



SLOVENSKI STANDARD

SIST EN 301 511:2001

01-september-2001

; `cVU]b]g]ghYa `nUa cV]bY_ca i b]_UV]Y`f} GAŁ!`<Ufa cb]n]fUb]`ghUbXUfX`nU
a cV]bY`dgcgU]Y`j `dUgcj] `; GA `-\$`]b`87G`%,\$\$Z_]`nUYa UV]ghj YbY`nU h]j Y `YbU
' "&X]fY_hj YF/ HH9`f% -- #) #07Łf} GA `% "%fUh`]]WU+`\$"%z]nXUU%- , Ł

Global System for Mobile communications (GSM); Harmonized standard for mobile stations in the GSM 900 and DCS 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC) (GSM 13.11 version 7.0.1 Release 1998)

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 301 511:2001](https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beccd-c0af3c1bee43/sist-en-301-511-2001)

<https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beccd-c0af3c1bee43/sist-en-301-511-2001>

Ta slovenski standard je istoveten z: **EN 301 511 Version 7.0.1**

ICS:

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)
-----------	---	--

SIST EN 301 511:2001

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 301 511:2001

<https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beed-c0af3c1bee43/sist-en-301-511-2001>

ETSI EN 301 511 V7.0.1 (2000-12)

Candidate Harmonized European Standard (Telecommunications series)

**Global System for Mobile communications (GSM);
Harmonized standard for mobile stations
in the GSM 900 and DCS 1800 bands covering
essential requirements under article 3.2
of the R&TTE directive (1999/5/EC)
(GSM 13.11 version 7.0.1 Release 1998)**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

GSM®

GLOBAL SYSTEM FOR
MOBILE COMMUNICATIONS

[SIST EN 301 511:2001](https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beed-c0af3c1bee43/sist-en-301-511-2001)

<https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beed-c0af3c1bee43/sist-en-301-511-2001>



Reference

DEN/SMG-071311Q7

KeywordsDigital cellular telecommunications system,
Global System for Mobile communications (GSM)**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**iTeh STANDARD PREVIEW**
(standards.iteh.ai)SIST EN 301 511:2001<https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beecd-c0af3c1bee43/sist-en-301-511-2001>

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at <http://www.etsi.org/tb/status/>

If you find errors in the present document, send your comment to:
editor@etsi.fr

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.

© European Telecommunications Standards Institute 2000.
All rights reserved.

Contents

Intellectual Property Rights	5
Foreword	5
Introduction.....	6
1 Scope.....	8
2 References	9
3 Definitions, symbols and abbreviations	10
3.1 Definitions	10
3.2 Symbols	10
3.3 Abbreviations.....	10
4 Technical requirements specifications	10
4.1 Environmental profile.....	10
4.2 Conformance requirements.....	10
4.2.1 Transmitter - Frequency error and phase error.....	10
4.2.2 Transmitter - Frequency error under multipath and interference conditions.....	10
4.2.3 Transmitter - Frequency error and phase error in HSCSD multislot configuration.....	11
4.2.4 Frequency error and phase error in GPRS multislot configuration	11
4.2.5 Transmitter output power and burst timing	11
4.2.6 Transmitter - Output RF spectrum	11
4.2.7 Transmitter output power and burst timing in HSCSD multislot configurations.....	11
4.2.8 Transmitter - Output RF spectrum in HSCSD multislot configuration	11
4.2.9 Transmitter - Output RF spectrum for MS supporting the R-GSM frequency band	11
4.2.10 Transmitter output power in GPRS multislot configuration.....	11
4.2.11 Output RF spectrum in GPRS multislot configuration.....	11
4.2.12 Conducted spurious emissions - MS allocated a channel	11
4.2.13 Conducted spurious emissions - MS in idle mode	11
4.2.14 Conducted spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel.....	11
4.2.15 Conducted spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode	12
4.2.16 Radiated spurious emissions - MS allocated a channel	12
4.2.17 Radiated spurious emissions - MS in idle mode	12
4.2.18 Radiated spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel.....	12
4.2.19 Radiated spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode	12
4.2.20 Receiver Blocking and spurious response - speech channels.....	12
4.2.21 Receiver Blocking and spurious response - speech channels for MS supporting the R-GSM frequency band	12
5 Testing for compliance with technical requirements	12
5.1 Environmental conditions for testing.....	12
5.2 Essential radio test suites	12
5.2.1 Transmitter - Frequency error and phase error.....	12
5.2.2 Transmitter - Frequency error under multipath and interference conditions.....	13
5.2.3 Transmitter - Frequency error and phase error in HSCSD multislot configuration.....	13
5.2.4 Frequency error and phase error in GPRS multislot configuration	13
5.2.5 Transmitter output power and burst timing	13
5.2.6 Transmitter - Output RF spectrum.....	13
5.2.7 Transmitter output power and burst timing in HSCSD multislot configurations.....	13
5.2.8 Transmitter - Output RF spectrum in HSCSD multislot configuration	13
5.2.9 Transmitter - Output RF spectrum for MS supporting the R-GSM frequency band	13
5.2.10 Transmitter output power in GPRS multislot configuration.....	13
5.2.11 Output RF spectrum in GPRS multislot configuration.....	13
5.2.12 Conducted spurious emissions - MS allocated a channel	13
5.2.13 Conducted spurious emissions - MS in idle mode	13

