3GPP TS 25.301 V7.1.0 (2007-03)

Technical Specification

3rd Generation Partnership Project;
Technical Specification Group Radio Access Network;
Radio Interface Protocol Architecture
(Release 7)

The present document has been developed within the 3rd Generation Partnership Project (3GPP ™) and may be further elaborated for the purposes of 3GPP.

The present document has not been subject to any approval process by the 3GPP Organisational Partners and shall not be implemented.
This Specification is provided for future development work within 3GPP only. The Organisational Partners accept no liability for any use of this Specification.
Specifications and reports for implementation of the 3GPP ™ system should be obtained via the 3GPP Organisational Partners' Publications Offices.

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

Keywords
UMTS, radio, architecture

3GPP

Postal address

3GPP support office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet
http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2007, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

Contents

Foreword 5
1 Scope 6
2 References 6
3 Definitions and abbreviations 7
3.1 Definitions 7
3.2 Abbreviations 7
4 Assumed UMTS Architecture 8
5 Radio interface protocol architecture 9
5.1 Overall protocol structure 9
5.1.1 Service access points and service primitives 11
5.2 Layer 1 Services and Functions 12
5.2.1 L1 Services 12
5.2.1.1 Transport channels 12
5.2.2 L1 Functions 13
5.3 Layer 2 Services and Functions 14
5.3.1 MAC Services and Functions 14
5.3.1.1 MAC Services to upper layers 14
5.3.1.1.1 Logical channels 14
5.3.1.1.2 Mapping between logical channels and transport channels 16
5.3.1.1.2.1 Mapping in Uplink 16
5.3.1.1.2.2 Mapping in Downlink 16
5.3.1.2 MAC functions 18
5.3.2 RLC Services and Functions 19
5.3.2.1 Services provided to the upper layer 19
5.3.2.2 RLC Functions 20
5.3.3 PDCP Services and Function 21
5.3.3.1 PDCP Services provided to upper layers 21
5.3.3.2 PDCP Functions 21
5.3.4 Broadcast/Multicast Control - Services and functions 21
5.3.4.1 BMC Services 21
5.3.4.2 BMC Functions 21
5.3.5 Data flows through Layer 2 21
5.3.5.1 Data flow for BCCH mapped to BCH 25
5.3.5.2 Data flow for BCCH mapped to FACH 25
5.3.5.3 Data flow for PCCH mapped to PCH 25
5.3.5.4 Data flow for CCCH mapped to FACH/RACH 25
5.3.5.5 Data flow for SHCCH mapped to USCH 25
5.3.5.6 Data flow for SHCCH mapped to FACH/RACH 26
5.3.5.7 Data flow for DCCH mapped to FACH/RACH 26
5.3.5.8 Data flow for DCCH mapped to DSCH 26
5.3.5.9 Data flow for DCCH mapped to USCH 26
5.3.5.10 Void 26
5.3.5.11 Data flow for DTCH (non-transparent RLC) mapped to FACH/RACH 26
5.3.5.12 Data flow for DTCH (non-transparent RLC) mapped to DSCH 26
5.3.5.13 Data flow for DTCH (non-transparent RLC) mapped to USCH 26
5.3.5.14 Data flow for DTCH (transparent RLC) mapped to DCH 26
5.3.5.15 Data flow for DTCH (non-transparent RLC) mapped to DCH 26
5.3.5.16 Void 27
5.3.5.17 Data flow for DCCH mapped to DCH 27
5.3.5.18 Data flow for CTCH mapped to FACH 27
5.3.5.19 Data flow for DCCH mapped to HS-DSCH 27
5.3.5.20 Data flow for DTCH (non-transparent RLC) mapped to HS-DSCH 27
5.3.5.21 Data flow for DCCH mapped to E-DCH 27
5.3.5.22 Data flow for DTCH (non-transparent RLC) mapped to E-DCH 27

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

5.3.5.23 Data flow for MCCH (non-transparent RLC) mapped to FACH 27
5.3.5.24 Data flow for MSCH (non-transparent RLC) mapped to FACH 27
5.3.5.25 Data flow for MTCH (non-transparent RLC) mapped to FACH 27
5.3.6 Transport Channel, Logical Channel and MAC-d flow Numbering 27
5.4 Layer 3 - Uu Stratum Services and Functions 29
5.4.1 Uu Stratum services 29
5.4.1.1 General Control 29
5.4.1.2 Notification 29
5.4.1.3 Dedicated Control 29
5.4.2 RRC functions 30
5.5 Interactions between RRC and lower layers in the C plane 32
5.6 Protocol termination 32
5.6.1 Protocol termination for DCH 32
5.6.2 Protocol termination for RACH/FACH 33
5.6.3 Void 35
5.6.4 Void 35
5.6.5 Protocol termination for DSCH 35
5.6.5.1 DSCH definition 35
5.6.5.2 Resource allocation and UE identification on DSCH 36
5.6.5.2.1 Void 36
5.6.5.2.2 UE requires a downlink SHCCH 36
5.6.5.3 Model of DSCH in UTRAN 36
5.6.5.4 Protocol termination 37
5.6.6 Protocol termination for transport channel of type USCH 38
5.6.6.1 USCH definition 38
5.6.6.2 Resource allocation and UE identification on USCH 38
5.6.6.3 Model of USCH in UTRAN 38
5.6.6.4 Protocol termination 39
5.6.7 Protocol termination for transport channel of type BCH 40
5.6.8 Protocol termination for transport channel of type PCH 40
5.6.9 Protocol termination for HS-DSCH 41
5.6.9.1 HS-DSCH definition 41
5.6.9.2 Resource allocation and UE identification on HS-DSCH 41
5.6.9.3 Protocol termination 41
5.6.10 Protocol termination for E-DCH 42
5.6.10.1 E-DCH definition 42
5.6.10.2 Resource allocation and UE identification related to E-DCH 42
5.6.10.3 Protocol termination 42
5.6.11 Protocol termination for MBMS 43
5.6.11.1 MBMS definition 43
5.6.11.2 Resource allocation related to MBMS 43
5.6.11.3 Protocol termination 43

6 User Identification and RRC Connection Mobility 44
6.1 UE identification on the radio interface 44
6.2 UE connection to UTRAN 45

7 UE modes 45

Annex A (informative): Change history 47

DOCKET ALARM
Find authenticated court documents without watermarks at docketalarm.com.

Foreword

This Technical Specification (TS) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

DOCKET ALARM Find authenticated court documents without watermarks at docketalarm.com.

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.