3GPP2 SC.R2002-001

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3GPP2 System Capability Guide

Release B

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Revision History

Revision	Description	Date
Version 1.0	Initial release	14 June 2001

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INTRODUCTION

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

- **DOCUMENT PURPOSE**

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

- **DOCUMENT OVERVIEW**

  This document includes the following sections:

  - INTRODUCTION AND 3GPP2 SYSTEM OVERVIEW
  - cdma2000 AIR INTERFACE CAPABILITIES
    - PHYSICAL LAYER
    - MAC LAYER
    - LAC LAYER
    - LAYER 3 SIGNALING
  - ACCESS NETWORK CAPABILITIES
  - INTERSYSTEM CAPABILITIES
  - OTHER 3GPP2 SYSTEM FEATURES
  - DATA SERVICES
    - CIRCUIT-SWITCHED DATA
    - PACKET-SWITCHED DATA
  - 3GPP2 SYSTEM SERVICES
  - ANALOG AIR INTERFACE OPERATIONS AND CAPABILITIES
  - ACRONYM LISTING AND CROSS REFERENCE

- **DOCUMENT APPLICABILITY**

  This document is applicable to the 3GPP2 wireless telecommunications system Release B. However, this document may also include references to previously issued standards and specifications.

- **DOCUMENT REFERENCES**

This document references all 3GPP2 specifications and reports based on the 3GPP2 Document Reference Listing which is included in the Appendix of this document. All documents included in that list are also considered implicit references for this SCG document.

The 3GPP2 Service Implementation Guide (SIG) is a companion document to this SCG document which details the use of existing 3GPP2 signaling to implement new system services. That document is referenced in the 3GPP2 SYSTEM SERVICES section of this document.

3GPP2 OVERVIEW AND BACKGROUND

The 3GPP2 (3rd Generation Partnership Project 2) is a partnership of standards development organizations (SDOs). The 3GPP2 Organizational Partners include, along with their regional areas of interest, the following SDOs:

ORGANIZATIONAL PARTNER		REGIONAL AREA OF INTEREST
ARIB	Association of Radio Industries and Business	Japan
CWTS	China Wireless Telecommunication Standard Group	China
TIA	Telecommunications Industry Association	NAFTA countries including USA, Canada, and Mexico
TTA	Telecommunications Technology Association	Korea
TTC	Telecommunication Technology Committee	Japan

3GPP2 is an effort spearheaded by the original four (4) Organizational Partners (i.e., ARIB, TIA, TTA, and TTC) to establish a Partnership Project for the 3G wireless communication systems using evolved ANSI/TIA/EIA-41, "Cellular Radio telecommunication Intersystem Operations" networks and related RTTs. This effort was initiated in response to concerns regarding ETSI's unwillingness to include non-GSM technologies in their proposal for the establishment of the 3G Partnership Project (3GPP). The inaugural meeting of the 3GPP2 Steering Committee was held in January 1999 in Vancouver, BC where the partnership documents and working procedures were also officially agreed. CWTS's application for membership as an Organizational Partner was officially accepted in June 1999 in Seoul, Korea.

Participating SDOs have the right to submit 3GPP2 technical specifications for approval and publication as standards, or parts of standards within their home national or regional processes. This partnership project is a new way of working among the existing organizations. It addresses the industry's need to produce globally applicable specifications without altering the national or regional scope of existing standards organizations.

The Technical Specification Groups (TSGs) currently formed within 3GPP2 for specifying Release B are the following:

- TSG-A Access Network Interface
  - Physical links, transports and signaling
  - Support for access network mobility

- 3G Capabilities (e.g. High speed data support)
- Abis interface
- Interoperability Specification
- Support for 3GPP2 Radio Access Technologies

- TSG-C cdma2000
  - Radio Layer 1 specification
  - Radio Layer 2 specification
  - Radio Layer 3 specification
  - MS/BS Radio Performance Specifications
  - Radio Link Protocol (RLP)
  - Support for enhanced privacy, authentication and encryption
  - Digital speech codecs and related minimum performance specifications
  - Video codec selection, and specification of related video services
  - Data and other ancillary services support
  - Conformance test plans
  - Removable User Identity Module (R-UIM)
  - Location-based services support
- TSG-N Intersystem Operations
  - Evolution of Core Network to support interoperability and Intersystem Operations
  - UIM support (Detachable and Integrated)
  - Support for enhanced privacy, authentication, encryption and other security aspects.
  - VHE (Virtual Home Environment)
  - Support of New Supplemental Services (including ISDN interworking)
  - Optimal Interoperability Specification for International Roaming (e.g. Selection of required parameters options)
  - New Features for International Roaming (Global Emergency Number, Optimal Routing)
  - IMT-2000 issues as necessary to ensure support of the ANSI-41 family member

- TSG-P Wireless Packet Data Networking
  - Wireless IP services (including IP mobility management)
  - Voice over IP
  - AAA and security
  - Private network access
  - Internet/intranet access
  - Multimedia support
  - QoS support
- TSG-S Services and Systems Aspects
  - Development and maintenance of 3GPP2 System Capabilities Guide
  - Development, management and maintenance of 3GPP2 Work Plan
  - Stage 1 Services and Features Requirements Definition
  - High-Level Functionality Description Development
  - System Reference Model Development and Maintenance
  - Requirements for International Roaming.
  - Development of 3GPP2 OAM&P across all TSGs including 1) Stage 1 high-level requirements and 2) Stage 2 and Stage 3 for the interface between network management system and element management functions.
  - High-level coordination of the work performed in other TSGs and monitoring of progress.
  - Coordination to resolve technical discrepancies between the works undertaken by other TSGs.

The organizational structure of 3GPP2 is illustrated in Figure 1 below:

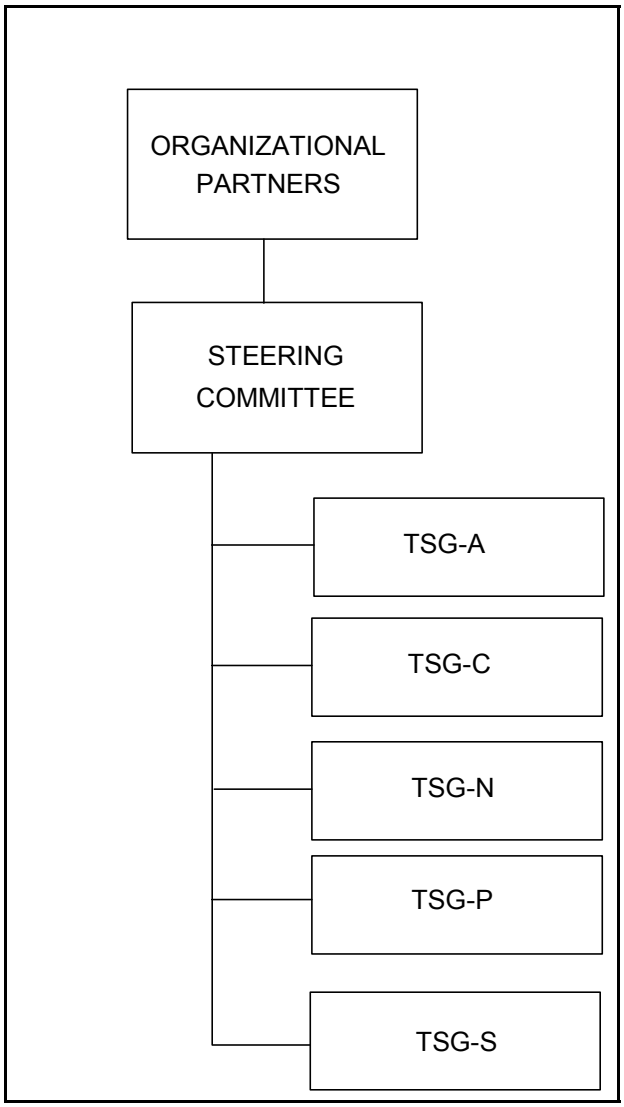

Figure 1: 3GPP2 ORGANIZATIONAL STRUCTURE

NOTE: Additional and more detailed information on 3GPP2 may be obtained at http://www.3gpp2.org.

3GPP2 SYSTEM OVERVIEW

The 3GPP2 wireless telecommunication system is a third generation (3G) wireless telecommunication system which was designed based on requirements proposed by the International Telecommunications Union (ITU) in it's IMT-2000 initiative.

The 3GPP2 air interface (cdma2000) is a wideband spread spectrum radio interface that utilizes CDMA technology in order to meet the needs of the third generation (3G) wireless communication systems and to meet the requirements for the 3G evolution of the current TIA/EIA-95-B family of standards.

- **3GPP2 RELEASE B OBJECTIVES**

Basic design objectives of the 3GPP2 Release B system as enhanced from the cdma2000 Release A specifications are indicated below:

- CORE CAPABILITY ENHANCEMENTS
  - cdma2000 Release B
  - IOS v4.1 and v4.2
  - Wireless IP Network Specification
- SERVICE ADDITIONS/ENHANCEMENTS
  - Access Control Based on Call-Type
  - Advice of Charge
  - Allowing different multiplex options for FCH/DCCH
  - Answer Hold
  - Automatic Code Gapping
  - Common Control Channel Support
  - Diversity code combining in soft handoff
  - Enhanced Rate Adaption Mode (ERAM)
  - Freephone
  - Low Data Rate Devices Support
  - Network Support for MDN-based Message Centers
  - New repetition and puncturing scheme for flexible/variable rate
  - Prepaid
  - Position determination services
  - Preferred Language

- Premium Rate Charging
- Rejection of Undesired Annoying Calls
- Rescue Channel for call recovery
- R-UIM
- User Selective Call Forwarding

- STANDING SYSTEM REQUIREMENTS
  - Increased Battery Life for the Mobile
  - Full Support of cdma2000 Release 0 and Release A Systems
  - Physical Layer Optimization and Signaling Layer Support
  - Backward compatibility with previous releases of core network and A-interface.

