[67] [Editor's Note: Approval Pending in SC Review Process] X.S0011-C v1.0 *Wireless IP Network Standard*, August, 2003

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[68] [Editor's Note: Approval Pending in SC Review Process] X.S0017 v1.0.0 *Open Service Access (OSA) Application Programming Interface (API),* August, 2003

[69] X.S0018-0 v1.0, *Legacy MS Domain (LMSD) – Step 1*, March 2003

2.2 Other References

The documents in this section are additional specifications and reports referred to this SRG, not including to those in section 2.1.

[70] 3GPP2 C.S0039-0 v1.0, *Enhanced Subscriber Privacy for High Rate Packet Data*, September 2002

[71] 3GPP2 C.S0030-0, Version 2.0, *Selectable Mode Vocoder Service Option for Wideband Spread Spectrum Communication Systems*, December, 2001

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[74] 3GPP2 N.S0013-0, WIN Phase-I

[75] 3GPP2 S.R0003-A: 3GPP2 System Capability Guide - Release B v1.0, June 2001

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[85] TIA/EIA-95-B, *Mobile Station - Base Station Compatibility Standard for Wideband Spread Spectrum Cellular System*, March 1999

[86] TIA/EIA-41-D, *Cellular Radiotelecommunications Intersystem Operations*, December 1997

[87] TIA/EIA-TSB100-A, *"Network Reference Model"* March, 2001

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3 DEFINITIONS

Access Network	A network implementing a particular access technology (such as a Radio Access Network) and connecting the terminal device (mobile station) to the core network.
All-IP Network	An IP-based network that uses IP for transport of all user data and signaling between all network entities, including the user terminal equipment. The All-IP network comprises the access network and the core network.
All-IP Core Network	That part of the All-IP networks that provide control and routing of user data between the access network and the service network.
Authentication	The act of verifying the identity of an entity (e.g., a user, device).
Base Transceiver Station	A piece of radio access network equipment that contains the radios and serves a geographic area.
Call	A session between two or more network entities.
Call Control	The set of functions that allow establishment, management and release of one or more sessions between two or more callable entities.
Handoff	The process by which an air interface circuit between a mobile station and a base station is transferred from the current base station equipment and air interface channel to either a different base station equipment and air interface channel or a different air interface channel on the current base station.
Home Network	The network where the subscriber has a subscription. The concept normally refers to the network owned by a specific carrier, rather than any geographical concept. Thus, home network may be global.
Inter-Access Technology Mobility	The ability of a subscriber to move between access network technologies in real time while maintaining session continuity.

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IP Multimedia Domain	The IP Multimedia Domain is an integral part of cdma2000 system that provides a comprehensive set of multimedia services via signaling and transport protocols defined by 3GPP2 and IETF. The IP Multimedia Domain consists of the services and related functions available within IP-based networks, including call control and mobility management using Mobile IP, SIP, and DIAMETER protocols.
Legacy MS	Any mobile station that supports a TIA/EIA-41 call model.
Legacy MS Domain	The Legacy MS Domain provides call control, service control, and mobility management via the current and evolved versions of the TIA/EIA-41 and TIA/EIA-835 protocols. Evolved legacy services include voice services, data services, and new and evolved interactions between voice and data services (e.g., call waiting interactions). These services and functions will be provided using the evolved cdma2000 family of standards over the air interface, IOS in the RAN, evolved TIA/EIA-41 signaling, evolved TIA/EIA-835 signaling, and IP-based bearer streams and other IP-based signaling in the Core Network. The Legacy MS Domain consists of the services and related functions provided by the call control and mobility management of the current and evolved versions of the TIA/EIA-41, TIA/EIA-835, IOS, and IS-2000 protocols.
Legacy Systems	The mobile system as defined in TSB-100A (Network Reference Model) that supports circuit-mode and packet-mode operations. For example, the network entity for the Legacy System comprises a combination of Mobile Switching Center (MSC), Visitor Location Register (VLR), Home Location Register (HLR), and Authentication Center (AC), Base Station (BS), and Mobile Station (MS). A Legacy System network entity represents a group of functions, not a physical device.

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Mobility	The ability to access services from any point in the network. The degree of service availability may depend on the access network capabilities, as well as any service level agreements between the user's home network and the visited network. Types of mobility include personal mobility, service mobility, and terminal mobility.
Mobility Management	The set of functions used to manage a mobile user moving while engaged in an active service and/or accessing within or outside that user's home network. These functions include handoff as well as communication with the home network for purposes of authentication, authorization, registration and transfer of user information.
Mutual Authentication	The act of two entities verifying the identity of each other.
Personal Mobility	The ability of users to change their association with one or more terminals at any point and time. The user should continue to receive subscribed and otherwise authorized services as supported by the current MS and access network.
Personalized Services	Services that need access to the subscriber profile are dependent on the overall call state (of the user) for reasons of service interaction. An example: a call termination service such as TIA/EIA-41's "Call Forward on Busy".
Point of Attachment Mobility	The ability of a subscriber to use a mobile terminal to gain access to any home or visited network (e.g., roaming).
Quality of Service	A specification of the service performance characteristics of one or more sessions between two or more network entities. QoS Specifies parameters including but not limited to data rate, latency, jitter, delivery assurance.
Radio Access Mobility	The ability of a subscriber to move within or between radio access networks in real time while maintaining a connection.
Radio Access Network	The network that connects radio base stations to the core network. The RAN provides and maintains radio-specific functions, which may be unique to a given radio access technology, that allow users to access the core network.

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Roaming	User's access services while outside of their subscribed home network.
Service Creation	An environment or a set of techniques that allows a service provider to autonomously generate and deploy new network features to be offered to subscribers.
Service Mobility	The ability of a subscriber to access subscribed and otherwise authorized services from any home or visited network.
Session	A logically associated set of communication streams.
Visited Network	The visited network is a carrier's network where a subscriber currently is roaming.

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4 cdma2000 SYSTEM SUPPORT

The cdma2000 System is a third generation (3G) system that employs both packet based protocols and circuit based protocols for operation. The cdma2000System is comprised of Legacy System support, the Legacy MS Domain (LMSD), the IP Multimedia Domain (MMD), and an IP-based Services Subsystem (ISS) that is applicable to both domains. This release contains support for the Legacy System, and limited support for the Legacy MS Domain.

cdma2000

4.1 Release Support for Legacy, LMSD, and MMD CDMA2000® Systems

4.1.1 Legacy System Support

The Legacy System provided by this cdma2000 System Release includes support for mobile stations (MSs) based on TIA/EIA-95 standards, and 3GPP2 C.S0001 through C.S0006 specifications. The Legacy System support uses circuit-based transport for all voice call delivery and features. The Legacy System also provides packet data services that form a foundation for the packet services of the Legacy MS Domain System and the Multimedia Domain System.

The cumulative 3GPP2 specifications included in this cdma2000 System Release provide the ability for an operator to use the Legacy System support to deploy a cdma2000 system.

4.1.2 LMSD Support

The Legacy Mobile Station Domain (Legacy MS Domain or LMSD) provides support for mobile stations that are based on IS-2000 call control and the feature set supported by [N. P0023, P.S0002]. This support makes use of IP-based transport and signaling.

The figure below represents the subset of the full LMSD that is supported in this cdma2000 System Release. The major feature of the LMSD added in this release is the use of IP bearer for Call Delivery. Call Delivery provides the ability for the Originating System, through the use of inter-system IP trunking, to deliver a mobile terminated voice call to a separate Serving System controlled by the same operator.

See section 5 for a complete list of all features provided in this cdma2000 System Release.

