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Radio Link Control / Medium Access Control (RLC/MAC)
protocol
(3GPP TS 44.060 version 13.4.0 Release 13)**

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Foreword

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

The present document specifies the procedures used at the radio interface (Reference Point Um, see 3GPP TS 24.002) for the General Packet Radio Service (GPRS) Medium Access Control /Radio Link Control (MAC/RLC) layer within the digital cellular telecommunications system (Phase 2+).

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.

1 Scope

1.1 General

This document specifies procedures for the following layers of the radio interface (*Um* reference point), the interface between the GSM/EDGE Radio Access Network (GERAN) and the Mobile Station (MS):

- Radio Link Control (RLC)
- Medium Access Control (MAC), including Physical Link Control functions

The procedures apply in *A/Gb mode* and may also apply in *Iu mode* (see 3GPP TS 44.160).

1.2 Related documents

The following documents provide information related to this document:

- 3GPP TS 43.064 contains an overview of the GPRS radio interface (*Um* reference point).
- 3GPP TS 44.003 specifies channel types, access capabilities and channel configurations at the *Um* reference point.
- 3GPP TS 44.004 specifies services offered by the physical layer of the *Um* reference point. It also specifies control channels. RLC and MAC use these services and control channels.
- 3GPP TS 24.007 specifies, in general terms, this protocol's structured functions, its procedures and its relationship with other layers and entities. It also specifies the basic message format and error handling applied by layer 3 protocols.
- 3GPP TS 44.018 specifies GPRS procedures when operating on the Common Control Channel (CCCH) or on dedicated channels.
- 3GPP TS 44.064 specifies the Logical Link Control (LLC) layer.
- 3GPP TS 43.051 is an overall description of the GSM/EDGE Radio Access Network (GERAN) in *Iu mode*.
- 3GPP TS 44.160 specifies RLC/MAC procedures specific to *Iu mode*.
- 3GPP TS 51.010 specifies test procedures for radio-interface signalling.

1.3 Use of logical control channels

3GPP TS 45.002 defines four similar sets of logical control.

The first set consists of the following logical control channels:

- Broadcast Control Channel (BCCH): downlink only, used to broadcast Cell specific information;
- Paging Channel (PCH): downlink only, used to send page requests to Mobile Stations (MSs);
- Random Access Channel (RACH): uplink only, used to request GPRS resources or a Dedicated Control Channel;
- Access Grant Channel (AGCH): downlink only, used to allocate GPRS resources or a Dedicated Control Channel;

The second set consists of the following logical control channels (Packet Control Channels):

- Packet Broadcast Control Channel (PBCCH): downlink only, used to broadcast Cell specific information (not used, see sub-clause 1.6);