Additional details on the 3GPP2 wireless telecommunications system are indicated below:

- **3GPP2 NETWORK BASIS**

  In general, the 3GPP2 system is defined by the operation of three (3) primary system interfaces as listed below:

  - AIR INTERFACE
  - RADIO ACCESS INTERFACE (i.e., A-INTERFACE)
  - INTERSYSTEM INTERFACE

  The basis of the 3GPP2 wireless telecommunications system is summarized as follows:

  - Intersystem interface and network architecture are based on TIA/EIA-41 and TIA/EIA/IS-835.
  - Radio access interface is based on the InterOperability System (IOS) standard. Compliance with 3GPP2 A.S0001 is required for full support of all applicable capabilities, features, and services listed herein.
  - Air interface is based on enhanced cdma2000 and is designed as follows:
    - BAND CLASS DESIGNATORS

BAND CLASS DESIGNATOR	BAND
0	800 MHz BAND
1	1900 MHz BAND
2	TACS BAND
3	JTACS BAND
4	KOREAN PCS BAND
5	450 MHz BAND
6	2 GHz BAND
7	700 MHz BAND
8	1800 MHz BAND
9	900 MHz BAND

    - PHYSICAL CHANNELS
      - 1.25 MHz SINGLE CHANNEL
      - 1xEV-DO CHANNEL
      - 3x-3x and 3x-1x MULTI-CARRIER CHANNEL (MC)

- OTHER BASIC CAPABILITIES
  - SUPPORTS 2G MOBILES
  - SUPPORT HANDOFF BETWEEN 2G/3G SYSTEMS AND BETWEEN 3G CHANNELS

Compliance with the latest versions of 3GPP2 C.S0001 through C.S0006 is required for full support of all applicable capabilities, features, and services listed herein.

- **3GPP2 NETWORK ARCHITECTURE**

The 3GPP2 Network Reference Model (NRM) is illustrated in Figure 2. It is described in substantially more detail in the 3GPP2 Network Reference Model document (3GPP2 S.R0005-B). Compliance with 3GPP2 S.R0005-B is required for full support of all applicable capabilities, features, and services listed herein.

Figure 2: 3GPP2 NETWORK REFERENCE MODEL

NOTE: An explanation of the terms used in Figure 2 may be obtained from the "TIA Subcommittee TR-45.5 Final Inputs for the Draft IMT.RSPC Section 5" at http://www.itu.int/itudoc/itu-r/sg8/docs/tg8-1/1998-99/18th/index.html . However, an ITU-R TIES password is required for access.

- **3GPP2 AIR INTERFACE SIGNALING LAYERS**

  The air interface of 3GPP2 systems has been developed based on the ISO/OSI Reference Model layering requirements. The 3GPP2 layer structure is illustrated below in Figure 3:

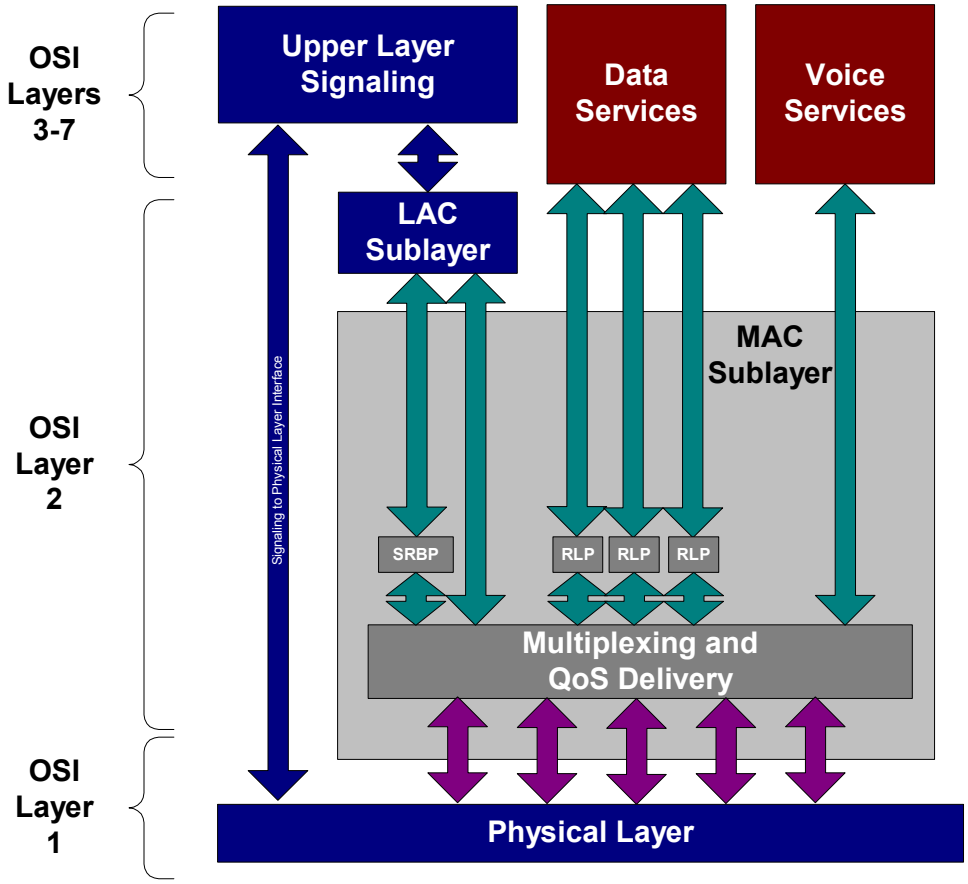

Figure 3: AIR INTERFACE - SIMPLIFIED LAYERING DIAGRAM

A more detailed architectural diagram is detailed in Figure 4 below:

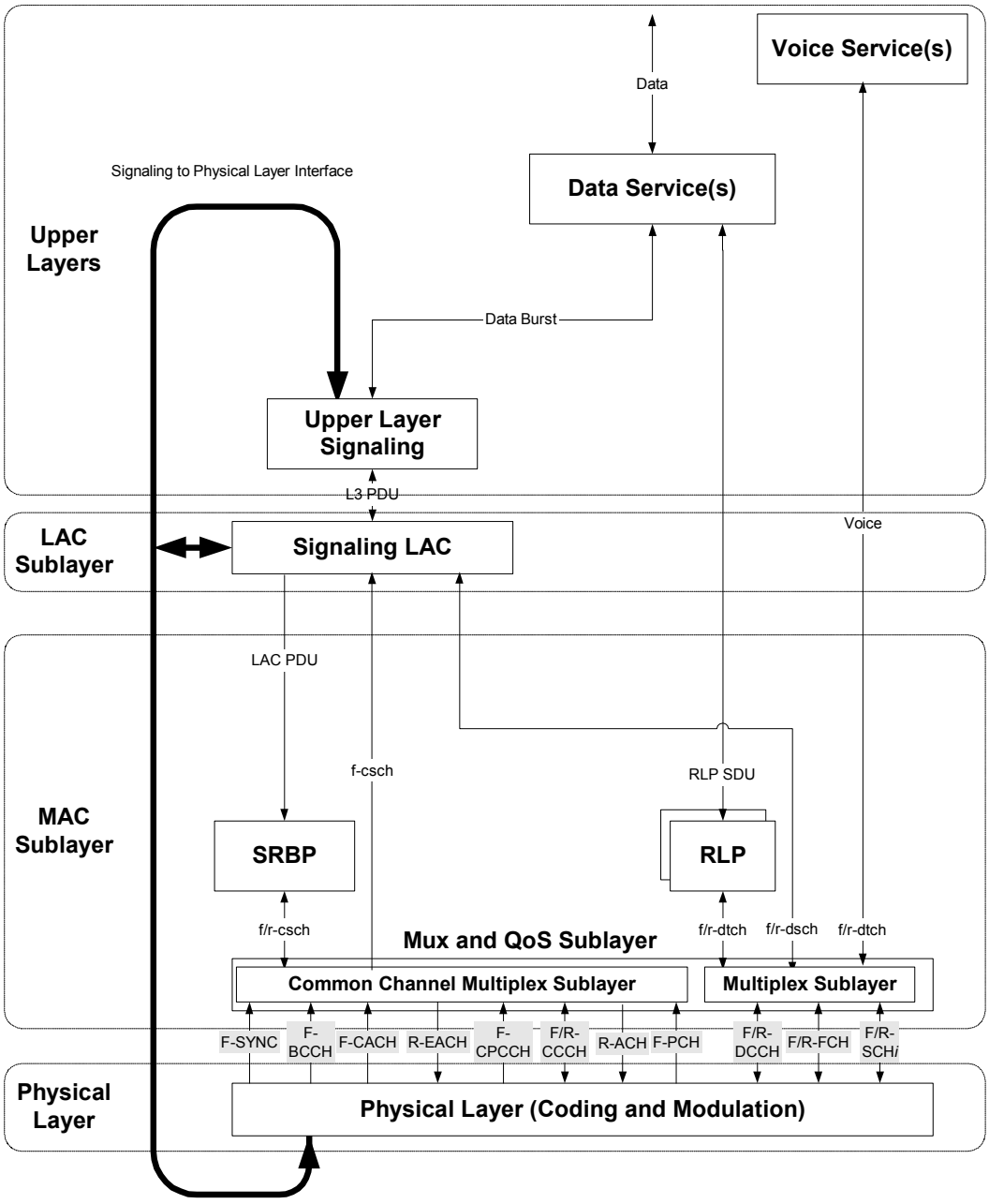

Figure 4: AIR INTERFACE - GENERAL ARCHITECTURE

Definitions of the 3GPP2 air interface layers are indicated below:

- **PHYSICAL LAYER:** Supports actual transmission and reception of signals between the mobile station and the base station including frequency selection with appropriate modulation and demodulation operations. The Physical Layer supports RF channel bandwidths of N x 1.25 MHz, where N is the Spreading Rate number and N = 1 and 3. The data rates, channel encoding, and modulation parameters supported on the Traffic Channels are specified by radio configurations. For Spreading Rates 1 and 3, there are six radio configurations for the reverse link and there are nine radio configurations for the forward link. Collectively, these radio configurations form the FDD MC-CDMA 1X and 3X. Spreading Rate 1 corresponds to 1X. Spreading Rate 3 corresponds to 3X. Radio Configurations 1 and 2 are specified to be backward compatible with TIA/EIA-95-B systems. The 3GPP2 air interface also supports a class of operational band plans as specified in the TIA/EIA/IS-2000 standard. The Physical Layer signaling corresponds to ISO/OSI Reference Model physical layer (i.e., layer 1).