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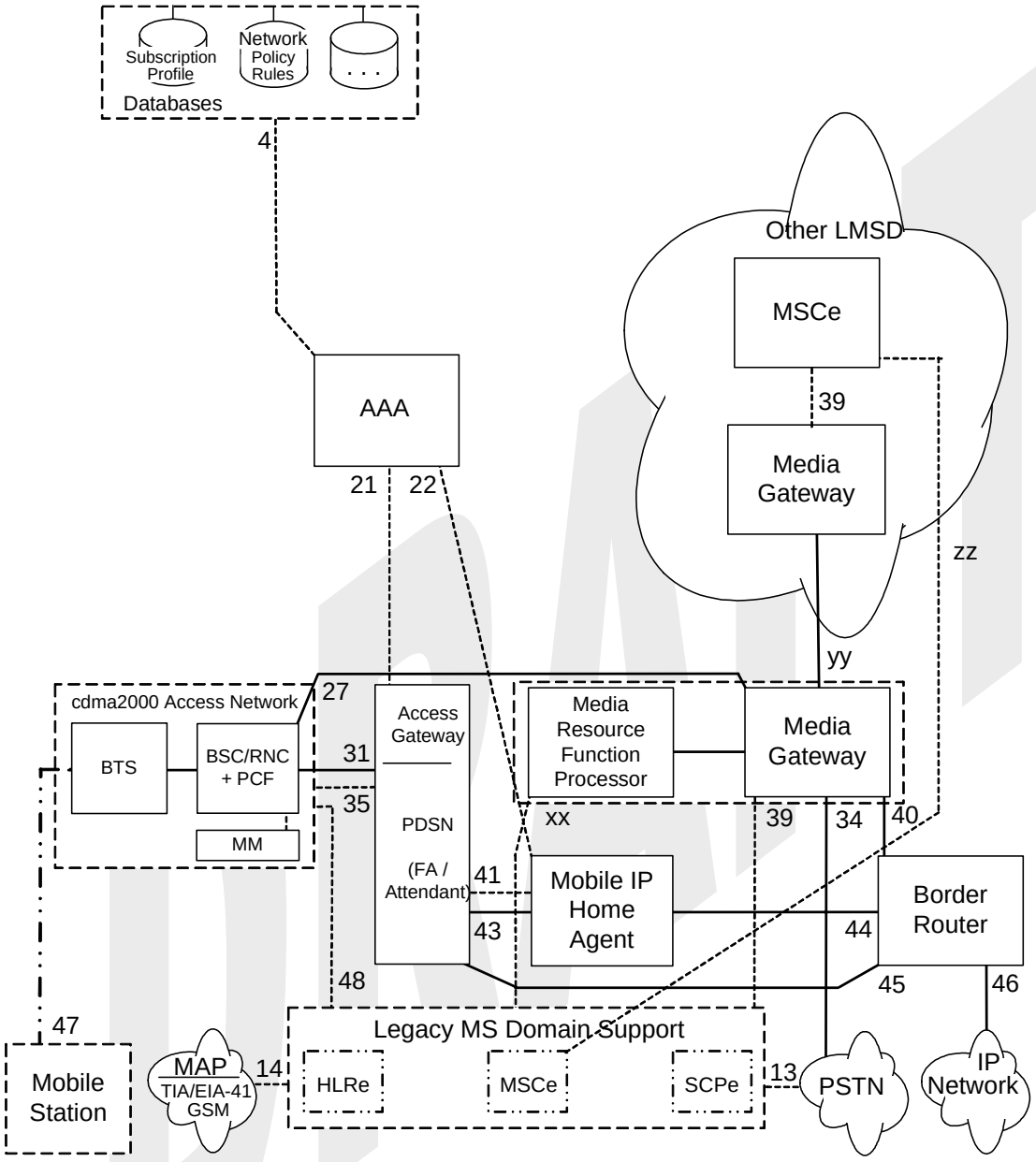

Figure 1 - cdma2000 LMSD Step 1 Network Architecture Model

5 System Release Content and Feature Description

The features and capabilities provided by this cdma2000 System Release are listed in Table 1. This release includes new and enhanced features added since the publication of S.R0003-A: 3GPP2 System Capability Guide - Release B v1.0.; for the list of features in previous releases, please refer to S.R0003-A.

Editor's Note:

All document need to have revision numbers.

Confirm editor's descriptions for TSG-A and TSG-C.

Confirm publication of S.S0084-0, X.S0011-C and X.S0017-0.

Table 1. Features and Descriptions in This Release

Work Item Number	Name	Descriptions	Specs & Reports
3GPP2-00003	Enhanced International Dialing, Calling Number Identification & Callback, Calling Party Category Identification	The feature provides the enhanced international dialing and calling number identification and call back network capabilities and the inter-system operations to enable a wireless system to these capabilities. This feature also provides the inter-system operations that enable identification of the calling party category.	N.S0027-0 v1.0
3GPP2-00009	CDMA Packet Data Services, Phase 1	This feature supports inter-system hand-off of an active packet data stream.	X.S0001-0 v1.0
3GPP2-00012	Data Message Handler	This specification describes the procedures and messages necessary to provide wireless service providers the non-signaling data communications requiring interaction between different wireless systems.	N.S0026-A v1.0
3GPP2-00018	Enhancements to Roamer Database Veri-	An OA&M feature that provides more control over queries to check that roaming data is correctly provi-	N.S0025-A, v1.0

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Work Item Number	Name	Descriptions	Specs & Reports
	fication	sioned.	N.S0025-B v1.0
3GPP2-00026	Legacy MS Domain - Step 1 (LMSD-Step 1)	The LMSD Step 1 feature provides IP transport for inter-system call delivery. This is the first phase of implementation of the full Legacy MS Domain.	S.R0059-0 v1.0, X.S0018-0 v1.0, X.S0011-C
3GPP2-00039	Link Layer Assisted Robust Header Compression (LLA ROHC)	The Link-Layer Assisted Robust Header Compression (LLA-ROHC) feature provides one-way or two-way voice communications by providing for transport of header-compressed or header-removed IP/UDP/RTP packets between the Base Station and the Mobile Station.	S.R0068-0 v1.0, C.S0047-0 v1.0, A.S0011 to 17-A v1.0 (IOS v4.3), X.S0011-C
3GPP2-00049	PDSN Resource Optimization	Defines the scheme for cleanup of unused PPP contexts in the PDSN in a timely fashion. the maintenance of PPP sessions at the PDSN consumes valuable resources. From operational considerations, it is desirable to release idle/unused PPP sessions at the PDSN as soon as possible. This feature optimizes resource utilization in the PDSN by removing stale PPP sessions that are results of dormant inter PDSN handoffs.	X.S0011-C
3GPP2-0063	Packet Prepaid Service in cdma2000 Wireless IP Network	The packet prepaid service allows the subscriber to pay for packet data services prior to usage. A prepaid subscriber establishes an account with the service provider to access packet data services in the home and roaming networks. Charges for packet data services are applied to	X.S0011-C, S.S0084-0

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Work Item Number	Name	Descriptions	Specs & Reports
		the prepaid service account by decrementing the account ing real-time. The prepaid subscriber may be notified about the account information at the beginning, during or at the end of the packet data service. When the account balance is low, the subscriber may be notified so that the subscriber may recharge the account. When the account balance is below a pre-defined threshold, the subscriber's packet data services may be de-authorized.	
3GPP2-2000-001	Support for Common Channel Only Capable Devices (e.g., Telemetry/Paging Services)	The feature provides support for packet data registration and data transmission over Common Channels using Short Data Bursts.	A.S0011 to 17-0 v2.0, C.S0005-B v1.0
3GPP2-2000-003	Rescue Channel	The Rescue Channel feature addresses a standing 4requirement of reducing dropped calls. The concept is to use pre-allocated radio resources at neighboring base stations and have the mobile station and network execute a predetermined procedure to reestablish communication in the event of a call that is in danger of being dropped.	A.S0011 to 17-0 v2.0, C.S0002-B v1.0, C.S0005-B v1.0,
3GPP2-2000-004	Realm Configured Packet Data Session Inactivity Timer	This feature provides a timer provisioned at the AAAL as a part of the overall QoS. The PDSDT values are associated with the realms accessed by the users packet data service.	S.R0033-0 v1.0, A.S0011 to 17-A v1.0 (IOS v4.3), X.S0011-C
3GPP2-2000-005	Access Control Based on Call Type (ACCT)	Provides MS access attempt control based on SO/SO groups. ACCT MSs are not allowed to perform originations for restricted Service	A.S0011 to 17-A v1.0 (IOS v4.3),