5.2.14	Conducted spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel	14
5.2.15	Conducted spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode	14
5.2.16	Radiated spurious emissions - MS allocated a channel	14
5.2.17	Radiated spurious emissions - MS in idle mode	14
5.2.18	Radiated spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel	14
5.2.19	Radiated spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode	14
5.2.20	Receiver Blocking and spurious response - speech channels	14
5.2.21	Receiver Blocking and spurious response - speech channels for MS supporting the R-GSM frequency band	14
Annex A (normative):	The EN requirements table (EN-RT)	15
A.1	Type of Mobile Stations	17
A.2	Additional Information	17
Annex B (informative):	The EN title in the official languages	18
Annex C (informative):	Change history	19
History		20

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 301 511:2001](https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beecd-c0af3c1bee43/sist-en-301-511-2001)

<https://standards.iteh.ai/catalog/standards/sist/f689b210-2482-431a-beecd-c0af3c1bee43/sist-en-301-511-2001>

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://www.etsi.org/ipr>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee 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 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 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive") [1].

Technical specifications relevant to Directive 1999/5/EC are given in annex A.

SIST EN 301 511:2001

<https://standards.iteh.ai/catalog/standards/sist/89f210-2482-431a-becd-e0af3e1bee43/sist-en-301-511-2001>

National transition dates

Date of adoption of this EN:	1 December 2000
Date of latest announcement of this EN (doa):	31 March 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 September 2001
Date of withdrawal of any conflicting National Standard (dow):	30 September 2001

Introduction

The present document is part of a set of standards designed to fit in a modular structure to cover all radio and telecommunications terminal equipment under the R&TTE Directive [1]. Each standard is a module in the structure. The modular structure is shown in figure 1.

