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Digital cellular telecommunications system (Phase 2); Attachment requirements for Global System for Mobile communications (GSM); Mobile stations in the DCS 1 800 band and additional GSM 900 band; Telephony (GSM 13.02 version 4.0.1)

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ETSI EN 301 420 V4.0.1 (1999-12)

Candidate Harmonized European Standard (Telecommunications series)

**Digital cellular telecommunications system (Phase 2);
Attachment requirements for Global System for
Mobile communications (GSM);
Mobile stations in the DCS 1 800 band and
additional GSM 900 band; Telephony
(GSM 13.02 version 4.0.1)**

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GLOBAL SYSTEM FOR
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Foreword

This Candidate Harmonized European Standard (Telecommunications series) has been produced by the Special Mobile Group (SMG).

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 98/13/EC of the European Parliament and of the Council relating to telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity ("Directive 98/13/EC").

Technical specifications relevant to the 98/13/EC Directive are given in the Requirements Table (RT) in annex A.

This standard covers the requirements for GSM Telephony (speech).

This standard contains the procedures and requirements for the approval testing of GSM terminal equipment for speech. These requirements apply to terminals for Phase 2 of the public land mobile radio service, operating in:

- the DCS 1 800 band; or
- the GSM 900 band; or
- both in the DCS 1 800 band and the GSM 900 MHz band.

The requirements of other standards apply in addition to this standard.

For each test, supplementary information is provided, giving a justification why this item has been selected for regulatory testing, and a reference to the relevant article of the Terminal Directive [1].

This standard is based on the EN 300 607-1 (GSM 11.10-1) [2].

NOTE: The present document for Phase 2 may be developed in stages. The first release will include, as a minimum, all of the basic Phase 2. Subsequent releases will include additional requirements.

The contents of the present document may be subject to continuing work within SMG and may change following formal SMG approval. Should SMG modify the contents of this EN it will then be re-submitted for formal approval procedures by ETSI with an identifying change of release date and an increase in version number as follows:

Version 4.x.y

where:

- 4 GSM Phase 2;
- x the second digit is incremented for all other types of changes, i.e. technical enhancements, corrections, updates, etc.;
- y the third digit is incremented when editorial only changes have been incorporated in the specification.

National transposition dates	
Date of adoption of this EN:	3 December 1999
Date of latest announcement of this EN (doa):	31 March 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 September 2000
Date of withdrawal of any conflicting National Standard (dow):	30 September 2000

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1 Scope

The present document specifies the technical requirements to be met by terminal equipment capable of connecting to a public telecommunications network. These requirements apply to terminals for Phase 2 of the public land mobile radio service, operating in:

- the DCS 1 800 band; or
- the GSM 900 band; or
- both in the DCS 1 800 band and the GSM 900 MHz band.

with a channel separation of 200 kHz, utilizing constant envelope modulation and carrying traffic channels according to the Time Division Multiple Access (TDMA) principle.

This standard specifies the access requirements for terminals as stated above implementing the GSM standard.

For each test purpose and its corresponding conformance requirement, a reference is given to EN 300 607-1 (GSM 11.10-1) [2]. The requirements apply to speech transmission.

The measurement uncertainty is handled, as described in EN 300 607-1 (GSM 11.10) [2].

This standard covers the essential requirements of the Directive 98/13/EC [1] Article 5g. Articles 5d, 5e, and 5f are covered by EN 301 419-1 (GSM 13.01) [6].

The Terminal Directive 98/13/EC Articles 5a and 5b are covered by other directives, and, therefore, not by this standard.

In this standard, there are no Electromagnetic Compatibility technical requirements in terms of the Terminal Directive 98/13/EC, Article 5c.

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NOTE 1: Technical Requirements for EMC performance and testing of the equipment are covered by the relevant standards applicable to the EMC Directive 89/336/EEC, annex A.

EN 300 607-1 (GSM 11.10) [2] constitutes the conformance test suite referenced by this TBR. The verification of the conformance requirements in this TBR is based on the tests described in this reference. The set of requirements in EN 300 607-1 (GSM 11.10) [2] and the set of requirements in this TBR need not be identical.

Some requirements only apply to specific types of mobile station (e.g. data tests only apply to mobile stations with a data facility). The standard also indicates the specific test which shall be carried out for each mobile station type.

An active accessory is covered by this standard if it modifies the terminal performance in an aspect which affects conformance to essential requirements.

NOTE 2: Only active devices are subject to this standard. Accessories may be tested with specific terminals, and either approved for use with those terminals only, or may possibly be approved for use with a wider range of terminals, depending on the nature and effect of the accessory.

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, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] Directive 98/13/EC of the European Parliament and of the Council of 12 February 1998 "relating to telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity" (Official Journal, L74/1, 12.3.98). (The Directive)
- [2] EN 300 607-1 (GSM 11.10-1): "Digital cellular telecommunications system (Phase 2); Mobile station conformity specifications".
- [3] Void.
- [4] EN 300 540 (GSM 03.50): "Digital cellular telecommunications system (Phase 2); Transmission planning aspects of the speech service in the GSM Public Land Mobile Network (PLMN) system".
- [5] EN 300 504 (GSM 02.06): "Digital cellular telecommunication system (Phase 2); Types of Mobile Stations (MS)".
- [6] EN 301 419-1: "Digital cellular telecommunications system (Phase 2); Attachment requirements for Global System for Mobile communications (GSM); Part 1: Mobile stations in the GSM 900 and DCS 1 800 bands; Access (GSM 13.01 version 4.0.0)"

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3 Abbreviations

For the purposes of this standard, the following abbreviations apply:

DTX	Discontinuous Transmission (mechanism)
EL	Echo Loss
MMI	Man Machine Interface
MS	GSM Mobile Station
TCH/FS	Full rate Traffic CHannel for Speech
TCH/HS	Half rate Traffic CHannel for Speech

4 General requirements

The requirements of this standard apply to the following classes of terminal:

- Terminals operating only in the DCS 1 800 band. These terminals shall conform to the requirements of clause 5.
- Terminals operating in the DCS 1 800 band and in the GSM 900 band (including terminals operating in the Extended GSM 900 band) either simultaneously or in one band at a time. These terminals shall conform to:
the requirements of clause 5 of this standard.