Work Item Number	Name	Descriptions	Specs & Reports
		Options. ACCT MSs are capable of determining when ACCT is cancelled or when the MS has moved to a location where ACCT is not active. ACCT condition is signaled on overhead - broadcast channel.	C.S0005-A Release A Addendum 2, S.R0029-0 v1.0
3GPP2-2000-006	OAM&P for cdma2000 (3GPP Delta Specification)	The purpose of this work item is to provide detailed requirements for Fault Management, Configuration Management and Performance Management for cdma2000® systems as well as to define the management interface between Element Management Systems/Functions towards OSS and Network Management Systems, based on relevant 3GPP Release 99 recommendations.	S.S0028-A v3.0
3GPP2-0065	Flexible Rate Data	Flex Rate provides the user with the ability to assign other data rates (e.g., for possible codecs) to the MS with greater granularity than previously allowed in cdma2000®.	A.S0011 to 17-0 v2.0, C.S0005-B v1.0
3GPP2-0066	Voice Over IP (VoIP) - Phase I	Voice over IP (VoIP) uses the Internet Protocol (IP) to transmit voice as packets over an IP network. VoIP can be achieved on any data network that uses IP, like Internet, Intranets and Local Area Networks (LAN). Motivations for Internet telephony include (1) demand for multimedia communication and (2) demand for integration of voice and data networks.	S.R0068-0 v1.0, C.S0047-0 v1.0, A.S0011 to 17-A v1.0 (IOS v4.3), S.R0035-0 v1.0, A.S0011 to 17-0 v2.0,

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Work Item Number	Name	Descriptions	Specs & Reports
			X.S0011-C
3GPP2-0039.1	Multiple Service Instances	Ability of a cdma2000 MS to maintain multiple packet data connections simultaneously.	A.S0011 to 17-A v1.0 (IOS v4.3), S.R0035-0 v1.0, P.S0001-B v1.0, N.S0029-0 v1.0
3GPP2-0039.2	Fast Handoff	This feature provides enhancements required to support fast hand-off in intra-PDSN and inter-PDSN hand-off cases.	S.R0035-0 v1.0, A.S0011 to 17-0 v2.0, P.S0001-B v1.0, N.S0029-0 v1.0
TSGA-001	Other Enhancements to IOS v4.3	This feature provides the following enhancements: (1) IP Transport in the RAN (2) Network Directed System Selection	S.R0035-0 v1.0, A.S0011 to 17-A v1.0 (IOS v4.3)
TSGA-002	Other Enhancements to IOS v4.2	This feature provides the following enhancements: (1) A10-A11 Interface Version Control (2) A8-A9 Interface Version Con-	A.S0011 to 17-0 v2.0

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Work Item Number	Name	Descriptions	Specs & Reports
		trol (3) BI-Directional Generic Routing Encapsulation (GRE) Key Assignment over RP Interface (4) UIM Support (5) Support for Enhanced Rate Adaptation Mode (6) Support of Code Combining Soft Handoff (7) MOB_P_REV of 7 or Greater	
TSGA-004	Tandem Free Operation (TFO) CDMA Only	[Tentative description from the spec by Editor] This is CDMA Tandem Free Operation (TFO) standard version 1.0 in order to adapt the TFO to C.S000(1-6)-A. This feature introduces the Inband Signaling Protocol between Transcoder/Rate Adapter Units for speech traffic channels for the TFO of Speech Codecs within the digital cellular telecommunications system.	A.S0004-A v2.0
TSGA-005	Tandem Free Operation (TFO-B) CDMA Only Rev B	CDMA Tandem Free Operation (TFO) standard version 1.1 contains modifications to support the Selectable Mode Vocoder (SMV) and codec mismatch resolution and optimization.	S.R0014-0 v1.0, A.S0004-B v2.0
TSGA-006	HRPD Addendum	This feature provides high rate packet data transmission to the mobile station at up to 2.4 Mbps in a single 1.25 MHZ CDMA carrier.	A.S0008-0 V3.0
TSGA-007	HRPD Alternative Architecture (aka HRPD	High Rate Packet Data (HRPD) provides packet data services at up to 2.4 Mbps on the forward link. Ser-	A.S0007-A v2.0

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Work Item Number	Name	Descriptions	Specs & Reports
	Phase 2)	vices included are: access authentication, data delivery, session handoff, and status management.	
TSGC-001	Enhancements to C.S000(1-6)-B	This feature provides the following enhancements: (1) Signaling Support for Code Combining Soft Handoff (CCSH) (2) Separate Multiplex Option on Fundamental Channel (FCH) and DCCH (Dedicated Control Channel) in the Service Configuration Record (3) Record Type for Status Request Message (4) Concurrent Services Definition (5) Clarify Reverse Supplemental Channel (REV_SCH) and Forward Supplemental Channel (FOR_SCH) Number of Bits per Frame Indicator	C.S000(1-6)-B v1.0
TSGC-002	Enhancements to C.S000(1-6)-C	This feature provides the following enhancements: (1) Reverse Link Code Assignments (2) Authentication (incorporation of 3GPP AKA) (3) QoS Support (Hooks) (4) Adaptive T_DROP (performance enhancement)	C.S000(1-6)-C v1.0, C.S0017-A
TSGC-004	Circuit Switched Video Conferencing Service	[Tentative description from the spec by Editor]	C.S0042-0 v1.0

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Work Item Number	Name	Descriptions	Specs & Reports
		This specification defines the functional characteristics and requirements of the circuit switched video conferencing services. The service features and system requirements are defined to provide video conferencing services in 3GPP2 wireless telecommunications networks.	
TSGC-005	CDMA Card Application Toolkit (CCAT, in support of R-UIM)	[Tentative description from the spec by Editor] CDMA Card Application Toolkit (CCAT) is a set of commands and procedures for use during the network operation phase of CDMA, in addition to those defined in C.S0023-A (R-UIM). Specifying the interface is to ensure interoperability between an R-UIM and an ME independently of the respective manufacturers and operators. CCAT will allow Service Providers to offer unique services to their subscribers by placing applications they have designed (or third party applications) on the R-UIM that would function on any particular manufacture's ME that supports the Toolkit features.	C.S0035-0 v1.0
TSGC-006	Broadcast SMS	The Broadcast SMS feature provides content providers with the ability to send short messages to all eligible receivers within a certain area by use of SMS messages broadcast on appropriate radio channels. Example uses of Broadcast SMS include: advertising, weather, traffic, stock quotes, parking availability, etc.	C.S0015-A v1.0

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Work Item Number	Name	Descriptions	Specs & Reports
TSGC-007	Data Services (technical updates)	[Tentative description from the spec by Editor] This document specifies procedures for Radio Link Protocol Type 3 (RLP). Radio Link Protocol Type 3 is used with a cdma2000 Traffic Channel to support CDMA data services.	C.S0017-0-2 v5.0
TSGC-008	R-UIM, Revision A	UIM support provides the ability to move a user's identity from one mobile device to another by removing and inserting a chip into the handset.	C.S0023-A v1.0, N.S0003-0 v1.0
TSGC-009	Test Data Service Option (TDSO) Revision 0, Point Release v2.0	[Tentative description from the spec by Editor] This document specifies procedures for the Test Data Service Option (TDSO). The TDSO is used to allow verification of the physical layer performance frame error rate (FER) and protocol data unit (PDU) error rate (PER) of cdma2000 physical channels.	C.S0026-0 v2.0
TSGC-010	TAS Revision 0, Point Release 3.0	[Tentative description from the spec by Editor] This standard is a companion to the cdma2000 high rate packet data standards. This specification provides a set of procedures that the access terminal and the access network can use to conduct the access terminal minimum performance tests in a factory/laboratory environment. It also allows measurements of certain forward and reverse link performances in a field	C.S0029-0 v3.0

