3GPP2 C.S0001-D

Version 1.0

Date: February 2004

3RD GENERATION
PARTNERSHIP
PROJECT 2
"3GPP2"

Introduction to cdma2000 Spread Spectrum Systems

Revision D

CONTENTS

FIGURES

TABLES

1

No text

3

1 OVERVIEW

1.1 The cdma2000 Family of Standards

The cdma2000[®][1] family of standards includes core air interface, minimum performance, and service standards (see 1.3). The cdma2000 air interface standards specify a spread spectrum radio interface that uses Code Division Multiple Access (CDMA) technology to meet the requirements for Third Generation (3G) wireless communication systems. The core air interface standards in the family are [1, 2, 3, 4, 5]. In addition, the family includes a standard [6] that specifies analog operation, to support dual-mode mobile stations and base stations.

Throughout the remainder of this document, use of the term cdma2000 refers to the cdma2000 family.

1.1.1 Purpose

The technical requirements contained in cdma2000 form a compatibility standard for CDMA systems. They ensure that a mobile station can obtain service in a system manufactured in accordance with the cdma2000 standards. The requirements do not address the quality or reliability of that service, nor do they cover equipment performance or measurement procedures.

Compatibility, as used in connection with cdma2000, is understood to mean: any cdma2000 mobile station is able to place and receive calls in cdma2000 or IS-95 systems. Conversely, any cdma2000 system is able to place and receive calls for cdma2000 and IS-95 mobile stations. In a subscriber's home system, all call placement is automatic. Similarly, it is preferable for call placement to be automatic when a mobile station is roaming.

To ensure compatibility, both radio system parameters and call processing procedures are specified. The sequence of call processing steps that the mobile stations and base stations execute to establish calls is specified, along with the digital control messages and, for dual-mode systems, the analog signals that are exchanged between the two stations.

The base station is subject to different compatibility requirements than the mobile station. Radiated power levels, both desired and undesired, are fully specified for mobile stations, in order to control the RF interference that one mobile station can cause another. Base stations are fixed in location and their interference is controlled by proper layout and operation of the system in which the station operates. Detailed call processing procedures are specified for mobile stations to ensure a uniform response to all base stations. Base station procedures, which do not affect the mobile stations' operation, are left to the designers of the overall land system. This approach to writing the compatibility

---

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

1 specification is intended to provide the land system designer with sufficient flexibility to
2 respond to local service needs and to account for local topography and propagation
3 conditions.

4 cdma2000 includes provisions for future service additions and expansion of system
5 capabilities. This release of the cdma2000 family of standards supports Spreading Rate 1
6 and Spreading Rate 3 operation (see [2]).

7 **1.1.2   Architecture**

8 Figure 1 depicts the general architecture of cdma2000. Development of the cdma2000
9 family of standards has, to the greatest extent possible, adhered to the architecture by
10 specifying different layers in different standards.
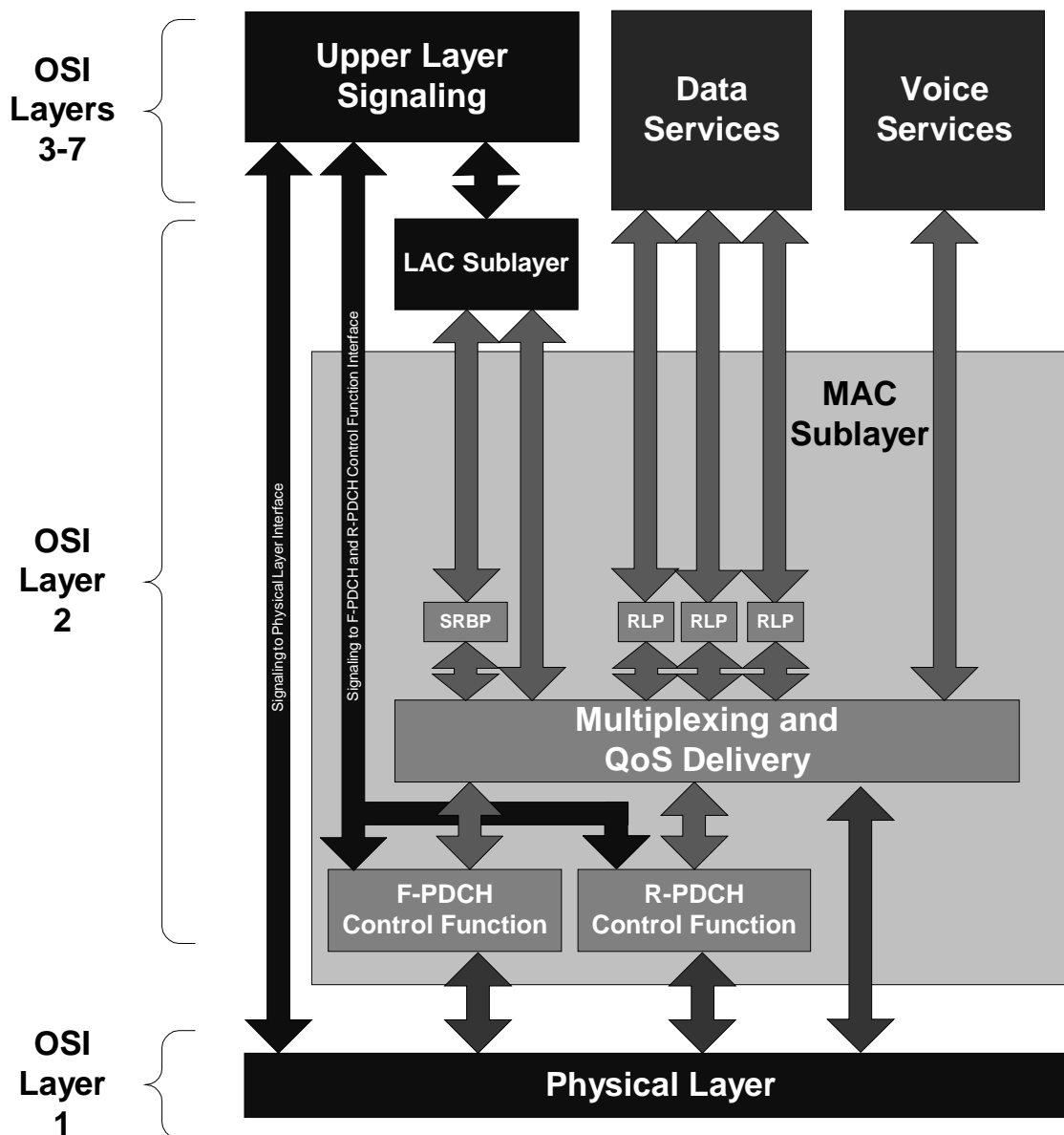
11

12 **Figure 1   cdma2000 Architecture**

DOCKET ALARM

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

fastcase
Smarter legal research.