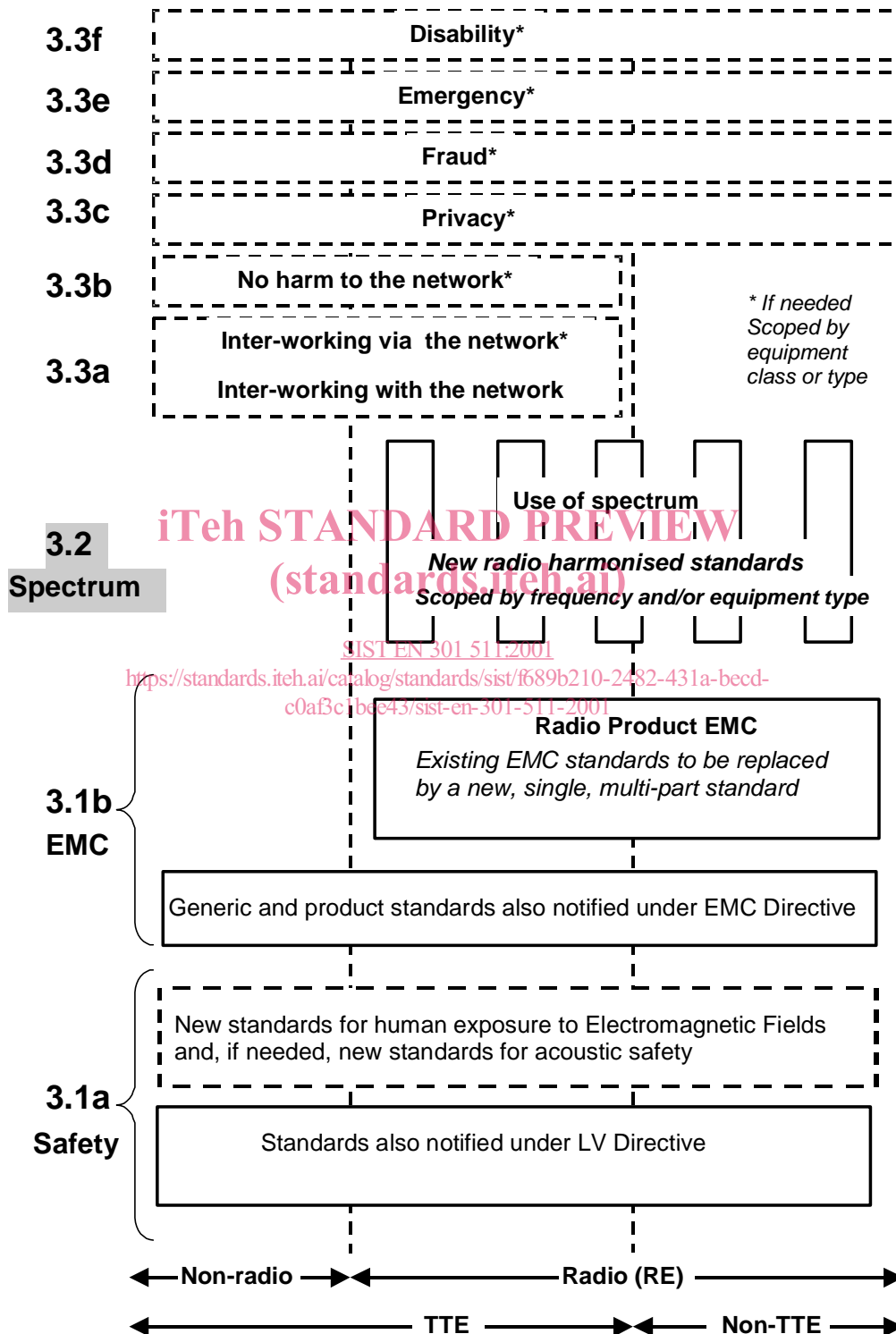


Figure 1: Modular structure for the various standards used under the R&TTE Directive [1]

The left hand edge of the figure 1 shows the different subclauses of Article 3 of the R&TTE Directive [1].

For article 3.3 various horizontal boxes are shown. Dotted lines indicate that at the time of publication of this standard essential requirements in these areas have to be adopted by the Commission. If such essential requirements are adopted, and as far and as long as they are applicable, they will justify individual standards whose scope is likely to be specified by function or interface type.

The vertical boxes show the standards under article 3.2 for the use of the radio spectrum by radio equipment. The scopes of these standards are specified either by frequency (normally in the case where frequency bands are harmonized) or by radio equipment type.

For article 3.1b the diagram shows the new single multi-part product EMC standard for radio, and the existing collection of generic and product standards currently used under the EMC Directive [13]. The parts of this new standard will become available in the second half of 2000, and the existing separate product EMC standards will be used until it is available.

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive [14] and new standards covering human exposure to electromagnetic fields. New standards covering acoustic safety may also be required.

The bottom of the figure shows the relationship of the standards to radio equipment and telecommunications terminal equipment. A particular equipment may be radio equipment, telecommunications terminal equipment or both. A radio spectrum standard will apply if it is radio equipment. An article 3.3 standard will apply as well only if the relevant essential requirement under the R&TTE Directive [1] is adopted by the Commission and if the equipment in question is covered by the scope of the corresponding standard. Thus, depending on the nature of the equipment, the essential requirements under the R&TTE Directive [1] may be covered in a set of standards.

