

ETSI/TC SMG
Released by : ETSI/PT 12
Release date: February 1992

RELEASE NOTE

Recommendation GSM 08.04

BSS-MSC Layer 1 Specification

Previously distributed version : 3.0.3 (Release 1/90)

New Released version February 92 : 3.0.3 (Release 92, Phase 1)

1. Reason for changes

No changes since the previously distributed version.

Blank page

ETSI-GSM
Technical
Specification

GSM 08.04

Version 3.0.3

UDC: 621.396.21

Key words: European Digital Cellular Telecommunications System; Global System for Mobile Communications (GSM)

**European digital cellular
telecommunication system (phase 1);
BSS-MSC Layer 1 Specification**

ETSI

European Telecommunications Standards Institute

ETSI Secretariat: B.P.152 . F - 06561 Valbonne Cedex . France

TP. + 33 92 94 42 00 TF. + 33 93 65 47 16 Tx. 47 00 40 F

Copyright European Telecommunications Standards Institute 1992.
All rights reserved.

No part may be reproduced or used except as authorised by contract or other written permission. The copyright and the foregoing restriction on reproduction and use extend to all media in which the information may be embodied.

PREFATORY NOTE

ETSI has constituted stable and consistent documents which give specifications for the implementation of the European Cellular Telecommunications System. Historically, these documents have been identified as "GSM recommendations".

Some of these recommendations may subsequently become Interim European Telecommunications Standards (I-ETTs) or European Telecommunications Standards (ETTs), whilst some continue with the status of ETSI-GSM Technical Specifications. These ETSI-GSM Technical Specifications are for editorial reasons still referred to as GSM recommendations in some current GSM documents.

The numbering and version control system is the same for ETSI-GSM Technical Specifications as for "GSM recommendations".

1. INTRODUCTION

This recommendation defines the structure of the physical layer (layer 1) of the BSS-MSC interface for supporting traffic channels. Use of the physical layer for supporting Signalling System No.7 signalling links is covered in recommendation GSM 08.06.

The physical layer is the lowest layer in the OSI Reference Model and it supports all functions required for transmission of bit streams on the physical medium.

For this recommendation only digital transmission will be considered, the use of analogue transmission is a national concern.

2. LAYER 1 SPECIFICATION

All CCITT recommendations referred to are Red Book.

Layer 1 shall utilise digital transmission at a rate of 2048 kbit/sec with a frame structure of 32 * 64kbit/sec time slots, as specified in recommendation CCITT G.705 section 3.

Therefore the physical/electrical characteristics are defined in CCITT recommendation G.703.

The functional characteristics are defined in recommendation CCITT G.732 section 2 and 3.

Fault conditions should be treated in accordance with recommendation CCITT G.732 section 4.

Speech encoding shall be the A-law as defined in recommendation CCITT G.711.

The idle pattern must be transmitted on every timeslot that is not assigned to a channel, and to every timeslot of a channel that is not allocated to a call. The idle pattern shall be 01010100.

Synchronisation at the BSS for the transmitted 2048 kbit/sec bit stream shall be derived from the received 2048 kbit/sec bit stream.

Data encoding is covered in recommendation GSM 08.20.

Note : A predetermined number of the 64kbit/sec time slots may be used for signalling, to one or more base station systems.