Work Item Number	Name	Descriptions	Specs & Reports
		environment.	
TSGC-012	Parameter Value Administration, Revision D	[Tentative description from the spec by Editor] This document assigns parameter values (e.g., service options and *Data Burst Message* burst types) within certain cdma2000 specifications for standard and for proprietary usage.	C.R1001-D v1.0
TSGN-005	Open Service Access (OSA)	The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e. the OSA Application Programming Interfaces (APIs). These APIs are applicable to the 3GPP2 network architecture described in P.S0001-B, S.R0037-0, X.S0013. It is intended that all upgrades to the 3GPP TS 29.198 series Release 5 specification will also apply.	X.S0017-0
TSGP-001	Ipv6 Mobility Support	Simple IPv6 (RFC 2460) Service refers toa service in which an MS is assigned an IP address and is provided IP routing service by an access provider network. The MS retains its IP address as long as it is served by a radio network that has connectivity to the address assigning PDSN. There is no IP address mobility beyond this PDSN.	P.S0001-B v1.0
TSGP-003	Flow Mapping and Treatment	This optional feature adds signaling to control the flow of packets between the PDSN and the MN in order to help minimize performance impacts due to packet losses. Flow	X.S0011-C

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Work Item Number	Name	Descriptions	Specs & Reports
		control is triggered through the use of high/low watermarks for the PCF/SDU buffer. It also provides a feedback mechanism to the PDSN when packet loss occurs. This is beneficial when used to help resyn-cronize state information for data compression protocol.	
TSGP-004	Other Enhancements to P.S0001-B	Includes: Header Compression, 1xEV-DO, IP Reachability Service, Accounting Enhancements	X.S0011-C
TSGS-001	Common Cryptographic Algorithms	This document provides detailed cryptographic procedures for wire-less system application. The docu-ment details specification for CAVE algorithm, A-Key procedures, SSD Generation and Update, CMEA/ECMEA Encryption Key, VPM generation Procedures, WIKEY procedures, Enhanced Voice and Data Privacy (SCMEA key generation code and Enhanced Voice Privacy). Text Vectors for above are also specified.	S.S0053-0 v1.0
TSGS-002	Interface Specification for Common Crypto-graphic Algorithms	This specifications document details the interfaces to cryptographic pro-cedures for 3GPP2 wireless system applications. These procedures are used to perform the security ser-vices of mobile station authentica-tion, subscriber message encryp-tion, encryption key and subscriber voice privacy key generation within wireless equipment. This document is a companion document to ***S.S0053***, where the cryptographic procedures are described in details.	S.S0054 –0 v1.0

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Work Item Number	Name	Descriptions	Specs & Reports
TSGS-003	Enhanced Cryptographic Algorithms	This specifications document details the enhanced cryptographic procedures for 3GPP2 wireless system applications. These procedures are used to perform the security services of mutual authentication between mobile stations and base stations, subscriber message encryption, and key agreement within wireless equipment. The following cryptographic procedures are detailed: Enhanced Hash Algorithm (SHA-1 based), Authentication and Key Agreement procedures (AKA), Enhanced Voice and Data Privacy (ESP Rijndael based cryptographic procedures). In addition, this specification documents provides reference implementation for CDMA Enhanced Privacy (ESP procedures) and SHA-based AKA functions (f0-f5). Test Vectors for the above are also specified.	S.S0055-0 v1.0
TSGX-001	Wireless IP Network Standard	This provides the following features: (1) Simple IP and Mobile IP Access services (2) Packet Data Mobility and Resource management (3) Quality of Service and Header Reduction (4) Accounting Services and RADIUS VSAs	X.S0011-C

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6 ACRONYMS

µs	Microsecond (10^{-6} second).
2G	Second Generation
3G	Third Generation.
3G-IOS	Third Generation InterOperability Specification
3GPP	Third Generation Partnership Project (ETSI driven)
3GPP2	Third Generation Partnership Project (ANSI driven)
AAA	Authentication, Authorization and Accounting
AAL	ATM Adaptation Layer.
AAL2	ATM Adaptation Layer type 2
AAL5	ATM Adaptation Layer type 5
ABR	Average Bit Rate.
AC	Authentication Center
ACCOLC	ACCess Over Load Class.
ACCT	Access Control based on Call Type
ACELP	Adaptive Code Excited Linear Prediction.
ACF	Authentication Control Function
ACH	Access Channel
Ack	Acknowledgement
ACP	Adjacent Channel Power
ACRE	Authentication & Call Routing Equipment
AD	Abbreviated Dialing
ADDS	Application Data Delivery Service
ADPCM	Adaptive Differential Pulse Code Modulation
ADS	Asynchronous Data Service
AGW	Access Gateway (including mobile IP foreign agent)AH
	Authentication Header
AH	Answer Hold
AHAG	Ad Hoc Authentication Group (TR45)
AHG	AdHoc Group
AI	Air Interface.
AIN	Advanced Intelligent Network
AK	Acknowledge (Data)
A-key	Authentication key.
AL	Air Link
AM	Amplitude Modulation.
AMA	Automatic Message Accounting
AMPS	Advanced Mobile Phone System.
ANID	Access Network Identifiers
ANLYZD	Analyzed Information INVOKE
ANSI	American National Standards Institute
ANZT	Analyzed Information Timer
AOC	Advice of Charge
AON	All Or None parameter
ARIB	Association of Radio Industries and Businesses (Japan)
ARQ	Automatic Repeat Request
ASR	Automatic Speech Recognition
Async	Asynchrounous
ATIS	Alliance for Telecommunications Industry Solutions
ATM	Asynchronous Transfer Mode
AUTHR	Authentication Response
AWGN	Additive White Gaussian Noise
AWI	Alert With Information.
BCCH	Broadcast Control Channel
BCD	Binary Coded Decimal
BCH Code	Bose-Chaudhuri-Hocquenghem Code
BCM	Basic Call Manager
BCSM	Basic Call State Model
BDISCT	Bulk Disconnection Timer
BER	Bit Error Rate.
BFI	Bad Frame Indicator
BFT	Binary File Transfer.
BGCF	Breakout Gateway Control Function.
B-ISDN	Broadband-Integrated Services Digital Network
BLOB	Block of Bits
bps	Bits per second.
BPSK	Biphase shift keying.
BR	Border Router
BRAID	The Motorola data encryption algorithm's name refers to braiding, as in hair.
BS	Base Station
BSAP	Base Station Application Part
BSC	Base Station Controller
BSMAP	Base Station Management Application Part
BSMC	Base Station Manufacturer Code
BSMCS	BSMC Status Parameter
BTA	Basic Trading Area
BTS	Base Transceiver System
BTTS	Broadcast Transport Teleservice Capability
BULKDISCONNN	Bulk Disconnection INVOKE
bulkdisconn	Bulk Disconnection RETURN RESULT
C/I	Carrier/Interference ratio
c2KAN	cdma2000® Access Network
CAC	Carrier Access Code
CACH	Channel Assignment Channel
CALEA	Communication Assistance to Law Enforcement Act.
CAPCS	Cellular Auxiliary Personal Communications Service
CAVE	Cellular Authentication & Voice Encryption
CBR	Constant Bit Rate
CC	Connection Confirm
CC	Call Control
CCA	Common Cryptographic Algorithm
CCCH	Common Control Channel
CCDIR	Call Control Directive INVOKE
ccdir	Call Control Directive RETURN RESULT
CCDT	Call Control Directive Timer
CCF	Call Control Function
CCITT	The International Telegraph and Telephone Consultative Committee. Now called the ITU.
CCM	Control Channel Mode Parameter
CCPD	Common Channel Packet Data
CCSH	Code Combining Soft Handoff
CDCP	Call Data Collection Point
CDG	CDMA Development Group
CDGP	Call Data Generation Point
CDIS	Call Data Information Source.
CDMA	Code Division Multiple Access
CDMABC	CDMA Band Class parameter
CDMABCI	CDMA Band Class Information parameter
CDMABCL	CDMA Band Class List parameter
CDMACR	CDMA Connection Reference parameter
CDMACRINFO	CDMA Connection Reference Information parameter
CDMACRLIST	CDMA Connection Reference List parameter
CDMAS	CDMA State parameter
CDMASCM2	CDMA Station Class Mark 2 parameter
CDMASCR	CDMA Service Configuration Record parameter
CDMASERCONF	CDMA Service Configuration Record parameter
CDMASEROPT	CDMA Service Option parameter
CDMASEROPTLIST	CDMA Service Option List parameter
CDMASO	CDMA Service Option parameter
CDMASOL	CDMA Service Option List parameter
CDPD	Cellular Digital Packet Data

