



# SLOVENSKI STANDARD

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

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# ETSI EN 301 511 V9.0.2 (2003-03)

*Candidate Harmonized European Standard (Telecommunications series)*

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

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GLOBAL SYSTEM FOR  
MOBILE COMMUNICATIONS

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## Reference

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# Contents

Intellectual Property Rights .....	5
Foreword.....	5
Introduction .....	6
1 Scope .....	8
2 References .....	9
3 Definitions and abbreviations.....	11
3.1 Definitions .....	11
3.2 Abbreviations .....	11
4 Technical requirements specifications .....	12
4.1 Environmental profile.....	12
4.2 Conformance requirements .....	12
4.2.1 Transmitter - Frequency error and phase error .....	12
4.2.2 Transmitter - Frequency error under multipath and interference conditions .....	12
4.2.3 Transmitter - Frequency error and phase error in HSCSD multislot configuration .....	12
4.2.4 Frequency error and phase error in GPRS multislot configuration.....	12
4.2.5 Transmitter output power and burst timing.....	12
4.2.6 Transmitter - Output RF spectrum.....	12
4.2.7 Transmitter output power and burst timing in HSCSD multislot configurations.....	12
4.2.8 Transmitter - Output RF spectrum in HSCSD multislot configuration .....	12
4.2.9 Transmitter - Output RF spectrum for MS supporting the R-GSM frequency band.....	13
4.2.10 Transmitter output power in GPRS multislot configuration .....	13
4.2.11 Output RF spectrum in GPRS multislot configuration .....	13
4.2.12 Conducted spurious emissions - MS allocated a channel.....	13
4.2.13 Conducted spurious emissions - MS in idle mode.....	13
4.2.14 Conducted spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel.....	13
4.2.15 Conducted spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode.....	13
4.2.16 Radiated spurious emissions - MS allocated a channel .....	13
4.2.17 Radiated spurious emissions - MS in idle mode .....	13
4.2.18 Radiated spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel.....	13
4.2.19 Radiated spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode.....	13
4.2.20 Receiver Blocking and spurious response - speech channels .....	13
4.2.21 Receiver Blocking and spurious response - speech channels for MS supporting the R-GSM frequency band.....	14
4.2.22 Frequency error and Modulation accuracy in EGPRS Configuration.....	14
4.2.23 Frequency error under multipath and interference conditions in EGPRS Configuration.....	14
4.2.24 EGPRS Transmitter output power .....	14
4.2.25 Output RF spectrum in EGPRS configuration .....	14
4.2.26 Blocking and spurious response in EGPRS configuration.....	14
5 Testing for compliance with technical requirements.....	14
5.1 Environmental conditions for testing .....	14
5.2 Essential radio test suites.....	14
5.2.1 Transmitter - Frequency error and phase error .....	14
5.2.2 Transmitter - Frequency error under multipath and interference conditions .....	14
5.2.3 Transmitter - Frequency error and phase error in HSCSD multislot configuration .....	14
5.2.4 Frequency error and phase error in GPRS multislot configuration.....	15
5.2.5 Transmitter output power and burst timing.....	15
5.2.6 Transmitter - Output RF spectrum.....	15
5.2.7 Transmitter output power and burst timing in HSCSD multislot configurations.....	15
5.2.8 Transmitter - Output RF spectrum in HSCSD multislot configuration.....	15
5.2.9 Transmitter - Output RF spectrum for MS supporting the R-GSM frequency band.....	15
5.2.10 Transmitter output power in GPRS multislot configuration .....	15