- **MEDIA ACCESS CONTROL (MAC) LAYER:** Supports multiple data service state machine instances, one for each active packet or circuit data service instance, with applicable QoS mechanisms on each. This layer supports the complex multi-media multi-service capabilities which are targeted for 3G wireless systems. The MAC Layer signaling corresponds to the “lower” portion (i.e., interface to the Physical Layer) of the ISO/OSI Reference Model Link Layer (i.e., layer 2). The MAC services are considered to be null when encoded voice data is transported directly by the Physical Layer (i.e., backward compatible with TIA/EIA-95-B). NOTE: The MAC Layer for 3GPP2 Release B includes support for one (1) voice and/or one (1) packet data service (data rates up to 2 Mbps) instance. The full multi-media call model will be supported in a future MAC Layer release.

- **LINK ACCESS CONTROL (LAC) LAYER:** Supports point-to-point transmission over the air for signaling services and (optionally) for circuit data services. The LAC Layer also provides the framework and services to transport encoded voice data in the form of packet data or circuit data traffic as a part of a multimedia call. The LAC Layer signaling corresponds to the “upper” portion (i.e., interface to the MAC Layer) of the ISO/OSI Reference Model Link Layer

(i.e., layer 2). The LAC services are considered to be null when encoded voice data is transported directly by the Physical Layer (i.e., backward compatible with TIA/EIA-95-B).

- **LAYER 3 SIGNALING:** Supports all other application and upper layer protocols (e.g. Signaling Services, Voice Services, Data Services (Packet Data and Circuit Data)). Layer 3 signaling corresponds to layers 3 and above as appropriate of the ISO/OSI Reference Model.
- The 3GPP2 layering structure is composed of two (2) separate planes: the Control Plane and the Data Plane. The principal advantage of this structuring is the clear definition of the service interfaces between all of the functional entities described by the cdma2000 layering structure.

NOTE: Additional and more detailed technical information on the 3GPP2 air interface (cdma2000) may be obtained from the TIA Subcommittee TR-45.5 Final Inputs for the Draft IMT.RSPC Section 5 at http://www.itu.int/itudoc/itu-r/sg8/docs/tg8-1/1998-99/18th/index.html . However, an ITU-R TIES password is required for access.

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3GPP2 AIR INTERFACE

This section details the capabilities and features of the 3GPP2 air interface (cdma2000).

- **PHYSICAL LAYER**

  The following are general physical layer capabilities of the 3GPP2 system.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
BAND CLASS	BAND CLASS 0		C.S0002 Section 2.1.1.1.1 C.S0002-A Section 2.1.1.1.1 C.S0002-A-1 Section 2.1.1.1.1 C.S0002-B Section 2.1.1.1.1
	BAND CLASS 1		C.S0002 Section 2.1.1.1.2 C.S0002-A Section 2.1.1.1.2 C.S0002-A-1 Section 2.1.1.1.2 C.S0002-B Section 2.1.1.1.2
	BAND CLASS 2		C.S0002-A Section 2.1.1.1.3 C.S0002-A-1 Section 2.1.1.1.3 C.S0002-B Section 2.1.1.1.3
	BAND CLASS 3		C.S0002-A Section 2.1.1.1.4 C.S0002-A-1 Section 2.1.1.1.4 C.S0002-B Section 2.1.1.1.4
	BAND CLASS 4		C.S0002-A Section 2.1.1.1.5 C.S0002-A-1 Section 2.1.1.1.5 C.S0002-B Section 2.1.1.1.5
	BAND CLASS 5		C.S0002-A Section 2.1.1.1.6 C.S0002-A-1 Section 2.1.1.1.6 C.S0002-B Section 2.1.1.1.6

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	BAND CLASS 6		C.S0002-A Section 2.1.1.1.7 C.S0002-A-1 Section 2.1.1.1.7 C.S0002-B Section 2.1.1.1.7
	BAND CLASS 7		C.S0002-A Section 2.1.1.1.8 C.S0002-A-1 Section 2.1.1.1.8 C.S0002-B Section 2.1.1.1.8
	BAND CLASS 8		C.S0002-A-1 Section 2.1.1.1.9 C.S0002-B Section 2.1.1.1.9
	BAND CLASS 9		C.S0002-A-1 Section 2.1.1.1.10 C.S0002-B Section 2.1.1.1.10
CDMA SYSTEM TIME			C.S0002 Section 1.3 C.S0002-A Section 1.3 C.S0002-A-1 Section 1.3 C.S0002-B Section 1.3
CHANNEL NAMING CONVENTION			C.S0001 Section 2.2 C.S0001-A Section 2.2 C.S0002-A-1 Section 2.2 C.S0001-B Section 2.2
CDMA CHANNEL MODULATION	FORWARD CDMA CHANNELS		C.S0002 Section 3.1.3.1 C.S0002-A Section 3.1.3.1 C.S0002-A-1 Section 3.1.3.1 C.S0002-B Section 3.1.3.1
	REVERSE CDMA CHANNELS		C.S0002 Section 2.1.3.1 C.S0002-A Section 2.1.3.1 C.S0002-A-1 Section 2.1.3.1 C.S0002-B Section 2.1.3.1

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
PHYSICAL CHANNELS	ACCESS CHANNEL	R-ACH	C.S0002 Section 2.1.3.3 C.S0002-A Section 2.1.3.3 C.S0002-A-1 Section 2.1.3.3 C.S0002-B Section 2.1.3.3
	BROADCAST CONTROL CHANNEL	F-BCCH	C.S0002 Section 3.1.3.5 C.S0002-A Section 3.1.3.5 C.S0002-A-1 Section 3.1.3.5 C.S0002-B Section 3.1.3.5
	COMMON POWER CONTROL CHANNEL	F-CPCCH	C.S0002 Section 3.1.3.7 C.S0002-A Section 3.1.3.7 C.S0002-A-1 Section 3.1.3.7 C.S0002-B Section 3.1.3.7
	COMMON ASSIGNMENT CHANNEL	F-CACH	C.S0002 Section 3.1.3.8 C.S0002-A Section 3.1.3.8 C.S0002-A-1 Section 3.1.3.8 C.S0002-B Section 3.1.3.8
	ENHANCED ACCESS CHANNEL	R-EACH	C.S0002 Section 2.1.3.4 C.S0002-A Section 2.1.3.4 C.S0002-A-1 Section 2.1.3.4 C.S0002-B Section 2.1.3.4
	FORWARD COMMON CONTROL CHANNEL	F-CCCH	C.S0002 Section 3.1.3.9 C.S0002-A Section 3.1.3.9 C.S0002-A-1 Section 3.1.3.9 C.S0002-B Section 3.1.3.9

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	FORWARD DEDICATED CONTROL CHANNEL	F-DCCH	C.S0002 Section 3.1.3.10 C.S0002-A Section 3.1.3.10 C.S0002-A-1 Section 3.1.3.10 C.S0002-B Section 3.1.3.10
	FORWARD FUNDAMENTAL CHANNEL	F-FCH	C.S0002 Section 3.1.3.11 C.S0002-A Section 3.1.3.11 C.S0002-A-1 Section 3.1.3.11 C.S0002-B Section 3.1.3.11
	FORWARD PILOT CHANNELS	F-PICH	C.S0002 Section 3.1.3.2 C.S0002-A Section 3.1.3.2 C.S0002-A-1 Section 3.1.3.2 C.S0002-B Section 3.1.3.2
	FORWARD SUPPLEMENTAL CHANNEL	F-SCH	C.S0002 Section 3.1.3.12 C.S0002-A Section 3.1.3.12 C.S0002-A-1 Section 3.1.3.12 C.S0002-B Section 3.1.3.12
	FORWARD SUPPLEMENTAL CODE CHANNEL	F-SCCH	C.S0002 Section 3.1.3.13 C.S0002-A Section 3.1.3.13 C.S0002-A-1 Section 3.1.3.13 C.S0002-B Section 3.1.3.13
	PAGING CHANNEL	F-PCH	C.S0002 Section 3.1.3.4 C.S0002-A Section 3.1.3.4 C.S0002-A-1 Section 3.1.3.4 C.S0002-B Section 3.1.3.4

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	QUICK PAGING CHANNEL	F-QPCH	C.S0002 Section 3.1.3.6 C.S0002-A Section 3.1.3.6 C.S0002-A-1 Section 3.1.3.6 C.S0002-B Section 3.1.3.6
	REVERSE PILOT CHANNEL	R-PICH	C.S0002 Section 2.1.3.2 C.S0002-A Section 2.1.3.2 C.S0002-A-1 Section 2.1.3.2 C.S0002-B Section 2.1.3.2
	REVERSE COMMON CONTROL CHANNEL	R-CCCH	C.S0002 Section 2.1.3.5 C.S0002-A Section 2.1.3.5 C.S0002-A-1 Section 2.1.3.5 C.S0002-B Section 2.1.3.5
	REVERSE DEDICATED CONTROL CHANNEL	R-DCCH	C.S0002 Section 2.1.3.6 C.S0002-A Section 2.1.3.6 C.S0002-A-1 Section 2.1.3.6 C.S0002-B Section 2.1.3.6
	REVERSE FUNDAMENTAL CHANNEL	R-FCH	C.S0002 Section 2.1.3.7 C.S0002-A Section 2.1.3.7 C.S0002-A-1 Section 2.1.3.7 C.S0002-B Section 2.1.3.7
	REVERSE POWER CONTROL SUBCHANNEL		C.S0002 Section 2.3.1.10
	REVERSE SUPPLEMENTAL CHANNEL	R-SCH	C.S0002 Section 2.1.3.8 C.S0002-A Section 2.1.3.8 C.S0002-A-1 Section 2.1.3.8 C.S0002-B Section 2.1.3.8