CDR	Call Detail Record
CDRP	Call Data Rating Point
CE	Channel Element
CELP	Code Excited Linear Prediction.
CFRT	Connection Failure Report Timer
CHANGE	Change parameter
CHAP	Challenge Handshake Authentication Protocol
CHGSRVAT	Change Service Attribute parameter
CI	Cell Identity
CIC	Carrier ID Code
CIC	Circuit Identity Code
CID	Connection Identifier (used with reference to AAL2)
CIE	Content of Information Element
CITEL	Commission InterAmericanna de Telecommunications Association
CL	Connectionless
CLASS	Custom Local Area Signaling Services.
CLI	Calling Line Identity
CM	Connection Management
CMEA	Cellular Message Encryption Algorithm
CMODES	Confidentiality Modes parameter
CMRS	Commercial Mobile Radio Service.
CNAP	Calling NAme Presentation
CNAR	Calling Name Restriction
CNID	Control Network ID parameter
CNIP	Calling Number Identification Presentation
CO	Connection Oriented
COUNT	Call History Count
CPCCH	Common Power Control Channel
CPE	Customer Premise Equipment
CR	Connection Request
CRC	Cyclic Redundancy Code
CREF	Connection Refused
CRID	Call Recovery ID parameter
CRIDLIST	Call Recovery ID List parameter
CRL	Certificate Revocation List
CRM	Circuit Reservation Message
CRRT	Call Recovery Report Timer
CS	Cryptosync
CS-2	Capability Set 2
CSC	Customer Service Center
csch	Common Signaling Channel
CS-n	Capability Set n
CT	Cypher Text
CTIA	Cellular Telecommunication Industry Association
CTIA	Cellular Telecommunications Industry Association
CTO	Chief Technical Officers
CTS	CDMA Tiered Services
CVSE	Critical Vendor/Organization Specific Extension
CW	Call Waiting CWTS China Wireless Telecommunication Standard Group
DAE	Data Access Element parameter
DAEL	Data Access Element List parameter
DAI	Data Available Indicator
D-AMPS	Digital Advanced Mobile Phone System.
DB	DatabasesdBc The ratio (in dB) of the sideband power of a signal, measured in a given bandwidth at a given frequency offset from the center frequency of the same signal, to the total inband power of the signal. .
dBm	Decibels referenced to one milliwatt
dBm/Hz	Decibels per Hertz - a measure of power spectral density
dBW	A measure of power expressed in terms of its ratio (in dB) to one Watt.
DCC	Digital Control Channel.
DCCH	Dedicated Control Channel
DCDC	Desired Characteristics & Decision Criteria
DCE	Data Circuit-terminating Equipment
DCS	Digital Cellular System (1800)
DDR	Document Discrepancy Report
DECT	Digital European Cordless Telephone
DFP	Distributed Functional Plane
DISCO	Domestic-International Satellite service Consolidation.
DKEY	DataKey parameter
DLCI	Data Link Connection Identifier
DLR	Destination Local Reference
DMH	Data Message Handler
DN	Directory Number.
DO	Data Optimization DOI Domain of Interpretation
DP	Detection Point
DPC	Destination Point Code
DPP	Data Privacy Parameters
DQPSK	Differential Quadrature Phase Shift Keying
DRAM	Dynamic Random Access Memory
DRS	Data Ready to Send
DS	Direct Spread
DS-41	Direct Spread (ANSI)-41. DS0
DSS2	Digital Subscriber Signaling Number 2
dsch	Dedicated Signaling Channel
DT1	Data Transfer 1
DT2	Data Form 2
DTAP	Direct Transfer Application Part
DTC	Digital Traffic Channel
dtch	Dedicated Traffic Channel
DTE	Data Terminal Equipment
DTMF	Dual Tone Multi-Frequency
DTV	Digital Television
DTX	Discontinuous TransmissionE1 E1-type Digital Carrier
E2E	End-to-End
E911	Enhanced 911
EA	Entropy Accumulator
Eb	The energy of an information bit.
E_b/N_t	The ratio in dB of the combined received energy per bit to the effective noise power spectral density.
E_c/I_0	The ratio in dB between the pilot energy accumulated over one PN chip period (E_c) to the total power spectral density (I_0) in the received bandwidth.
ECI	Error Concealment Indicator
ECR	Enhanced Call Routing
ECSP	Electronic Communications Service Providers
ED	Expedited Data
EDACP	Enhanced Digital Access Communications System
EDP	Event Detection Point
EDP-N	Event Detection Point - Notification
EDP-R	Event Detection Point - Request
EIA	Electronics Industry Association
EIB	Erasure Indicator Bit
EIR	Equipment Identity Register
EIRP	Effective Isotropic Radiated Power
EPSMM	Extended Pilot Strength Measurement Message
ER	Enhanced Roaming
ERAM	Enhanced Rate Adaption Mode
ERI	Enhanced Roaming Indicator
ERMES	European Radio Messaging System
ERP	Effective Radiated Power
ESA	Enhanced Security Algorithm
ESC	Extended Spectrum Capacity
ESI	Electronic Surveillance Interface
ESMR	Enhanced Specialized Mobile RadioESN Electronic Serial Number
ESN	Electronic Serial Number
ESP	Encapsulating Security Payload
ESP	Enhanced Subscriber Privacy
ETACS	Extended Total Access Communications Systems