The modularity principle has been taken because:

- it minimizes the number of standards needed. Because equipment may, in fact, have multiple interfaces and functions it is not practicable to produce a single standard for each possible combination of functions that may occur in an equipment;
- it provides scope for standards to be added:
 - under article 3.2 when new frequency bands are agreed or
 - under article 3.3 should the Commission take the necessary decisions
 without requiring alteration of standards that are already published;
- it clarifies, simplifies and promotes the usage of Harmonized Standards as the relevant means of conformity assessment.

1 Scope

The present document applies to the following radio telecommunications terminal equipment types:

- 1 GSM mobile station.

This radio equipment type is for operation within the Digital cellular telecommunications system in the GSM 900 and/or DCS 1800 frequency bands as shown in table 1.

Table 1: Frequency bands for GSM900 and DCS1800 Mobile Station system

Type	TX:	RX:
P-GSM900	890-915 MHz	935-960 MHz
DCS1800	1710-1785 MHz	1805-1880 MHz
E-GSM900	880-915 MHz	925-960 MHz
R-GSM900	876-915 MHz	921-960 MHz

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

This EN is intended to cover the provisions of Directive 1999/5/EC (R&TTE Directive) [1] Article 3.2, which states that "..... radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

This EN covers the general access requirements for terminal equipment for Phase 2 and Phase 2+ Releases 1996, 1997 and 1998. This EN constitutes the equivalent of the GSM document GSM 13.11 version 7.0.0. This EN does not cover the GPRS Class A mobiles and the GPRS only mobiles.

For each test purpose and its corresponding conformance requirement, a reference is given to the test method in EN 300 607-1 (GSM 11.10-1) [2]. The requirements apply at the air interface which may be stimulated to perform the tests by additional equipment if necessary.

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

In addition to this EN, other ENs that specify technical requirements in respect of essential requirements under other parts of Article 3 of the R&TTE Directive [1] may apply to equipment within the scope of this EN.

NOTE 1: A list of such ENs is included on the web site <<http://www.newapproach.org>>.

EN 300 607-1 (GSM 11.10-1) [2] constitutes the conformance test suite for GSM. The verification of the conformance requirements in this standard is based on the tests described in this reference. The set of requirements in EN 300 607-1 (GSM 11.10-1) [2] and the set of requirements in this standard 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, tests that only apply to GSM900 or only to DCS1 800 or to both). The present document indicates the specific test which should 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.
- For this Release 1998 document, references to GSM documents are for Release 1998 versions (version 7.x.y).

- [1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).
- [2] EN 300 607-1: "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 8.1.0 Release 1999)".
- [3] ETS 300 500: "Digital cellular telecommunications system (Phase 2); Principles of telecommunication services supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.01)".
- [4] GSM 02.01: "Digital cellular telecommunications system (Phase 2+); Principles of telecommunication services supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.01 version 5.5.0 Release 1996)".
- [5] TS 100 500: "Digital cellular telecommunications system (Phase 2+); Principles of telecommunication services supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.01 version 6.2.0 Release 1997)".
- [6] TS 100 500: "Digital cellular telecommunications system (Phase 2+); Principles of telecommunication services supported by a GSM Public Land Mobile Network (PLMN); (GSM 02.01 version 7.1.0 Release 1998)".
- [7] ETS 300 504: "Digital cellular telecommunications system (Phase 2); Types of Mobile Stations (MS) (GSM 02.06 version 4.5.0)".
- [8] ETS 300 919: "Digital cellular telecommunications system (Phase 2+); Types of Mobile Stations (MS) (GSM 02.06 version 5.2.1 Release 1996)".
- [9] EN 300 919: "Digital cellular telecommunications system (Phase 2+); Types of Mobile Stations (MS) (GSM 02.06 version 6.1.1 Release 1997)".
- [10] EN 300 919: "Digital cellular telecommunications system (Phase 2+); Types of Mobile Stations (MS) (GSM 02.06 version 7.0.1 Release 1998)".
- [11] EN 301 113: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 1 (GSM 02.60 version 6.3.0 Release 1997)".
- [12] TS 101 113: "Digital cellular telecommunications system (Phase 2+); General Packet Radio Service (GPRS); Service description; Stage 1 (GSM 02.60 version 7.4.0 Release 1998)".
- [13] Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).