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	REVERSE SUPPLEMENTAL CODE CHANNEL	R-SCCH	C.S0002 Section 2.1.3.9 C.S0002-A Section 2.1.3.9 C.S0002-A-1 Section 2.1.3.9 C.S0002-B Section 2.1.3.9
	SYNC CHANNEL	F-SYNCH	C.S0002 Section 3.1.3.3 C.S0002-A Section 3.1.3.3 C.S0002-A-1 Section 3.1.3.3 C.S0002-B Section 3.1.3.3

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The following are mobile station capabilities which are supported by the 3GPP2 system.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
MINIMUM PERFORMANCE REQUIREMENTS			C.S0011 C.S0011-A
TRANSMITTER	FREQUENCY PARAMETERS		C.S0002 Section 2.1.1 C.S0002-A Section 2.1.1 C.S0002-A-1 Section 2.1.1 C.S0002-B Section 2.1.1
	OUTPUT POWER CHARACTERISTICS		C.S0002 Section 2.1.2 C.S0002-A Section 2.1.2 C.S0002-A-1 Section 2.1.2 C.S0002-B Section 2.1.2
	MODULATION CHARACTERISTICS		C.S0002 Section 2.1.3 C.S0002-A Section 2.1.3 C.S0002-A-1 Section 2.1.3 C.S0002-B Section 2.1.3
	LIMITATIONS ON EMISSIONS		C.S0002 Section 2.1.4 C.S0002-A Section 2.1.4 C.S0002-A-1 Section 2.1.4 C.S0002-B Section 2.1.4
	SYNCHRONIZATION AND TIMING		C.S0002 Section 2.1.5 C.S0002-A Section 2.1.5 C.S0002-A-1 Section 2.1.5 C.S0002-B Section 2.1.5

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	TRANSMITTER PERFORMANCE REQUIREMENTS		C.S0002 Section 2.1.6 C.S0002-A Section 2.1.6 C.S0002-A-1 Section 2.1.6 C.S0002-B Section 2.1.6
RECEIVER	CHANNEL SPACING AND DESIGNATION		C.S0002 Section 2.2.1 C.S0002-A Section 2.2.1 C.S0002-A-1 Section 2.2.1 C.S0002-B Section 2.2.1
	DEMODULATION CHARACTERISTICS		C.S0002 Section 2.2.2 C.S0002-A Section 2.2.2 C.S0002-A-1 Section 2.2.2 C.S0002-B Section 2.2.2
	LIMITATIONS ON EMISSIONS		C.S0002 Section 2.2.3 C.S0002-A Section 2.2.3 C.S0002-A-1 Section 2.2.3 C.S0002-B Section 2.2.3
	MALFUNCTION DETECTION		C.S0002 Section 2.2.4 C.S0002-A Section 2.2.4 C.S0002-A-1 Section 2.2.4 C.S0002-B Section 2.2.4

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The following are base station capabilities which are supported by the 3GPP2 system.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
MINIMUM PERFORMANCE REQUIREMENTS			C.S0010 C.S0010-A
TRANSMITTER	FREQUENCY PARAMETERS		C.S0002 Section 3.1.1 C.S0002-A Section 3.1.1 C.S0002-A-1 Section 3.1.1 C.S0002-B Section 3.1.1
	OUTPUT POWER CHARACTERISTICS		C.S0002 Section 3.1.2 C.S0002-A Section 3.1.2 C.S0002-A-1 Section 3.1.2 C.S0002-B Section 3.1.2
	MODULATION CHARACTERISTICS		C.S0002 Section 3.1.3 C.S0002-A Section 3.1.3 C.S0002-A-1 Section 3.1.3 C.S0002-B Section 3.1.3
	LIMITATIONS ON EMISSIONS		C.S0002 Section 3.1.4 C.S0002-A Section 3.1.4 C.S0002-A-1 Section 3.1.4 C.S0002-B Section 3.1.4
	SYNCHRONIZATION, TIMING, AND PHASE		C.S0002 Section 3.1.5 C.S0002-A Section 3.1.5 C.S0002-A-1 Section 3.1.5 C.S0002-B Section 3.1.5

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	TRANSMITTER PERFORMANCE REQUIREMENTS		C.S0002 Section 3.1.6 C.S0002-A Section 3.1.6 C.S0002-A-1 Section 3.1.6 C.S0002-B Section 3.1.6
RECEIVER	CHANNEL SPACING AND DESIGNATION		C.S0002 Section 3.2.1 C.S0002-A Section 3.2.1 C.S0002-A-1 Section 3.2.1 C.S0002-B Section 3.2.1
	DEMODULATION CHARACTERISTICS		C.S0002 Section 3.2.2 C.S0002-A Section 3.2.2 C.S0002-A-1 Section 3.2.2 C.S0002-B Section 3.2.2
	LIMITS ON EMISSIONS		C.S0002 Section 3.2.3 C.S0002-A Section 3.2.3 C.S0002-A-1 Section 3.2.3 C.S0002-B Section 3.2.3
	RECEIVER PERFORMANCE REQUIREMENTS		C.S0002 Section 3.2.4 C.S0002-A Section 3.2.4 C.S0002-A-1 Section 3.2.4 C.S0002-B Section 3.2.4

• VOCODER CAPABILITIES

The following vocoder capabilities are supported by the 3GPP2 system.

FEATURE	CATEGORY	ACRONYM	REFERENCE
MINIMUM PERFORMANCE STANDARD FOR SPEECH OPTION 1			C.S0012
HIGH RATE (13 kbps) SPEECH SO			C.S0020
- HIGH RATE SPEECH SO TTY/TDD ADDENDUM			C.S0020-0-1
- MINIMUM PERFORMANCE STANDARD FOR HR (13 kbps)			C.S0021
ENHANCED VARIABLE RATE VOCODER		EVRC	C.S0014
- EVRC ADDENDUM FOR REMOVAL OF BIT EXACT			C.S0014-0-1
- EVRC TTY/TDD ADDENDUM			C.S0014-0-2
- MINIMUM PERFORMANCE STANDARD FOR EVRC			C.S0018

- **LOGICAL CHANNELS**

The following logical channels are supported by the 3GPP2 Release A system.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
LOGICAL CHANNELS	FORWARD COMMON SIGNALING CHANNEL	f-csch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	FORWARD DEDICATED MAC CHANNEL	f-dmch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	FORWARD DEDICATED SIGNALING CHANNEL	f-dsch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	FORWARD DEDICATED TRAFFIC CHANNEL	f-dtch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	REVERSE COMMON SIGNALING CHANNEL	r-csch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
	REVERSE DEDICATED MAC CHANNEL	r-dmch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	REVERSE DEDICATED SIGNALING CHANNEL	r-dsch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B
	REVERSE DEDICATED TRAFFIC CHANNEL	r-dtch	C.S0003 C.S0003-A C.S0003-A-1 C.S0003-B

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• MAC LAYER CAPABILITIES

The following are general MAC layer capabilities of the 3GPP2 system.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
OVERVIEW AND DEFINITION OF MAC COMPONENTS			C.S0003 Section 1.7.1 C.S0003-A Section 1.6 C.S0003-A-1 Section 1.6 C.S0003-B Section 1.6
LAYERING MODEL			C.S0003 Section 1.7.2 C.S0003-A Section 1.6.1 C.S0003-A-1 Section 1.6.1 C.S0003-B Section 1.6.1
SERVICE INTERFACES			C.S0003 Section 1.8.1, Section 2.1 C.S0003-A Section 1.7.1, Section 2.1 C.S0003-A-1 Section 1.7.1, Section 2.1 C.S0003-B Section 1.7.1, Section 2.1
ENTITIES OF MAC SUBLAYER			C.S0003 Section 2.2 C.S0003-A Section 2.2 C.S0003-A-1 Section 2.2 C.S0003-B Section 2.2
- RESOURCE CONTROL			C.S0003 Section 2.2.1
- OBJECTS			C.S0003 Section 2.2.2
- CONTROL PLANE ENTITIES			C.S0003 Section 2.2.3
- DATA PLANE ENTITIES			C.S0003 Section 2.2.4
- FUNCTIONAL ENTITIES			C.S0003-A Section 2.2.1 C.S0003-A-1 Section 2.2.1 C.S0003-B Section 2.2.1

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- SUPERVISORY PROCEDURES			C.S0003 Section 2.2.5 C.S0003-A Section 2.2.2 C.S0003-A-1 Section 2.2.2 C.S0003-B Section 2.2.2

- **LAC LAYER CAPABILITIES**

The following reference is the conceptual model for the LAC Sublayer.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
CONCEPTUAL MODEL FOR THE LAC SUBLAYER			C.S0004 Annex A C.S0004-A Section 1.2 C.S0004-A-1 Section 1.2 C.S0004-B Section 1.2
TIMERS AND CONSTANTS			C.S0004 Annex B C.S0004-A Annex A C.S0004-A-1 Annex A C.S0004-B Annex A

The following are general LAC layer capabilities of the 3GPP2 system for mobile stations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
COMMON CHANNEL OPERATION			C.S0004 Section 2.1 C.S0004-A Section 2.1 C.S0004-A-1 Section 2.1 C.S0004-B Section 2.1
- TRANSMISSION ON R-CSCH			C.S0004 Section 2.1.1 C.S0004-A Section 2.1.1 C.S0004-A-1 Section 2.1.1 C.S0004-B Section 2.1.1
- RECEPTION ON F-CSCH			C.S0004 Section 2.1.2 C.S0004-A Section 2.1.2 C.S0004-A-1 Section 2.1.2 C.S0004-B Section 2.1.2
DEDICATED CHANNEL OPERATION			C.S0004 Section 2.2 C.S0004-A Section 2.2 C.S0004-A-1 Section 2.2 C.S0004-B Section 2.2
- TRANSMISSION ON R-CSCH			C.S0004 Section 2.2.1 C.S0004-A Section 2.2.1 C.S0004-A-1 Section 2.2.1 C.S0004-B Section 2.2.1
- RECEPTION ON F-CSCH			C.S0004 Section 2.2.2 C.S0004-A Section 2.2.2 C.S0004-A-1 Section 2.2.2 C.S0004-B Section 2.2.2

