

**Global System for Mobile communication (GSM);
Requirements for GSM operation on railways**



Reference

DEN/MSG-00001

Keywords

GSM, UIC

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Special Mobile Group (SMG), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

1 Scope

The present document identifies the 3GPP Technical Specifications which contain provisions relating to the use of GSM for application on railway networks.

The present document is applicable to GSM communication systems embraced by the European Council Directive 96/48/EC [35] on the interoperability of the trans-European high-speed rail system.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, subsequent revisions do apply.

NOTE 1: All the references listed in the present document are to the specific versions mentioned at the end of the titles.

- [1] ETSI TS 100 590: "Digital cellular telecommunications system (Phase 2+); Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification (GSM 08.08 version 8.5.0 Release 1999)".
- [2] ETSI TS 100 596: "Digital cellular telecommunications system (Phase 2+); Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 3 specification (GSM 08.58 version 8.4.0 Release 1999)".
- [3] ETSI TS 100 607-1: "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 8.2.0 Release 1999)".
- [4] ETSI TS 100 929: "Digital cellular telecommunications system (Phase 2+); Security related network functions (GSM 03.20 version 8.0.0 Release 1999)".
- [5] ETSI TS 100 933: "Digital cellular telecommunications system (Phase 2+); Voice Group Call Service (VGCS); Stage 2 (GSM 03.68 version 8.2.0 Release 1999)".
- [6] ETSI TS 100 934: "Digital cellular telecommunications system (Phase 2+); Voice Broadcast Service (VBS); Stage 2 (GSM 03.69 version 8.2.0 Release 1999)".
- [7] ETSI TS 100 948: "Digital cellular telecommunications system (Phase 2+); Group Call Control (GCC) protocol (GSM 04.68 version 8.1.0 Release 1999)".
- [8] ETSI TS 100 949: "Digital cellular telecommunications system (Phase 2+); Broadcast Call Control (BCC) protocol (GSM 04.69 version 8.1.0 Release 1999)".
- [9] ETSI TS 100 977: "Digital cellular telecommunications system (Phase 2+); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface (GSM 11.11 version 8.3.0 Release 1999)".
- [10] ETSI TS 101 349: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol (GSM 04.60 version 8.5.0 Release 1999)".
- [11] ETSI TS 101 350: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Overall description of the GPRS radio interface; Stage 2 (GSM 03.64 version 8.5.0 Release 1999)".

- [12] ETSI TS 101 351: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Mobile Station - Serving GPRS Support Node (MS-SGSN) Logical Link Control (LLC) layer specification (GSM 04.64 version 8.4.0 Release 1999)".
- [13] ETSI TS 101 503: "Digital cellular telecommunications system (Phase 2+); Mobile radio interface layer 3 specification; Radio Resource Control Protocol (GSM 04.18 version 8.5.0 Release 1999)".
- [14] ETSI TS 101 627: "Digital cellular telecommunications system (Phase 2+); Subscriber and equipment trace (GSM 12.08 version 5.1.1 Release 1996)".
- [15] ETSI TR 101 748: "Digital cellular telecommunications system (Phase 2+); Abbreviations and acronyms (GSM 01.04 version 8.0.0 Release 1999)".
- [16] ETSI TS 122 004: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); General on supplementary services (3G TS 22.004 version 3.2.1 Release 1999)".
- [17] ETSI TS 122 030: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Man-Machine Interface (MMI) of the User Equipment (UE) (3G TS 22.030 version 3.3.0 Release 1999)".
- [18] ETSI TS 122 087: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); User-to-User Signalling (UUS); Service description - Stage 1 (3G TS 22.087 version 3.1.0 Release 1999)".
- [19] ETSI TS 122 094: "Digital cellular telecommunications system (Phase 2+) (GSM) - Universal Mobile Telecommunications System (UMTS); Follow Me Service description - Stage 1 (3G TS 22.094 version 3.1.0 Release 1999)".
- [20] ETSI TS 123 008: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Organization of subscriber data (3G TS 23.008 version 3.4.0 Release 1999)".
- [21] ETSI TS 123 018: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Basic call handling; Technical realization (3G TS 23.018 version 3.5.0 Release 1999)".
- [22] ETSI TS 123 060: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); General Packet Radio Service (GPRS); Service description; Stage 2 (3G TS 23.060 version 3.4.0 Release 1999)".
- [23] ETSI TS 123 067: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); enhanced Multi-Level Precedence and Pre-emption service (eMLPP) - Stage 2 (3G TS 23.067 version 3.1.0 Release 1999)".
- [24] ETSI TS 123 087: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); User-to-user signalling (UUS) Supplementary Service - Stage 2 (3G TS 23.087 version 3.0.0 Release 1999)".
- [25] ETSI TS 123 094: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Follow-Me (FM) - Stage 2 (3G TS 23.094 version 3.1.0 Release 1999)".
- [26] ETSI TS 124 008: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Mobile radio interface layer 3 specification; Core Network Protocols - Stage 3 (3G TS 24.008 version 3.4.1 Release 1999)".
- [27] ETSI TS 124 080: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Mobile radio interface layer 3 supplementary services specification; Formats and coding (3G TS 24.080 version 3.3.0 Release 1999)".
- [28] ETSI TS 124 087: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); User-to-User Signalling (UUS) Supplementary Service - Stage3 (3G TS 24.087 version 3.0.0 Release 1999)".

- [29] ETSI TS 127 007: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); AT command set for User Equipment (UE) (3G TS 27.007 version 3.5.0 Release 1999)".
- [30] ETSI TS 129 002: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Mobile Application Part (MAP) specification (3G TS 29.002 version 3.5.2 Release 1999)".
- [31] ETSI TS 132 005: "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Telecommunication Management; Charging and billing; GSM call and event data for the Circuit Switched (CS) domain (3G TS 32.005 Version 3.1.0 Release 1999)".
- [32] ETSI TS 151 010-3: "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 3: Layer 3 Abstract Test Suite (ATS) (GSM 11.10-3 version 5.0.1 Release 4)".

NOTE 2: The referenced document was not publicly available at the time the present document was sent for Public Enquiry.

- [33] ETSI EN 300 925: "Digital cellular telecommunications system (Phase 2+); Voice Group Call Service (VGCS) - Stage 1 (GSM 02.68 version 7.0.2 Release 1998)".
- [34] ETSI EN 300 926: "Digital cellular telecommunications system (Phase 2+); Voice Broadcast Service (VBS) - Stage 1 (GSM 02.69 version 8.0.1 Release 1999)".
- [35] Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system.

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

GSM	Global System for Mobile Communications
UIC	Union Internationale des Chemins de fer

4 GSM for use in UIC systems

The GSM specifications originally developed within ETSI Technical Committee (TC) Special Mobile Group (SMG) were transferred to 3GPP on the closure of that TC. During development of the specifications, modifications were introduced to cater for the requirements of the railway industry. The specifications containing such modifications are listed in clause 2.

To satisfy the requirements of GSM systems for use on railway networks covered by the scope of the present document, the provisions of all those documents listed in clause 2 shall be implemented.

Annex A (informative): Change history

date	event	description of change	starting version	resulting version
2000-01-17	first draft			0.0.0

History

Document history		
V1.0.0	March 2001	Public Enquiry PE 20010713: 2001-03-14 to 2001-07-13