5.2.11	Output RF spectrum in GPRS multislot configuration .....	15
5.2.12	Conducted spurious emissions - MS allocated a channel .....	15
5.2.13	Conducted spurious emissions - MS in idle mode .....	15
5.2.14	Conducted spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel .....	15
5.2.15	Conducted spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode .....	15
5.2.16	Radiated spurious emissions - MS allocated a channel .....	16
5.2.17	Radiated spurious emissions - MS in idle mode .....	16
5.2.18	Radiated spurious emissions for MS supporting the R-GSM frequency band - MS allocated a channel .....	16
5.2.19	Radiated spurious emissions for MS supporting the R-GSM frequency band - MS in idle mode .....	16
5.2.20	Receiver Blocking and spurious response - speech channels .....	16
5.2.21	Receiver Blocking and spurious response - speech channels for MS supporting the R-GSM frequency band .....	16
5.2.22	Frequency error and Modulation accuracy in EGPRS Configuration .....	16
5.2.23	Frequency error under multipath and interference conditions in EGPRS Configuration .....	16
5.2.24	EGPRS Transmitter output power .....	16
5.2.25	Output RF spectrum in EGPRS configuration .....	16
5.2.26	Blocking and spurious response in EGPRS configuration .....	16
<b>Annex A (normative):</b>	<b>The EN requirements table (EN-RT) .....</b>	<b>17</b>
A.1	Type of Mobile Stations .....	19
A.2	Additional Information .....	19
<b>Annex B (informative):</b>	<b>The EN title in the official languages .....</b>	<b>20</b>
<b>Annex C (informative):</b>	<b>Change history .....</b>	<b>21</b>
History .....		22

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## Foreword

This Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Mobile Standards Group (MSG).

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [33] (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 1999/5/EC [1] 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").

Technical specifications relevant to Directive 1999/5/EC [1] are given in annex A.

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<b>National transposition dates</b>	
Date of adoption of this EN	14 March 2003
Date of latest announcement of this EN (doa):	30 June 2003
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 December 2003
Date of withdrawal of any conflicting National Standard (dow):	30 June 2004