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ETSI	European Technical Standards Institute.
EVM	Error Vector Magnitude
EVRC	Enhanced Variable Rate Codec
EXESCR	Execute Script parameter
FA	Foreign Agent
FAC	Foreign Agent Challenge
FACCH	Fast Access Control Channel
F-ACH	Forward Access Channel
FAILCAUSE	Failure Cause parameter
FAILTYPE	Failure Type parameter
FAM	Fleet and Asset Management
FAMOUS	Future Advanced MObile Universal Service
F-BCCH	Forward Broadcast Control Channel
FBI	Federal Bureau of Investigation
F-CACH	Forward Common Assignment Channel
FCC	Federal Communications Commission
F-CCCH	Forward Common Control Channel
FCH	Fundamental Channel
F-CPCCH	Forward Common Power Control Channel
F-CPCSCH	Forward Common Power Control Sub-channel
f-csch	Forward Common Signaling Channel
F-DCCH	Forward Digital Control Channel.
FDD	Frequency Division Duplex
FDMA	Frequency Division Multiple Access.
f-dsch	Forward Dedicated Signaling Channel
f-dtch	Forward Dedicated Traffic Channel
FE	Functional Entity
FEATIND	Feature Indicator parameter
FER	Frame Error Rate
FHMA	Frequency Hopping Multiple Access
FIM	Feature Interactions Manager
FM	Feature Manager
FM	Frequency Modulation
FNPRM	Future Notice of Proposed Rule Making
FOCC	Forward Analog Control Channel
FPC	Forward Power Control
F-PCH	Forward Paging Channel
FPH	FreePhone
FPLMTS	Future Public Land Mobile Telecommunications Systems – now IMT-2000
FQI	Frame Quality Indicator
FSK	F Shift Keying
FSLP	Feature Service Logic Program
FSN	Frame Sequence Number
FTAG	Fraud Technical Advisory Group
FTP	File Transfer Protocol
FVC	Forward Analog Vice Channel
FWA	Fixed Wireless Access
FWI	Flash With Information
GAOM	Global Action Overhead Message
GECO	Global ECO (Emergency Call Origination)
GEO	Geostationary Orbit
GHz	GigaHertz (10^9 Hertz)
GMSK	Gaussian Minimum Shift Keying (GSM)
GPS	Global Positioning System
GR	Gain Ratio
GRE	Generic Routing Encapsulation
GSM	Formerly: Group Special Mobile. Now: Global System for Mobile Communications
GT	Global Title parameter
HA	Mobile IP Home Agent
HAC	Hearing Aid Compatibility
HCO	Hearing Carry Over
HDML	Handheld Device Markup Language
HLR	Home Location Register
HMAC-SHA	Hash-based Message Authentication Code - SHA
HO	Hand Off
HRPD	High Rate Packet Data
ICGI	IS-41 whole Cell Global Identification
ICO	Intermediate Circular Orbit
ICS	Incoming Call Screening
IDEN	Integrated Digital Enhanced Network
IE	Information Element
IEI	Information Element Identifier
IETF	Internet Engineering Task Force
IFAST	Formerly "International Forum on AMPS Standards Technology"; recently changed to "International Forum on ANSI-41 Standards Technology"
IIF	Interoperability and Interworking Function
IKE	Internet Key Exchange
ILEC	Incumbent Local Exchange Carrier
IM	InterModulation
IMBE	Improved Multi-Band Excitation
IMHO	In My Humble Opinion
IMS	Intersystem Messaging Security
IMSCCID	Inter MSC Circuit Identification
IMSI	International Mobile Station Identifier
IMT	International Mobile Telecommunications
IMT-2000	International Mobile Telecommunications – 2000
IMTA	International Mobile Telecommunications Association
IN	Intelligent Network
INAP	Intelligent Network Application Protocol
IOS	Interoperability specification
IP	Internet Protocol
IP	Intelligent Peripheral
IPCP	IP Control Protocol
IPE	In Path Equipment
IPR	Intellectual Property Rights
IPMMC	IP Multimedia Client
IRM	International roaming MIN
IRT	Instruction Request Timer
IS	Interim Standard
ISAKMP	Internet Security Association and Key Management protocol
ISD	International Standards Development
ISDN	Integrated Services Digital Network
ISLP	InterSystem Link Protocol
ISLPINFO	ISLP Information
ISMA	Interference Sense Multiple Access
ISO	International Standards Organization
ISP	Internet Service Provider
IT	Inactivity Test
ITAR	International Traffic in Arms Regulations
ITU	International Telecommunications Union
ITU-R	International Telecommunications Union - Radio
ITU-T	International Telecommunications Union - Telephone
IWF	Interworking Function
JPC	Joint Projects Committee
JTACS	Japan Total Access Communications Systems
JTC	Joint Technical Committee
kbps	Kilobits (10^3) bits per second
kHz	KiloHertz (10^3 Hertz)
KSG	Key Stream Generator
ksps	Kilo-symbols per second (10^3 symbols per second)
L1	Layer 1
L2	Layer 2
L3	Layer 3
LAC	Link Access Control
LAES	Lawfully Authorized Electronic Surveillance
LAN	Local Area Network.
LATA	Local Access Transport Area
LBC	Location-Based Charging
LBSS	Location Based Services System
LCM	Long Code Mask
LEC	Local Exchange Carrier
LEO	Low Earth Orbit
LI	Length Indicator
LLA-ROHC	Link Layer Assisted Robust Header Compression

LMCC	Land Mobile Communications Council
LMDS	Local Multipoint Distribution Service
LMSD	Legacy Mobile Station Domain
LPC	Linear Predictive Coding
LPDE	Location Position Determining Equipment
LPM	Logical-to-Physical Mapping
LRF	Location Registration Function
LRFH	Location Registration Function – HLR
LRFV	Location Registration Function – VLR
LSB	Least Significant Bit
LSI	Location-Based Information Service
LTU	Logical Transmission Unit
MAC	Media Access Control
MAC	Medium Access Control
MACF	Mobile Station Access Control Function
MAP	Mobile Application Part
MC	Multi-Carrier
MC	Message Center.
MC-41	Multi-Carrier (ANSI)-41
MCC	Mobile Country Code
Mcps	Megachips per second (10^6 chips per second)
MCSB	Message Control and Status Block
MDN	Mobile Directory Number
MGCF	Media Gateway Control Function
MGW	Media Gateway
MHz	Megahertz (10^6 Hertz)
MIN	Mobile Identification Number
MIP	Mobile IP
MIPS	Millions of Instructions Per Second
MM	Mobility Management
MMD	Multimedia Domain
MNC	Mobile Network Code
MNE	Mobile Network Entity
MODRQ	Modification Request parameter
MODRQL	Modification Request List parameter
MODRSL	Modification Result List parameter
MOPS	Millions of Operations Per Second.
MOS	Mean Opinion Score
MoU	Memo of Understanding
MPEG	Motion Picture Expert Group
MRFC	Media Resource Function Controller
MRFP	Media Resource Function Processor
ms	Millisecond (10^{-3} second)
MS	Mobile Station
MSA	Metropolitan Statistical Area
MSB	Most significant bit
MSC	Mobile Switching Center
Msg	Message
MSID	Mobile Station Identifier
MSIN	Mobile Station Identifier Number
MT	Mobile Terminal
MT	Modify Timer
MTA	Major Trading Area
MTn	Mobile Terminal n
MTP	Message Transfer Part
MTSO	Mobile Telephone Switching Office
MUX	Multiplexer
MWI	Message Waiting Indication
MWIF	Mobile Wireless Internet Forum
NADC	North American Digital Cellular
NAG	Network Reference Model (NRM), Acronyms & Definitions Group
NAI	Network Access Identifier
NAM	Number Assignment Module
NAMPS	Narrowband Advanced Mobile Phone Service
NANP	North American Numbering Plan
NCG	Numbering Consulting Group
NDSS	Network Directed System Selection
NE	Network Entity
NID	Network Identification
NIST	National Institute for Standards and Technology.
NMAG	Network Management Ad Hoc Group.
NMSI	National Mobile Station Identity
NMT	Nordic Mobile Telephone
NNI	Network to Network Interworking
NP	Non-Public Service Mode
NPDATA	Non Public Data Parameter
NPN	Network Provided Number
NPR	Noise Power Ratio
NRM	Network Reference Model
ns	Nanosecond (10^{-9} second)
NSA	National Security Agency
NSMA	National Spectrum Management Association
NTIA	National Telecommunication Industry Association
NVSE	Normal Vendor Specific Extension
OA&M	Operations, Administration, and Maintenance
OAM&P	Operations Administration, Maintenance and Provisioning
OATS	Over-the Air Activation TeleService
OC3	Optical Carrier Level 3
OLC	Overload Class
OLT	Outer Loop Threshold
OMT	Overhead Message Train
ORYX	AT&T data algorithm - according to Jim Reeds (AT&T-WS), it stands for a goat-like animal with long and sharp horns. SM.
OS	Operations System
OSA	Open Service Access
OSA-AS	OSA-Application Server
OSA-SCS	OSA-System Capability Server
OSF-EML	OSF-Element Management Layer OSF-NML/OSS OSF-Network Management Layer / Operations Support System
OTA	Over-the-Air
OTAF	Over-the-Air Function
OTAPA	Over the Air Parameter Administration
OTASP	Over-the-Air Service Provisioning
OTD	Orthogonal Transmit Diversity
PACA	Priority Access Channel Assignment
PACS	Personal Access Communications System
PAMR	Public Access Mobile Radio
PANID	Previous Access Network Identifiers
PAP	Password Authentication Protocol
PATE	Packet Arrival Time Error
PC	Power Control
PCF	Packet Control Function
PCH	Paging Channel
PCI	Protocol Control Information
PCIA	Personal Communications Industry Association
PCM	Pulse Coded Modulation
PCMCIA	Personal Communications Manufacturer's Industry Association.
PCS	Personal Communications Services
PCS	Personal Communications System
PCSC	Personal Communications Switching Center
PDA	Personal Digital Assistant
PDE	Positioning Determining Element
PDF	Portable Document Format
PDF	Policy Decision Function
PDN	Packet Data Network (Internet/Intranet/Enterprise)
PDNR	Preliminary Draft of New Recommendation
PDSDT	Packet Data Session Dormancy Timer
PDSN	Packet Data Serving Node
PDU	Protocol Data Unit
PFC	Paging Frame Class Parameter
PHS	Personal Handyphone System
PIC	Point In Call
PIMM	Point In Mobility Management
PIN	Personal Identification Number
PL	Physical Layer