The following are general LAC layer capabilities of the 3GPP2 system for base stations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
COMMON CHANNEL OPERATION			C.S0004 Section 3.1 C.S0004-A Section 3.1 C.S0004-A-1 Section 3.1 C.S0004-B Section 3.1
- RECEPTION ON R-CSCH			C.S0004 Section 3.1.1 C.S0004-A Section 3.1.1 C.S0004-A-1 Section 3.1.1 C.S0004-B Section 3.1.1
- TRANSMISSION ON F-CSCH			C.S0004 Section 3.1.2 C.S0004-A Section 3.1.2 C.S0004-A-1 Section 3.1.2 C.S0004-B Section 3.1.2
DEDICATED CHANNEL OPERATION			C.S0004 Section 3.2 C.S0004-A Section 3.2 C.S0004-A-1 Section 3.2 C.S0004-B Section 3.2
- RECEPTION ON R-CSCH			C.S0004 Section 3.2.1 C.S0004-A Section 3.2.1 C.S0004-A-1 Section 3.2.1 C.S0004-B Section 3.2.1
- TRANSMISSION ON F-CSCH			C.S0004 Section 3.2.2 C.S0004-A Section 3.2.2 C.S0004-A-1 Section 3.2.2 C.S0004-B Section 3.2.2

- **LAYER 3 SIGNALING CAPABILITIES**

The following references illustrate the general overview of Layer 3 Signaling.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
SIGNALING ARCHITECTURE			C.S0005 Section 1.2 C.S0005-A Section 1.2 C.S0005-A-1 Section 1.2 C.S0005-B Section 1.2
SIGNALING AND FUNCTIONALITY			C.S0005 Section 1.3 C.S0005-A Section 1.3 C.S0005-A-1 Section 1.3 C.S0005-B Section 1.3

The following are general Layer 3 Signaling capabilities of the 3GPP2 system for mobile stations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
SECURITY AND IDENTIFICATION			C.S0005 Section 2.3 C.S0005-A Section 2.3 C.S0005-A-1 Section 2.3 C.S0005-B Section 2.3
MONITORED QUANTITIES AND STATISTICS			C.S0005 Section 2.4
ACCUMULATED STATISTICS			C.S0005-A Section 2.4 C.S0005-A-1 Section 2.4 C.S0005-B Section 2.4
CALL PROCESSING			C.S0005 Section 2.6
LAYER 3 PROCESSING			C.S0005-A Section 2.6 C.S0005-A-1 Section 2.6 C.S0005-B Section 2.6
PDU FORMATS FOR MOBILE STATIONS			C.S0005 Section 2.7 C.S0005-A Section 2.7 C.S0005-A-1 Section 2.7 C.S0005-B Section 2.7

The following are general Layer 3 Signaling capabilities of the 3GPP2 system for base stations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
SECURITY AND IDENTIFICATION			C.S0005 Section 3.3 C.S0005-A Section 3.3 C.S0005-A-1 Section 3.3 C.S0005-B Section 3.3
SUPERVISION			C.S0005 Section 3.4 C.S0005-A Section 3.4 C.S0005-A-1 Section 3.4 C.S0005-B Section 3.4
CALL PROCESSING			C.S0005 Section 3.6
LAYER 3 PROCESSING			C.S0005-A Section 3.6 C.S0005-A-1 Section 3.6 C.S0005-B Section 3.6
PDU FORMATS FOR MESSAGES			C.S0005 Section 3.7 C.S0005-A Section 3.7 C.S0005-A-1 Section 3.7 C.S0005-B Section 3.7

• HIGH-SPEED DATA CHANNEL (1xEV-DO) CAPABILITIES

The following references illustrate the general overview of 1xEV-DO Channel Signaling.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
OVERVIEW			C.S0024 Section 1
DEFAULT SIGNALING APPLICATION			C.S0024 Section 2
DEFAULT PACKET APPLICATION			C.S0024 Section 3
STREAM LAYER			C.S0024 Section 4
SESSION LAYER			C.S0024 Section 5
CONNECTION LAYER			C.S0024 Section 6
SECURITY LAYER			C.S0024 Section 7
MAC LAYER			C.S0024 Section 8
PHYSICAL LAYER			C.S0024 Section 9
COMMON ALGORITHMS AND DATA STRUCTURES			C.S0024 Section 10
REFERENCE TABLES			C.S0024 Section 11
1xEV-DO ASSIGNED NUMBERS			C.S0024 Section 12

• CROSS MODE OPERATION CAPABILITIES

The following are the hooks and extensions to the 3GPP2 system for support of 3GPP cross mode operations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
CDMA DS ON ANSI-41			C.S0007 v2.0
CDMA MC ON GSM-MAP			C.S0008 v2.0

3GPP2 RADIO ACCESS NETWORK INTERFACE

This section details the capabilities and features of the 3GPP2 access network interface (i.e., A-Interface).

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
MSC-BS INTERFACE MODEL			A.S0001 Section 1.7 A.S0001.1 Section 1.7 A.S0001-A Section 1.7
CALL PROCESSING AND SUPPLEMENTARY SERVICES			A.S0001 Section 2 A.S0001.1 Section 2 A.S0001-A Section 2
- CALL CONTROL			A.S0001 Section 2.1 A.S0001.1 Section 2.1 A.S0001-A Section 2.1
- A1 INTERFACE CALL SETUP			A.S0001 Section 2.2 A.S0001.1 Section 2.2 A.S0001-A Section 2.2
- CALL CLEARING PROCEDURE			A.S0001 Section 2.3 A.S0001.1 Section 2.3 A.S0001-A Section 2.3
- TRAFFIC CHANNEL RADIO LINK SUPERVISION			A.S0001 Section 2.4 A.S0001.1 Section 2.4 A.S0001-A Section 2.4
- SUPPORT OF SUPPLEMENTARY SERVICES			A.S0001 Section 2.5 A.S0001.1 Section 2.5 A.S0001-A Section 2.5
- DATA CALLS			A.S0001 Section 2.6

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- SUPPORT OF SHORT MESSAGE SERVICE			A.S0001 Section 2.7 A.S0001.1 Section 2.6 A.S0001-A Section 2.6
- SUPPORT OF OVER-THE-AIR SERVICE-PROVISIONING (OTASP)			A.S0001 Section 2.8 A.S0001.1 Section 2.7 A.S0001-A Section 2.7
- ERROR HANDLING			A.S0001 Section 2.9 A.S0001-A Section 2.8
- MOBILE ORIGINATED CALLS WITH PACA SERVICE			A.S0001.1 Section 2.10 A.S0001-A Section 2.10
- MOBILE POSITION DETERMINATION			A.S0001.1 Section 2.11 A.S0001-A Section 2.11
- USER ZONES			A.S0001.1 Section 2.12 A.S0001-A Section 2.12
- CIRCUIT DATA CALLS			A.S0001.1 Section 2.13 A.S0001-A Section 2.13
- PACKET DATA CALLS			A.S0001.1 Section 2.14 A.S0001-A Section 2.14
- A10/A11 INTERFACE PROCEDURES			A.S0001.1 Section 2.15 A.S0001-A Section 2.15
- SUPPORT OF ISDN INTERWORKING SERVICE			A.S0001-A Section 2.16
- SUPPORT OF CONCURRENT SERVICE			A.S0001-A Section 2.17
RADIO RESOURCE MANAGEMENT			A.S0001 Section 3 A.S0001.1 Section 3 A.S0001-A Section 3

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- RADIO CHANNEL SUPERVISION			A.S0001 Section 3.1 A.S0001.1 Section 3.1 A.S0001-A Section 3.1
- RADIO CHANNEL MANAGEMENT			A.S0001 Section 3.2 A.S0001.1 Section 3.2 A.S0001-A Section 3.2
- HANDOFF VIA MSC			A.S0001 Section 3.3 A.S0001.1 Section 3.3 A.S0001-A Section 3.3
- HANDOFF VIA DIRECT BS-TO-BS SIGNALING			A.S0001 Section 3.4 A.S0001.1 Section 3.4 A.S0001-A Section 3.4
- HANDOFF CALL FLOWS			A.S0001 Section 3.5 A.S0001.1 Section 3.5 A.S0001-A Section 3.5
MOBILITY MANAGEMENT, AUTHENTICATION, AND PRIVACY			A.S0001 Section 4 A.S0001.1 Section 4 A.S0001-A Section 4
- MOBILITY MANAGEMENT			A.S0001 Section 4.1 A.S0001.1 Section 4.1 A.S0001-A Section 4.1
- AUTHENTICATION AND PRIVACY			A.S0001 Section 4.2 A.S0001.1 Section 4.2 A.S0001-A Section 4.2
- PACKET DATA SECURITY CONSIDERATIONS			A.S0001.1 Section 4.3 A.S0001-A Section 4.3