## 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.

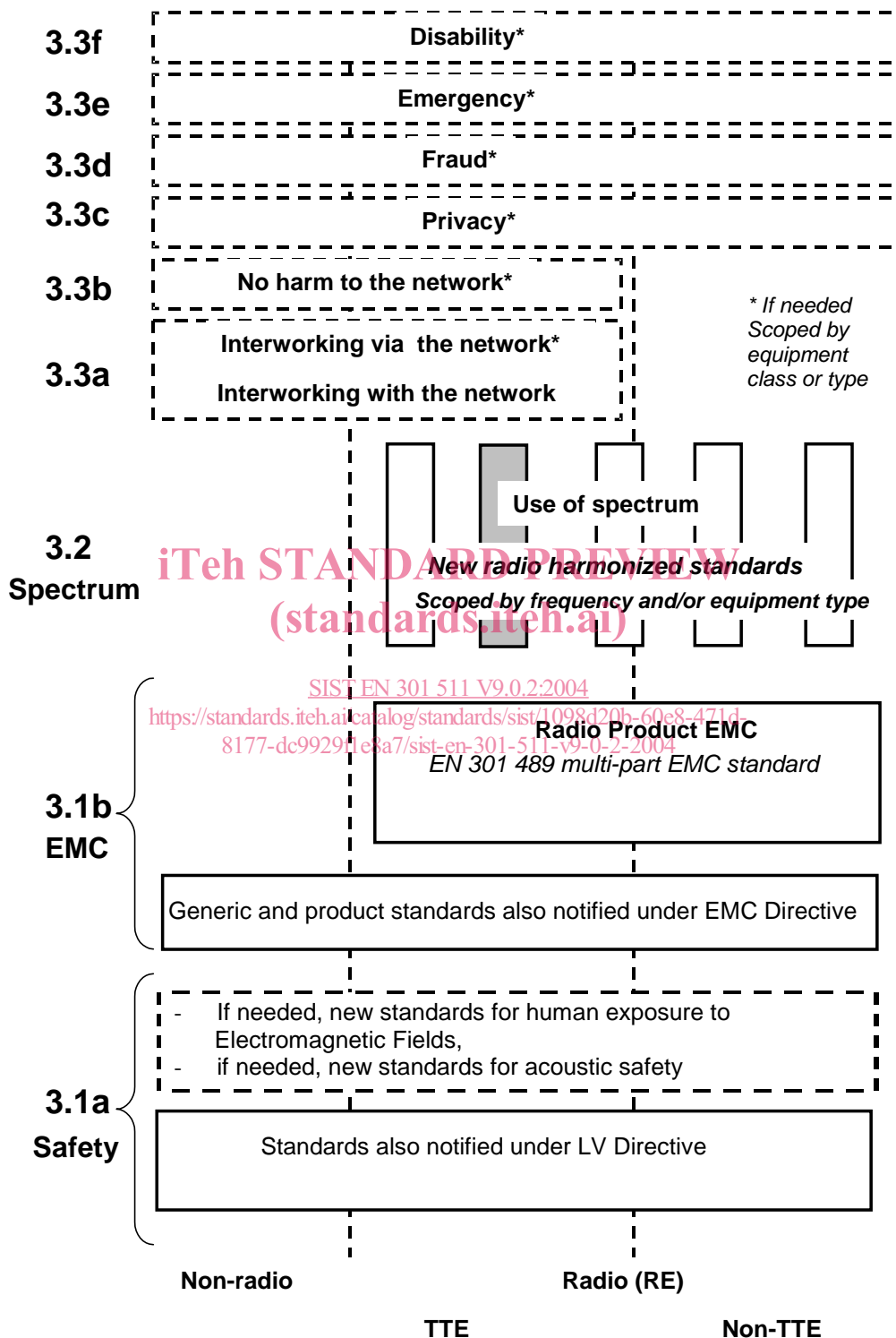


Figure 1: Modular structure for the various standards used under the R&TTE Directive [1]



The left hand edge of the figure 1 shows the different clauses 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 the present document 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 EN 301 489 [32], the multi-part product EMC standard for radio used under the EMC Directive [30].

For article 3.1a the diagram shows the existing safety standards currently used under the LV Directive [31] 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:

- GSM mobile station.

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

**Table 1: Frequency bands for GSM900 and GSM1800 Mobile Station system**

Type	TX	RX
<b>P-GSM900</b>	890 MHz to 915 MHz	935 MHz to 960 MHz
<b>GSM1800</b>	1 710 MHz to 1 785 MHz	1 805 MHz to 1 880 MHz
<b>E-GSM900</b>	880 MHz to 915 MHz	925 MHz to 960 MHz
<b>R-GSM900</b>	876 MHz to 915 MHz	921 MHz to 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.

The present document 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".

The present document covers the general access requirements for terminal equipment for Phase 2 and Releases 1996, 1997, 1998, 1999 and Rel-4. The general access requirements, applied to the terminal equipment, are for one release only. The present document does not cover the GPRS Class A mobiles, the GPRS only mobiles and the ECSD mobiles.

For each test purpose and its corresponding conformance requirement, a reference is given to the test method in TS 151 010-1 [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 TS 151 010-1 [2].

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [1] will apply to equipment within the scope of the present document.

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

TS 151 010-1 [2] constitutes the conformance test suite for GSM. The verification of the conformance requirements in the present document is based on the tests described in this reference. The set of requirements in TS 151 010-1 [2] and the set of requirements in the present document 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 GSM1800 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 the present document if it modifies the terminal performance in an aspect which affects conformance to essential requirements.

NOTE 2: Only active devices are subject to the present document. 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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- For this Release 4 document, references to GSM documents with numbers of the form "aa.bb" - for example, GSM 02.03 - are for:

Phase 2 (version 4.x.y)

Phase 2+ Release 96 (version 5.x.y)

Phase 2+ Release 97 (version 6.x.y)

Phase 2+ Release 98 (version 7.x.y)

Phase 2+ Release 99 (version 8.x.y)

- And references to GSM documents with numbers of the form "aa.bbb" - for example, 22.003 - are for:

Phase 2+ Release 99 (version 3.x.y)

Phase 2+ Release 4 (version 4.x.y)

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

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- [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] ETSI TS 151 010-1 (V4.9.0): "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (3GPP TS 51.010-1 version 4.9.0 Release 4)".
  - [3] ETSI TS 151 010-2 (V4.6.0): "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification (3GPP TS 51.010-2 version 4.6.0 Release 4)".
  - [4] ETSI ETS 300 502 (1994): "European digital cellular telecommunications system (Phase 2); Teleservices supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.03)".
  - [5] ETSI ETS 300 905 (1998): "Digital cellular telecommunications system (Phase 2+) (GSM); Teleservices supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.03 version 5.3.2)".
  - [6] ETSI TS 100 905 (V6.0.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Teleservices supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.03 version 6.0.0 Release 1997)".
  - [7] ETSI TS 100 905 (V7.0.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Teleservices supported by a GSM Public Land Mobile Network (PLMN) (GSM 02.03 version 7.0.0 Release 1998)".
  - [8] ETSI TS 122 003 (V3.3.0): "Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); Circuit Teleservices supported by a Public Land Mobile Network (PLMN) (3GPP TS 22.003 version 3.3.0 Release 1999)".