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PL	Programming Lock
PLD	Position Location Data
PLMN	Public Land Mobile Network
PLMTS	Public Land Mobile Telecommunications Systems
PM	Phase Modulation
PMC	Packet Mode Channel
PN	Project Number
PN	Pseudo Noise
POP	Point of Presence
POPs	Persons of Population
POTS	Plain Old telephone Service
P-P	PDSN-PDSN
PPC	Pre-Paid Charging
PPDN	Public Packet Data Network
PPM	Parts per million
PPP	Point-to-Point Protocol
PRC	Premium Rate Charging
PRINFO	PSID/RSID Information Parameter
PRLIST	PSID/RSID List Parameter
PS	Position Server
PSAP	Public Safety Answering Point
PSI	PACA Supported Indicator
PSID	Private System Identifier
PSPDN	Public Switched Packet Data Network.
PSTN	Public Switched Telephone Network
PT	Plain Text
PUB	Post Usage Billing
PUF	Power Up Function
PVC	Permanent Virtual Circuit
PWR	Power
PZID	Packet Zone Identifier
Q13	Speech Codec Service Option for ANSI-95 at 13.3 Kbps
Q8	Speech Codec Service Option for ANSI-95 at 8 Kbps
Q-FIN	ITU equivalent to TIA Stage 1.
QCELP	QUALCOMM Code Excited Linear Prediction
QIB	Quality Indicator Bit
QOF	Quasi-Orthogonal Function
QoS	Quality of Service
QPCH	Quick Paging Channel
QPSK	Quadrature phase shift keying
R&O	Report & Order (FCC)
RAAC	Reverse Analog Control Channel
RACF	Radio Access Control Function
R-ACH	Reverse Access Channel
RADIUS	Remote Authentication Dial In User Service
RAM	Random Access Memory.
RAN	cdma2000® Radio Access Network
RAND	Random Variable
RANDBS	Random Variable – BS Challenge
RANDC	Random Confirmation
RANDSSD	Random SSD
RANDU	Random Variable - Unique Challenge
RAST	RAdio STandards
RBOC	Regional Bell Operating Company
RC	Radio Configuration
RC-PDSDT	Realm Configured Packet Data Session Dormancy Timer
R-CCCH	Reverse Common Control Channel
RCD	Resource Configuration Database
RCF	Radio Control Function
r-csch	Reverse Common Signaling Channel
RDA	Rate Determination Algorithm
R-DCCH	Reverse Digital Control Channel
r-dsch	Reverse Dedicated Signaling Channel
r-dtch	Reverse Dedicated Traffic Channel
R-EACH	Reverse Enhanced Access Channel.
REVAL	Recommendations on the Procedures for Evaluation of Radio Transmission Technologies for FPLMTS
RF	Radio Frequency
RFC	Request For Comment
RLC	Release Complete (SCCP)
RLP	Radio Link Protocol
RLSD	Release (SCCP)
RMS	Root Mean Square
RN	Radio Network
RNC	Radio Network Controller (DS-41)
ROLR	Receive Objective Loudness Rating
RPE-LTP	Regular Pulse Excited LPC with Long Term Protection
RPC	Reverse Power Control
RRC	Radio Resource Control Function
RRP	Mobile IP Registration Reply
RRQ	Mobile IP Registration Request
RSA	Rivest, Shamir and Adleman – public key algorithm
RSA	Rural Service Area
RSAG	Radio Spectrum Advisory Group
RSC	Reset Confirm
RSID	Residential System Identifier
RsMA	Reservation Multiple Access
RSR	Reset Request
RSSI	Received Signal Strength Indicator
RTF	Radio Terminal Function
RTT	Radio Transmission Technology
RUAC	Rejection of Undesired Annoying Calls
R-UIM	Removable User Identity Module
RVC	Reverse Analog Voice Channel
SA	Security Association
SAC	Subscriber Access Control
SACCH	Slow Access Control Channel
SAP	Service Access Point
SAR	Segmentation and Reassembly
SAT	Supervisory Audio Tone
SBSL	Switch-Based Service Logic
SC	Smart Card
SCCH	Supplemental Code Channel
SCCP	Signaling Connection Control Part
SCD	Satellite Communications Division
SCE	Service Creation Environment
SCEF	Service Creation Environment Function
SCF	Service Control Function
SCFT	Service Control Function Timer
SCH	Supplemental Channel
SCI	Synchronized Capsule Indicator Bit
SCM	Station Class Mark
SCM	Session Control Manager
SCP	Service Control Point
SCRARG	Script Argument parameter
SCRNAME	Script Name parameter
SCRRESULT	Script Result parameter
SDAE	Service Data Access Element parameter
SDAEL	Service Data Access Element List parameter
SDB	Short Data Burst
SDBTS	Short Data Burst Tele-Service
SDCC	Supplementary Digital Color Code
SDF	Service Data Function
SDR	Service Data Result parameter
SDRL	Service Data Result List parameter
SDU	Service Data Unit (ATM)
SDU	Selection/Distribution Unit
SEAD	Software Encryption Algorithm for Data
SERVRSLT	Services Result Parameter
SG	Study Group
SHA-1	Secure Hash Algorithm -1
SID	Silence Descriptor
SID	System Identification
SIM	Service Interactions Manager
SIM	Subscriber Identity Module