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
LAYERS 1 & 2 AND TERRESTRIAL FACILITY MANAGEMENT			A.S0001 Section 5 A.S0001.1 Section 5 A.S0001-A Section 5
- PHYSICAL LAYER SPECIFICATION (LAYER 1)			A.S0001 Section 5.1 A.S0001.1 Section 5.1 A.S0001-A Section 5.1
- ANSI SS7 TRANSPORT SPECIFICATION (LAYER 2)			A.S0001 Section 5.2 A.S0001.1 Section 5.2 A.S0001-A Section 5.2
- USE OF ATM (LAYER 2)			A.S0001 Section 5.3 A.S0001.1 Section 5.3 A.S0001-A Section 5.3
- TRANSPORT PROTOCOLS			A.S0001 Section 5.4
- NETWORK AND TRANSPORT PROTOCOLS			A.S0001.1 Section 5.4 A.S0001-A Section 5.4
- TERRESTRIAL CIRCUIT MANAGEMENT PROCEDURES			A.S0001 Section 5.5 A.S0001.1 Section 5.5 A.S0001-A Section 5.5
MESSAGES, INFORMATION ELEMENTS, AND TIMER DEFINITIONS			A.S0001 Section 6 A.S0001.1 Section 6 A.S0001-A Section 6
SUPPLEMENTARY SERVICES ANNEX			A.S0001 Annex A A.S0001.1 Annex A A.S0001-A Annex A
OPTIONAL FEATURES ANNEX			A.S0001.1 Annex B A.S0001-A Annex B

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
CALL DIAGRAMS --> SUPPORT OF EVRC			A.S0001.1 Annex C A.S0001-A Annex C
INTER-GENERATION PACKET DATA HANDOFF ANNEX			A.S0001-A Annex D
ABIS INTERFACE			A.S0003
- FUNCTIONAL ARCHITECTURE AND INTERFACES			A.S0003 Section 4
- CALL PROCESSING			A.S0003 Section 5
- AB INTERFACE MESSAGE FORMATS			A.S0003 Section 6
- INFORMATION ELEMENT DEFINITIONS			A.S0003 Section 7
TANDEM FREE OPERATION			A.S0004 A.S0004-0.1
- GENERAL APPROACH			A.S0004 Section 4 A.S0004-0.1 Section 4
- TFO FRAME STRUCTURE			A.S0004 Section 5 A.S0004-0.1 Section 5
- TFO MESSAGE STRUCTURE			A.S0004 Section 6 A.S0004-0.1 Section 6
- TIME ALIGNMENT OF TFO FRAMES AND TFO MESSAGES			A.S0004 Section 7 A.S0004-0.1 Section 7
- PROCESSES FOR TFO OPERATION			A.S0004 Section 8 A.S0004-0.1 Section 8
- STATE MACHINE FOR TFO_PROTOCOL PROCESS FOR CDMA			A.S0004 Section 9 A.S0004-0.1 Section 9
- DETAILED DESCRIPTION FOR TFO_PROTOCOL FOR CDMA			A.S0004 Section 10 A.S0004-0.1 Section 10

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- TFO CAPABILITY DESCRIPTION AND REQUIREMENTS			A.S0004 Annex A A.S0004-0.1 Annex A
- INBAND SIGNALING PROTOCOL: GENERIC STRUCTURE			A.S0004 Annex B A.S0004-0.1 Annex B
IN-PATH EQUIPMENT: GENERIC RULES AND GUIDELINES			A.S0004 Annex C A.S0004-0.1 Annex C

3GPP2 NETWORK FEATURES AND CAPABILITIES

This section details the capabilities and features of the 3GPP2 intersystem interface.

FEATURE	CATEGORY	ACRONYM	REFERENCE
CELLULAR RADIOTELECOMMUNICATIONS INTERSYSTEM OPERATIONS			N.S0005
CELLULAR FEATURES DESCRIPTIONS			S.R0006
- REMOVABLE USER IDENTITY MODULE	STAGE 1 STAGE 2/3	R-UIM	S.R0009 N.S0003 C.S0023 v2.0 C.S0023-1
- PREFERRED LANGUAGE ENHANCEMENT	STAGE 1 STAGE 2/3		S.R0010 N.S0004
- ADVICE OF CHARGE	STAGE 1	AOC	S.R0011 N.S0004
- REJECTION OF UNDESIRED ANNOYING CALLS	STAGE 1 STAGE 2/3	RUAC	S.R0012 N.S0004
- FREEPHONE			N.S0004
- PREMIUM RATE CHARGING			N.S0004
- PCS MULTI-BAND BASED ON IS-41-C			N.S0006
- DCCH BASED ON IS-41-C			N.S0007
- INTERNATIONAL MOBILE SUBSCRIPTION IDENTIFIER		IMSI	N.S0009
- ADVANCED FEATURES IN WIDEBAND SPREAD SPECTRUM SYSTEMS			N.S0010
- CALLING NAME PRESENTATION / CALLING NAME RESTRICTION		CNAP/CNAR	N.S0012
- WIN PHASE 1			N.S0013
- AUTHENTICATION ENHANCEMENTS			N.S0014
- ANSI-41-D MISCELLANEOUS ENHANCEMENTS			N.S0015
- N.S0005 ENHANCEMENTS FOR INTERNATIONALIZATION			N.S0016

FEATURE	CATEGORY	ACRONYM	REFERENCE
- INTERNATIONAL IMPLEMENTATION OF WIRELESS TELECOMMUNICATIONS SYSTEMS COMPLIANT WITH TIA/EIA-41			N.S0017 N.S0017-A
- PREPAID CHARGING			N.S0018
- INTERSYSTEM LINK PROTOCOL			N.S0019
- SEGMENTATION AND REASSEMBLY			N.S0020
- USER SELECTIVE CALL FORWARDING	STAGE 1 STAGE 2/3	USCF	S.R0007 N.S0021
- ANSWER HOLD	STAGE 1 STAGE 2/3	AH	S.R0008 N.S0022
- AUTOMATIC CODE GAPPING	STAGE 1 STAGE 2/3	ACG	S.R0016 N.S0023
- NETWORK SUPPORT FOR MDN-BASED SYSTEMS			N.S0024
- ROAMER DATABASE VERIFICATION			N.S0025
- WIRELESS RADIO TELECOMMUNICATION INTERSYSTEM NON-SIGNALING DATA COMMUNICATION DMH			N.S0026
- GLOBAL EMERGENCY CALL ORIGINATION	STAGE 1	GECO	S.R0013
- VIDEO STREAMING			C.S0027
3G WIRELESS NETWORK MANAGEMENT	STAGE 1 STAGE 2/3		S.R0017 S.S0028
AUTHENTICATION			N.S0014
ISDN INTERWORKING	STAGE 1		S.R0015 C.S0017-0-2
LOCATION SERVICES			C.S0022 C.S0022-1
MARKOV SERVICE OPTION			C.S0025
MOBILE STATION LOOPBACK TEST			C.S0013 C.S0013-A

FEATURE	CATEGORY	ACRONYM	REFERENCE
OVER-THE-AIR SERVICE PROVISIONING **OVER-THE-AIR PARAMETER ADMINISTRATION**		OTASP OTAPA	C.S0016 C.S0016-A N.S0011
SHORT MESSAGE SERVICE		SMS	C.S0015 N.S0005
TANDEM FREE OPERATION	STAGE 1	TFO	S.R0014
TEST DATA SERVICE OPTION			C.S0026
SERVICE OPTIONS:			
- SPEECH SERVICE OPTION			C.S0009
SERVICES IMPLEMENTED USING EXISTING PROTOCOLS			
- INTERNATIONAL ACCESS/+ CODE DIALING			S.R0004 Section 1 N.0031
- CREDIT CARD CALLING SERVICE			S.R0004 Section 2 N.S0005
- CLOSED USER GROUP		CUG	S.R0004 Section 3 N.S0005
- ENHANCED ROUTING			S.R0004 Section 4 N.S0005
- INTERNATIONAL ROAMING			S.R0004 Section 5 N.S0016
- SPECIAL SERVICE DIALING		SPD	S.R0004 Section 6 N.S0005

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3GPP2 DATA SERVICES

This section details the data services, circuit and packet, support by the 3GPP2 system.

• CIRCUIT-SWITCHED DATA

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
CIRCUIT MODE SERVICES			N.S0008
CDMA DATA SERVICES			C.S0017 Section 3
- SERVICE OPTIONS FOR DATA SERVICES			C.S0017 Section 3.1
- ASYNC AND FAX SERVICES			C.S0017 Section 3.2
- PACKET DATA BEARER SERVICE			C.S0017 Section 3.3
- STU-III SERVICE			C.S0017 Section 3.4
- ANALOG FAX SERVICE			C.S0017 Section 3.5
- HIGH SPEED PACKET BEARER SERVICE			C.S0017 Section 3.6
INTERSYSTEM SUPPORT			C.S0017 Section 4
- PROTOCOL ARCHITECTURE			C.S0017 Section 4.1
- INTERSYSTEM INTERFACE			C.S0017 Section 4.2
DATA SERVICE OPTIONS FOR SPREAD SPECTRUM SYSTEMS: RADIO LINK PROTOCOL (RLP)			C.S0017 -1-10
DATA SERVICE OPTIONS FOR SPREAD SPECTRUM SYSTEMS: cdma2000 HIGH SPEED DATA SERVICES			C.S0017 -1-11

• PACKET-SWITCHED DATA

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
PROTOCOL REFERENCE MODEL			P.S0001 Section 4 P.S0001-A Section 4
SIMPLE IP OPERATION			P.S0001 Section 5 P.S0001-A Section 5
MOBILE IP OPERATION			P.S0001 Section 6 P.S0001-A Section 6
MOBILITY MANAGEMENT			P.S0001 Section 7 P.S0001-A Section 7
QUALITY OF SERVICE (QOS)			P.S0001 Section 8 P.S0001-A Section 8
ACCOUNTING			P.S0001 Section 9 P.S0001-A Section 9
R-P INTERFACE			P.S0001 Section 10 P.S0001-A Section 10
RADIO NETWORK REQUIREMENTS			P.S0001 Section 11 P.S0001-A Section 11
AIR INTERFACE			P.S0001 Section 12 P.S0001-A Section 12

ANALOG OPERATIONS

This section details the capabilities and features of the 3GPP2 analog operations.