SIP	Session Initiation Protocol
SIP-AS	SIP Application Server
SIR	Signal to Interference Ratio
SLC	Sector Link Count
SLP	Service Logic Program
SLPI	Service Logic Program Instance
SLR	Source Local Reference
SLS	Signaling Link Selection
SLTM	Signaling Link Test Message
SM	Switching Manager
SMAF	Service Management Access Function
SME	Short Message Entity
SME	Signal Message Encryption
SMF	Service Management Function
SMR	Specialized Mobile Radio.
SMS	Service Management System
SMS	Short Message Service
SMS-MO	SMS Mobile Originated
SMS-MT	SMS Mobile Terminated
SMV	Selectable Mode Vocoder
SN	Service Node
SNAP	Sub Network Attachment Point
SNHC	Synthetic/Natural Hybrid Coding
SO	Service Option
SOC	System Operator Code
SOCI	Service Option Connection Identifier
SOCS	SOC Status Parameter
SOG	Subsystem Out-of-service Grant
SOM	Start of Message (bit).
SOR	Subsystem Out-of-service
SP	Standards Proposal
SP	Signaling Point
SPASM	Subscriber Parameter Administration Security Mechanism
SPC	Service Programming Code
SPI	Security Parameter Index
SPL	Service Programming Lock.
sps	Symbols per second
SR	Spreading Rate
SR1	Spreading Rate 1
SR3	Spreading Rate 3 (3X)
SRAM	Static Random Access Memory
SRBP	Signaling Radio Burst Protocol
SRD	Standards Requirements Document
SRF	Specialized Resource Function
SRFDT	SRF Directive Timer
SRNC-ID	Source Radio Network Controller Identifier
S-RNTI	Source Radio Access Network Temporary Identifier
SS7	Signaling System 7
SSADT	Service Specific Assured Data Transfer
SSD	Shared Secret Data
SSF	Service Switching Function
SSFT	Service Switching Function Timer
SSM	Switching State Model
SSN	Sub-System Number
SSP	Service Switching Point
SSPR	System Selection for Preferred Roaming
SSSAR	Service Specific Segmentation and Reassembly
SSTED	Service Specific Transmission Error Detection
SSUI	Standard Subscriber Unit Interface.
ST	Search Timer
STG	Science & Technology Group (CTIA)
STP	Signaling Transfer Point
STS	Space Time Spreading
STU	Secure Telephone Unit
SVC	Switched Virtual Connection
SWG	Sub-Working Group
SYSCAP	System Capabilities
SZRT	Seize Resource Timer
T1	T1-type Digital Carrier
T3	T3-type Digital Carrier
T_Bits	Time Alignment Bits
TA	Terminal Adapter
TACS	Total Access Communications Systems
TCAP	Transaction Capability Application Part
TCAU	Telecommunications Contract & Audit Unit (FBI)
TCH	Traffic Channel
TCME TFO	Circuit Multiplication Equipment
TCP	Transmission Control Protocol
TCP/IP	Transport Control Protocol / Internet Protocol
TD	Transmit Diversity including OTD and STS
TDD	Telecommunications Device for the Deaf
TDD	Time Division Duplex
TDP	Trigger Detection Point
TDP-N	Trigger Detection Point - Notification
TDP-R	Trigger Detection Point - Request
TDSO	Test Data Service Option
TDT	T Disconnect Timer
TE	Terminal Equipment
TEn	Terminal Equipment n
TETRA	Terrestrial Trunked Radio
TFA	Transfer-Allowed Signal
TFO	Tandem Free Operation
TFP	Transfer-Prohibited Signal
TFR	Transfer-Restricted Signal
TG	Task Group
TIA	Telecommunications Industry Association
TILU	Telecommunications Industry Liaison Unit (FBI)
TINA-C	Telecommunications Information Networking Architecture Consortium
TLDN	Temporary Local Directory Number
TLV	Type Length Value
TMSI	Temporary Mobile Station Identification
TOD	Time of Day parameter
TOI	Third Order Intercept.
TOLR	Transmit Objective Loudness Rating
TR	Transmit-Receive (as in TR45)
TRAU	Transcoder and Rate Adaptor Unit
TRIGADDRLIST	Trigger Address List parameter
TRIGCAP	Trigger Capability parameter
TRIGLIST	Trigger List parameter
TRIGTYPE	Trigger Type parameter
TRS	Telecommunication Relay Service.
TRU	Transmit-Receive Unit
TSB	Telecommunications Systems Bulletin
TSSC	Technical Standards SubCommittee
TTA	Telecommunications Technology Association (Korea)
TTC	Telecommunication Technology Committee (Japan)
TTL	TRAU-TRX-Link
TTL	Transistor-Transistor Logic
TTY	Teletype
UDI	Unrestricted Digital Information
UDP	User Datagram Protocol
UDR	Usage Data Record
UDT	Unit Data (SCCP)
UDTS	Unit Data Service (SCCP)
UG	User Group
UIM	User/Universal Identity Module
UMAC	Universal Mobile Attenuation Code
UMTS	Universal Mobile Telecommunication System
UNI	User Network Interface
UPN	User Provided Number
UPT	Universal Personal Telecommunications
URCDT	Unreliable Call Data Timer
US1	US 1 Codec (12.2 Kbps)
USCF	User Selective Call Forwarding

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USNC	United States National Committee
UTC	Universal Temps Coordiné (Universal Coordinated Time)
UTRA	UMTS Radio Terrestrial Access
UWCC	Universal Wireless Communications Consortium
UZ	User Zone
UZDATA	User Zone Data Parameter
UZID	User Zone ID
V&V	Verification & Validation
VBR	Variable Bit Rate
VC	Virtual Circuit
VCCI	Virtual Channel Connection Identifier
VCO	Voice Carry Over
VCS	Voice Controlled Services
VHE	Virtual Home Environment
VLR	Visitor Location Register
VMAC	Voice Mobile Attenuation Code
VoIP	Voice over IP
VP	Voice Privacy
VPM	Voice Privacy Mask
VSC	Vertical Service Code
VSE	Vendor Specific Extension
VSELP	Vector Sum Excited Linear Prediction
VSWR	Volt Standing Wave Ratio
WAN	Wide Area Network
WAP	Wireless Application Protocol
WARC	World Administration Radio Conference
WBSS	WideBand Spread Spectrum
WCAT	Wireless Cellular Action Team
W-CDMA	Wideband Code Division Multiple Access
WCS	Wireless Communications Service
WG	Working Group
WIF	Wireless Interconnect Forum
WIN	Wireless Intelligent Network
WINCAP	WIN Capability parameter
WINOPCAP	WIN Operations Capability parameter
WINRT	WIN Response Timer
WLL	Wireless Local Loop
WMOPS	Weighted Millions of Operations Per Second
WNO	Wireless Network Operator
WNP	Wireless Number Portability
WP	Working Party
WRE	Wireless Residential Extension
wrt	with respect to
WTRIGLIST	WIN Trigger List parameter

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Annex

A-1 Supporting Specifications in Network Architecture Model

Network Architecture Model Reference Points and their related supporting specifications for the Alpha System Release are as follows. Reference Points are depicted in Section 4.1.2 Figure 1 and/or the Network Architecture Model [59].

Reference Points	Supporting Specifications
4 AAA – DB	Not Specified
6 LMSD – DB	[51] N.S0029-0 v1.0, *TIA/EIA-41-D Based Network Enhancements for CDMA Packet Data Service (C-PDS), Phase 1, Revision: 0*, June, 2002 [66] X.S0001-0, v1.0, TIA/EIA-41-D Based Network Enhancements for CDMA Packet Data Service (C-PDS), Phase-1
8/OSA-API OSA-AS – OSA-SCS	[68] X.S0017 v1.0.0 *Open Service Access (OSA) Application Programming Interface (API),* August, 2003
10 OSA-SCS – PS	[68] X.S0017 v1.0.0 *Open Service Access (OSA) Application Programming Interface (API),* August, 2003
11/Sh OSA-SCS – AAA & OSA-SCS - PS	[68] X.S0017 v1.0.0 *Open Service Access (OSA) Application Programming Interface (API),* August, 2003
12/ISC OSA-SCS – SCM & OSA-SCS – SIP-AS	[68] X.S0017 v1.0.0 *Open Service Access (OSA) Application Programming Interface (API),* August, 2003
13 LMSDS - PSTN	[81] ANSI T1.611-1991 Signaling System Number 7 (SS7) – Supplementary Services for Non-ISDN-Subscribers, American National Standards Institute, Inc.: 1991
14 LMSDS – MAP	[73] N.S0005-0 Cellular Radiotelecommunications Intersystem Operations, December 1997
21 AGW – AAA	[67] X.S0011-C v1.0 *Wireless IP Network Standard*, August, 2003
22 HA – AAA	[67] X.S0011-C v1.0 *Wireless IP Network Standard*, August, 2003

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Reference Points	Supporting Specifications
27 c2KAN – MGW	Not Specified
31 c2KAN – AGW	[19] A.S0017-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 7 (A10 and A11 Interfaces) (IOSv4.3)*, October 2002
34/Mb MGW – PSTN	Not Specified
35 c2KAN – AGW	[19] A.S0017-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 7 (A10 and A11 Interfaces) (IOSv4.3)*, October 2002
39 MGW – LMSDS	[69] X.S0018-0 v1.0, *Legacy MS Domain (LMSD) – Step 1*, March 2003
40/Mb MGW – BR	Not Specified
41 AGW – HA	Not Specified
43/Mb AGW – HA	Not Specified
44/Mb HA – BR	Not Specified
45/Mb AGW – BR	Not Specified
46/Mb BR– IPN	Not Specified
47/Um MS – c2kAN	Not Specified
48 c2kAN – LMSDS	[16] A.S0014-A v1.0 *Interoperability Specification (IOS) for cdma2000 Access Network Interfaces - Part 4 (A1, A2 and A5 Interfaces) (IOSv4.3)*, October 2002
yy MGW – MGW	Not Specified
zz LMSD - LMSD	[69] X.S0018-0 v1.0, *Legacy MS Domain (LMSD) – Step 1*, March 2003
m1 NME – OSF-EML	[61] S.S0028-A v2.0 *OAM&P for cdma2000® (3GPP Delta Specification),* January 2003
m2 OSF-EML – OSF-NML/OSS	[61] S.S0028-A v2.0 *OAM&P for cdma2000® (3GPP Delta Specification),* January 2003

1