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
REQUIREMENTS FOR MOBILE STATION ANALOG OPERATION			C.S0006 Section 2 C.S0006-A Section 2 v2.0 C.S0006-B Section 2
- TRANSMITTER			C.S0006 Section 2.1 C.S0006-A Section 2.1 v2.0 C.S0006-B Section 2.1
- RECEIVER			C.S0006 Section 2.2 C.S0006-A Section 2.2 v2.0 C.S0006-B Section 2.2
- SECURITY AND IDENTIFICATION			C.S0006 Section 2.3 C.S0006-A Section 2.3 v2.0 C.S0006-B Section 2.3
- SUPERVISION			C.S0006 Section 2.4 C.S0006-A Section 2.4 v2.0 C.S0006-B Section 2.4
- MALFUNCTION DETECTION			C.S0006 Section 2.5 C.S0006-A Section 2.5 v2.0 C.S0006-B Section 2.5
- CALL PROCESSING			C.S0006 Section 2.6 C.S0006-A Section 2.6 v2.0 C.S0006-B Section 2.6

CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- SIGNALING FORMATS			C.S0006 Section 2.7 C.S0006-A Section 2.7 v2.0 C.S0006-B Section 2.7
REQUIREMENTS FOR BASE STATION ANALOG OPERATION			C.S0006 Section 3 C.S0006-A Section 3 v2.0 C.S0006-B Section 3
- TRANSMITTER			C.S0006 Section 3.1 C.S0006-A Section 3.1 v2.0 C.S0006-B Section 3.1
- RECEIVER			C.S0006 Section 3.2 C.S0006-A Section 3.2 v2.0 C.S0006-B Section 3.2
- SECURITY AND IDENTIFICATION			C.S0006 Section 3.3 C.S0006-A Section 3.3 v2.0 C.S0006-B Section 3.3
- SUPERVISION			C.S0006 Section 3.4 C.S0006-A Section 3.4 v2.0 C.S0006-B Section 3.4
- MALFUNCTION DETECTION			C.S0006 Section 3.5 C.S0006-A Section 3.5 v2.0 C.S0006-B Section 3.5
- CALL PROCESSING			C.S0006 Section 3.6 C.S0006-A Section 3.6 v2.0 C.S0006-B Section 3.6

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CAPABILITY/FEATURE	CATEGORY	ACRONYM	REFERENCE
- SIGNALING FORMATS			C.S0006 Section 3.7 C.S0006-A Section 3.7 v2.0 C.S0006-B Section 3.7
REQUIREMENTS FOR MOBILE STATION OPTIONS			C.S0006 Section 4 C.S0006-A Section 4 v2.0 C.S0006-B Section 4
REQUIREMENTS FOR BASE STATION OPTIONS			C.S0006 Section 5 C.S0006-A Section 5 v2.0 C.S0006-B Section 5

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1 APPENDIX

2 • 3GPP2 DOCUMENT REFERENCE LISTING

3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
TSG-A RADIO ACCESS INTERFACE					
A.R0003	Abis Technical Report				
A.S0001	3G-IOS		Rev.0 = IOS V4.		
A.S0003	Abis interface specification				
A.S0004	Tandem Free Operation				
TSG-C cdma2000 AIR INTERFACE					
C.S0001	cdma2000 - Introduction		IS-2000-1		
C.S0002	cdma2000 - Physical Layer		IS-2000-2		
C.S0003	cdma2000 - MAC		IS-2000-3		
C.S0004	cdma2000 - Layer 2 LAC		IS-2000-4		
C.S0005	cdma2000 - Layer 3		IS-2000-5		
C.S0006	cdma2000 - Analog		IS-2000-6		
C.S0007	G3G CDMA-DS on ANSI-41				
C.S0008	G3G CDMA-MC on GSM-MAP				
C.S0009	Speech Service Option		TIA/EIA-96-C		
C.S0010	Base Station Minimum Performance		TIA/EIA-97-D		
C.S0011	Mobile Station Minimum Performance		TIA/EIA-98-D		
C.S0012	Minimum Performance Standard for Speech SO 1		TIA/EIA-125-A		
C.S0013	Mobile Station Loopback Test		TIA/EIA-126-C		
C.S0014	Enhanced Variable Rate Codec (EVRC)		IS-127		
C.S0014-0-1	EVRC addendum for removal of bit exact		IS-127-1		
C.S0014-0-2	EVRC TTY/TDD addendum		IS-127-2		
C.S0015	Short Message Service		TIA/EIA-637-A		

3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
C.S0016	OTASP of MS in Spread Spectrum Systems		IS-683-A		
C.S0017	(14.4 kbps) Data SOs for Spread Spectrum Systems - STU III Transparent + Non-Trans - Async Data + G3 Fax - Packet (Internet + CDPD) - Analog Fax (Rate Set 1+2)		IS-707-A		
C.S0017-0-1	Addendum for cdma2000 RLP and additional packet data support		IS-707-A-1		
C.P0017-0-2	Data SOs for Spread Spectrum Systems		IS-707-A-2		
C.S0018	Minimum Performance Specification for EVRC		IS-718		
C.S0020	High Rate (13 kbps) Speech SO		IS-733		
C.S0020-0-1	High Rate Speech SO TTY/TDD addendum		IS-733-1		
C.S0021	Minimum Performance for HR (13 kbps)		IS-736-A		
C.S0022	Location Services (Position Determination Service)		IS-801		
C.S0023	Removable User Identity Module		IS-820		
C.S0024	Markov Service Option (MSO)				
C.S0025	Test Data Service Option (TDSO)				
C.R1000	Requirements Mapping for cdma2000		TSB2000		
C.R1001	Parameter Value Assignments		TSB58-B		
C.P9001	SMV (Selectable Mode Vocoder)		PN-4575		
TSG-N INTERSYSTEM INTERFACE					
N.S0003	User Identity Module		IS-808	TTAE.3G-N.S0003	JP-3GB-N.S0003

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3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
N.S0004	WIN Phase 2 - Triggers for Preferred Language - Advice of Charge - Rejection of Undesired Annoying Calls - Premium Rate Charging - Freephone		IS-848	TTAE.3G-N.S0004	JP-3GB-N.S0004
N.S0005	Cellular Radiotelecommunications Intersystem Operations	YD/T-1031-1999	TIA/EIA-41-D	TTAE.3G-N.S0005	JJ-70.11
N.S0006	PCS Multi-band-Based on IS-41-C		TSB-76		JP-3GB-N.S0006
N.S0007	DCCH Based on IS-41-C		IS-730	TTAE.3G-N.S0007	
N.S0008	Circuit Modes Services-Data-Based on IS-41-C		IS-737		JP-3GB-N.S0008
N.S0009	IMSI		IS-751	TTAE.3G-N.S0009	JP-3GB-N.S0009
N.S0010	Advanced Features in Wideband Spread Spectrum Systems		IS-735		JP-3GB-N.S0010
N.S0011	OTASP and OTAPA		IS-725-A	TTAE.3G-N.S0011	JP-3GB-N.S0011
N.S0012	CNAP/CNAR		IS-764	TTAE.3G-N.S0012	JP-3GB-N.S0012
N.S0013	WIN		IS-771	TTAE.3G-N.S0013	JP-3GB-N.S0013
N.S0014	Authentication Enhancements		IS-778	TTAE.3G-N.S0014	JP-3GB-N.S0014
N.S0015	ANSI-41-D Miscellaneous Enhancements				TD-3GB-N.S0015
N.S0016	TIA/EIA-41-D Enhancements for Interna-tionalization		IS-807	TTAE.3G-N.S0016	JP-3GB-N.S0016
N.S0017	International Implementation of Wireless Telecommunication Systems Compliant with TIA/EIA-41		TSB29-C	TTAE.3G-N.S0017	TD-3GB-N.S0017

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3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
N.S0018	TIA/EIA-41-D Prepaid Charging		IS-826	TTAE.3G-N.S0018	JP-3GB-N.S0018
N.S0019	Intersystem Link Protocol		IS-728	TTAE.3G-N.S0019	JP-3GB-N.S0019
N.S0020	Segmentation and Reassembly		IS-812	TTAE.3G-N.S0020	
N.S0021	User Selective Call Forwarding (USCF)		IS-838		JP-3GB-N.S0021
N.S0022	Answer Hold (AH)		IS-837		JP-3GB-N.S0022
N.S0023	Automatic Code Gapping (ACG)		IS-706		JP-3GB-N.S0023
N.S0024	Network support for MDN-based Message Centers		IS-841		
N.S0025	Roamer Database Verification		IS-847		
N.S0026	Wireless Radio Telecommunica-tion Intersystem Non-Signaling Data Communication DMH		TIA/EIA-124-C		
TSG-P PACKET DATA SERVICES					
P.S0001	Wireless IP Network Architecture based on IETF Protocols				
P.S0002	Wireless IP Network Standard		TIA/EIA-835		
TSG-S SERVICES AND SYSTEMS ASPECTS					
S.R0001	3GPP2 Specifications List				
S.R0002	3G Capability Descriptions				
S.R0003	System Capability Guide				
S.R0004	System Implementation Guide				
S.R0005	3GPP2 Network Reference Model		TSB100		
S.R0006	Cellular Features Description		IS-664-A		
S.R0007	User Selective Call Forwarding (Stage1)		IS-838PN-4551		
S.R0008	Answer Hold (Stage1)		IS-837PN-4550		

3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
S.R0009	User Identity Module (Stage1)		IS-808PN-4582		
S.R0010	Preferred Language Enhance-ment (Stage1)		IS-848		
S.R0011	Advice of Charge (Stage1)		IS-848 PN-4289		
S.R0012	Rejection of Undesired Annoying Calls (Stage1)		IS-848 PN-4289		
S.R0013	Global Emergency Call Origina-tion (Stage1)				
S.R0014	Tandem Free Operation (Stage1)				
S.R0015	ISDN Interworking (Stage1)				
S.R0016	Automatic Code Gapping (Stage1)		IS-786PN-4410		
S.R0017	3G Wireless Network Manage-ment System High Level Re-quirements (Stage 1)		[IS-4108]		
S.R0018	Prepaid Charging (Stage 1)		IS-826PN-4287		
S.R0019	Location Services System Sup-port (Stage 1)		PN-4747		
S.R0021	Video Streaming Service (Stage 1)				
S.R0022	Video Conferencing Service (Stage 1)				
S.R0023	High-speed Data Enhancements for cdma2000 1x - Data Only (1xEV-DO) (Stage 1)				
S.R0024	Wireless Local Loop (WLL) (Stage 1)				
S.R0025	Wireless Pay Phone (WPP) (Stage 1)				
S.R0026	High-speed Data Enhancements for cdma2000 1x - Integrated Data and Voice (1xEV-DV) (Stage 1)				

3GPP2 DOC #	TITLE	CWTS REF #	TIA REF #	TTA REF #	TTC REF #
S.R0027	Personal Mobility (Stage 1)				
S.R0029	Access Control Based on Call Type (Stage 1)				
S.R0032	Enhanced Subscriber Authentication (ESA) and Enhanced Subscriber Privacy (ESP) (Stage 1)		PN-4393		
S.S0028	OAM&P for cdma2000 (3GPP Delta Specification)				

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- **AIR INTERFACE PARAMETER ADMINISTRATION**

CAPABILITY/FEATURE	REFERENCE
3GPP2 PARAMETER ADMINISTRATION PROCESS	C.R1001 Section 2
SERVICE OPTION NUMBER ASSIGNMENTS	C.R1001 Section 3
DATA BURST MESSAGE TYPE ASSIGNMENTS	C.R1001 Section 4
MULTIPLEX OPTION NUMBER ASSIGNMENTS	C.R1001 Section 5
MANUFACTURER-SPECIFIC OTASP ASSIGNMENTS	C.R1001 Section 7
ROAMING DISPLAY INDICATOR ASSIGNMENTS	C.R1001 Section 8
SHORT MESSAGE SERVICES ASSIGNMENTS	C.R1001 Section 9

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1 ACRONYMS

µs	Microsecond (10^{-6} second).
3G	Third Generation.
3G-IOS	Third Generation InterOperability Specification
3GPP	Third Generation Partnertship Project (ETSI driven)
3GPP2	Third Generation Partnership Project (ANSI driven)
AAL	ATM Adaptation Layer.
ABR	Average Bit Rate.
AC	Authentication Center
ACCOLC	ACCess Over Load Class.
ACELP	Adaptive Code Excited Linear Prediction.
ACF	Authentication Control Function
ACH	Access Channel
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
AH	Authentication Header
AH	Answer Hold
AHAG	Ad Hoc Authentication Group (TR45)
AHG	AdHoc Group
AI	Air Interface.
AIN	Advanced Intelligent Network
A-key	Authentication key.
AM	Amplitude Modulation.
AMA	Automatic Message Accounting
AMPS	Advanced Mobile Phone System.
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
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.
BLOB	Block of Bits
bps	Bits per second.
BPSK	Biphase shift keying.
BRAID	The Motorola data encryption algorithm's name refers to braiding, as in hair.
BS	Base Station
BSC	Base Station Controller
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
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
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
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
CELP	Code Excited Linear Prediction.
CFRT	Connection Failure Report Timer
CHANGE	Change parameter
CHAP	Challenge Handshake Authentication Protocol
CHGSRVAT	Change Service Attribute parameter
CIC	Carrier ID Code

CITEL	Commission InterAmericanna de Telecommunications Association
CLASS	Custom Local Area Signaling Services.
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
CPCCH	Common Power Control Channel
CPE	Customer Premise Equipment
CRC	Cyclic Redundancy Code
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
CWTS	China Wireless Telecommunication Standard Group
DAE	Data Access Element parameter
DAEL	Data Access Element List parameter
D-AMPS	Digital Advanced Mobile Phone System.
dBc	The ratio (in dB) of the sideband power of a signal, measured in a given bandwidth at a given frequency offset from the center frequency of the same signal, to the total inband power of the signal. .
dBm	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
DMH	Data Message Handler
DN	Directory Number.
DOI	Domain of Interpretation
DP	Detection Point
DPP	Data Privacy Parameters
DQPSK	Differential Quadrature Phase Shift Keying
DRAM	Dynamic Random Access Memory
DS	Direct Spread
dsch	Dedicated Signaling Channel
DTC	Digital Traffic Channel
dtch	Dedicated Traffic Channel
DTE	Data Terminal Equipment
DTMF	Dual Tone Multi-Frequency
DTV	Digital Television
DTX	Discontinuous Transmission
E911	Enhanced 911
EA	Entropy Accumulator
E_b	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
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
ER	Enhanced Roaming
ERAM	Enhanced Rate Adaptation 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 Radio
ESN	Electronic Serial Number
ESP	Encapsulating Security Payload
ESP	Enhanced Subscriber Privacy
ETACS	Extended Total Access Communications Systems
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
F-PCH	Forward Paging Channel
FPH	FreePhone
FPLMTS	Future Public Land Mobile Telecommunications Systems – now IMT-2000
FSK	F Shift Keying
FSLP	Feature Service Logic Program
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
GSM	Formerly: Group Special Mobile. Now: Global System for Mobile Communications
GT	Global Title parameter
HA	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
ICO	Intermediate Circular Orbit
ICS	Incoming Call Screening
IDEN	Integrated Digital Enhanced Network
IETF	Internet Engineering Task Force
IFAST	Formerly "International Forum on AMPS Standards Technology"; recently changed to "International Forum on ANSI-41 Standards Technology"
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
IP	Internet Protocol
IP	Intelligent Peripheral
IPCP	IP Control Protocol
IPE	In Path Equipment
IPR	Intellectual Property Rights
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
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	**K**iloHertz (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
LEC	Local Exchange Carrier
LEO	Low Earth Orbit
LMCC	Land Mobile Communications Council
LMDS	Local Multipoint Distribution Service
LPC	Linear Predictive Coding
LPM	Logical-to-Physical Mapping
LRF	Location Registration Function
LRF$_H$	Location Registration Function – HLR
LRF$_V$	Location Registration Function – VLR
LSB	Least Significant Bit
LSI	Location-Based Information Service
LTU	Logical Transmission Unit
MAC	Media Access Control
MACF	Mobile Station Access Control Function
MAP	Mobile Application Part
MC	Multi-Carrier
MC	Message Center.
MCC	Mobile Country Code
Mcps	Megachips per second (10^6 chips per second)
MCSB	Message Control and Status Block

MDN	Mobile Directory Number
MHz	Megahertz (10^6 Hertz)
MIN	Mobile Identification Number
MIP	Mobile IP
MIPS	Millions of Instructions Per Second
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
ms	Millisecond (10^{-3} second)
MS	Mobile Station
MSA	Metropolitan Statistical Area
MSB	Most significant bit
MSC	Mobile Switching Center
MSID	Mobile Station Identifier
MT	Mobile Terminal
MT	Modify Timer
MTA	Major Trading Area
MTn	Mobile Terminal n
MUX	Multiplexer
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
OAM&P	Operations Administration, Maintenance and Provisioning
OATS	Over-the Air Activation TeleService
OLC	Overload Class
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
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
PAP	Password Authentication Protocol
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
PDNR	Preliminary Draft of New Recommendation
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
PL	Physical Layer
PL	Programming Lock
PLMTS	Public Land Mobile Telecommunications Systems
PM	Phase Modulation
PN	Project Number
PN	Pseudo Noise
POP	Point of Presence
POPs	Persons of Population
POTS	Plain Old telephone Service
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
PSAP	Public Safety Answering Point
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
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	Radio Access Network
RAST	RAdio STandards
RBOC	Regional Bell Operating Company
RC	Radio Configuration
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
RLP	Radio Link Protocol
RMS	Root Mean Square
RN	Radio Network
ROLR	Receive Objective Loudness Rating
RPE-LTP	Regular Pulse Excited LPC with Long Term Protection
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
RSID	Residential System Identifier
RsMA	Reservation Multiple Access
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
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
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
SEAD	Software Encryption Algorithm for Data
SERVRSLT	Services Result Parameter
SG	Study Group
SID	Silence Descriptor
SIM	Service Interactions Manager
SIM	Subscriber Identity Module
SLP	Service Logic Program
SLPI	Service Logic Program Instance
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
SMV	Selectable Mode Vocoder
SN	Service Node
SNHC	Synthetic/Natural Hybrid Coding
SO	Service Option
SOC	System Operator Code
SOCS	SOC Status Parameter
SOM	Start of Message (bit).
SP	Standards Proposal
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
SRAM	Static Random Access Memory
SRBP	Signaling Radio Burst Protocol
SRD	Standards Requirements Document
SRF	Specialized Resource Function
SRFDT	SRF Directive Timer
SS7	Signaling System 7
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
SSUI	Standard Subscriber Unit Interface.
ST	Search Timer

STG	Science & Technology Group (CTIA)
STS	Space Time Spreading
STU	Secure Telephone Unit
SWG	Sub-Working Group
SYSCAP	System Capabilities
SZRT	Seize Resource Timer
T_Bits	Time Alignment Bits
TA	Terminal Adapter
TACS	Total Access Communications Systems
TCAP	Transaction Capability Application Part
TCAU	Telecommunications Contract & Audit Unit (FBI)
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
TDT	T Disconnect Timer
TE	Terminal Equipment
TEn	Terminal Equipment n
TETRA	Terrestrial Trunked Radio
TFO	Tandem Free Operation
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
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
UDP	User Datagram Protocol
UDR	Usage Data Record
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
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
V&V	Verification & Validation
VBR	Variable Bit Rate
VCO	Voice Carry Over
VCS	Voice Controlled Services
VHE	Virtual Home Environment
VLR	Visitor Location Register
VMAC	Voice Mobile Attenuation Code
VPM	Voice Privacy Mask
VSC	Vertical Service Code
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
WNP	Wireless Number Portability
WP	Working Party
WRE	Wireless Residential Extension
wrt	with respect to
WTRIGLIST	WIN Trigger List parameter

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