SLOVENSKI STANDARD
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Elektromagnetna združljivost (EMC) in zadeve v zvezi z radijskim spektrom (ERM) - Standard elektromagnetne združljivosti (EMC) za radijsko opremo in storitve - 1. del: Splošne tehnične zahteve

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

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Candidate Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

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Foreword

This Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

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

The present document is intended to become a Harmonized EMC Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Council Directive on the approximation of the laws of the Member States relating to electromagnetic compatibility (the "EMC Directive" 89/336/EEC [3] as amended), and the Council Directive on the approximation of the laws of the Member States relating to radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (the "R&TTE Directive" 1999/5/EC [4]).

Technical specifications relevant to the EMC Directive and the R&TTE Directive are given in annex A.

The present document is based upon the Generic Standards EN 50081-1 [1] and EN 50082-1 [2] and other standards, where appropriate, to meet the essential requirements of Council Directives 89/336/EEC [3], and 1999/5/EC [4] respectively.

For radio communications equipment which can be connected to the AC main supply, the requirements of EN 61000-3-2 [16] and EN 61000-3-3 [17] apply where appropriate.

The present document, and the product related parts of it are based on the current EMC standards published by ETSI. It should be noted that the majority of these EMC standards have also been published in the Official Journal of the European Commission.

The present document is part 1 of a multipart EN covering the ElectroMagnetic Compatibility (EMC) standard for radio equipment and services, as identified below:

Part 1: "Common technical requirements";

Part 2: "Specific conditions for radio paging equipment";

Part 3: "Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 40 GHz";

Part 4: "Specific conditions for fixed radio links and ancillary equipment and services";

Part 5: "Specific conditions for Private land Mobile Radio (PMR) and ancillary equipment (speech and non-speech)";

Part 6: "Specific conditions for Digital Enhanced Cordless Telecommunications (DECT) equipment";

Part 7: "Specific conditions for mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS)";

Part 8: "Specific requirements for GSM base stations";

Part 9: "Specific conditions for wireless microphones and similar Radio Frequency (RF) audio link equipment";

Part 10: "Specific conditions for First (CT1 and CT1+) and Second Generation Cordless Telephone (CT2) equipment";

Part 11: "Specific conditions for FM broadcasting transmitters";

Part 12: "Specific conditions for Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS)";

Part 13: "Specific conditions for Citizens' Band (CB) radio and ancillary equipment (speech and non-speech)";

Part 15: "Specific conditions for commercially available amateur radio equipment";

Part 16: "Specific conditions for analogue cellular radio communications equipment, mobile and portable";

Part 17: "Specific requirements for Wideband data and HIPERLAN";

Part 18: "Specific requirements for Terrestrial Trunked Radio (TETRA)";

Part 19: "Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications";

Part 20: "Specific conditions for Mobile Earth Stations (MES) used in the Mobile Satellite Services (MSS)";

Part 22: "Specific requirements for VHF aeronautical mobile and fixed radios".

National transposition dates	
Date of adoption of this EN:	14 July 2000
Date of latest announcement of this EN (doa):	31 October 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2001
Date of withdrawal of any conflicting National Standard (dow):	31 October 2003

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.

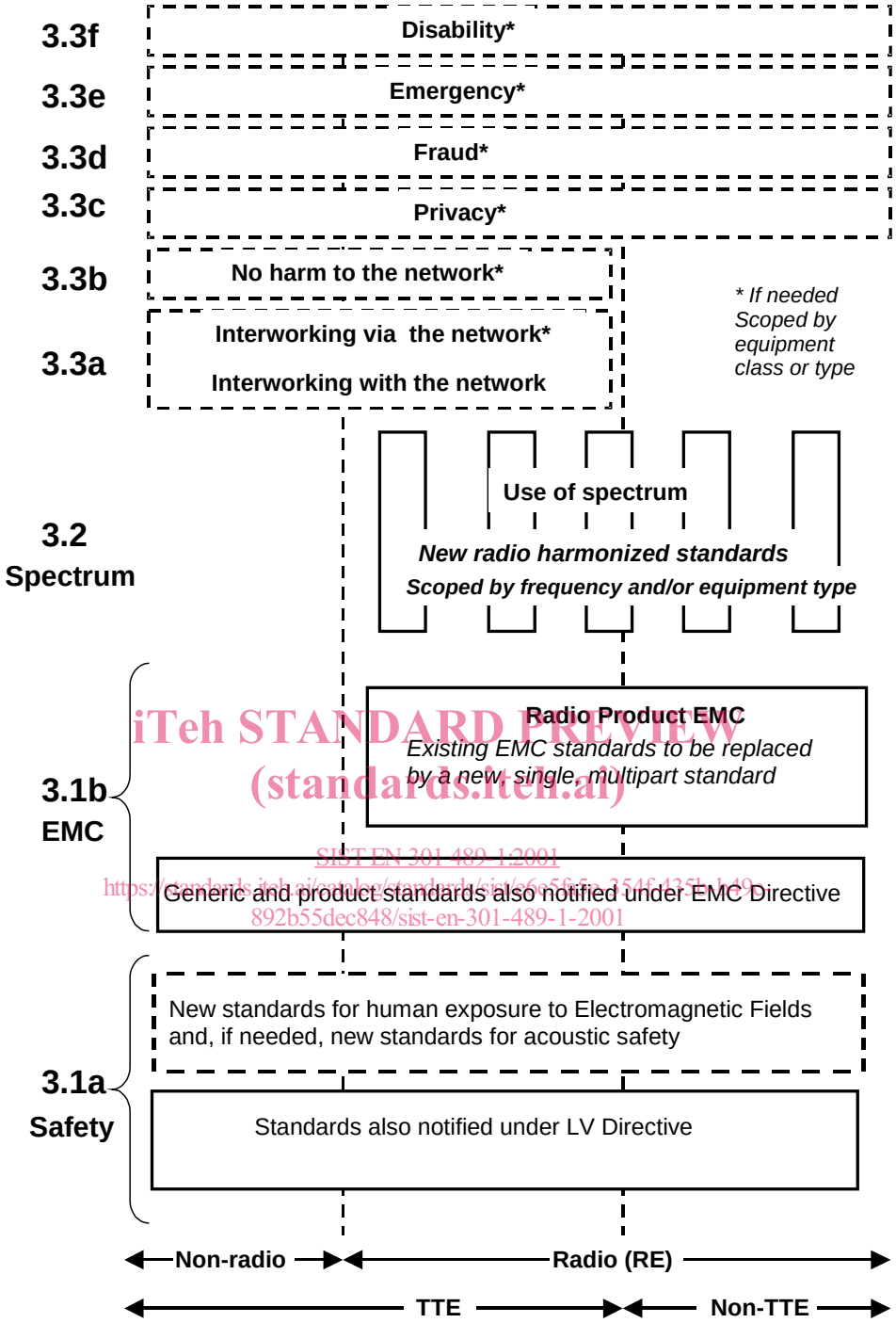

Figure 1: Modular structure for the various standards used under the R&TTE Directive [1]

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 multipart product EMC standard for radio, and the existing collection of generic and product standards currently used under the EMC Directive [2]. 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 [3] 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.

The figure 2 gives an enlargement of the EMC layer which is judged to be appropriate in view of this harmonized standards derivation.

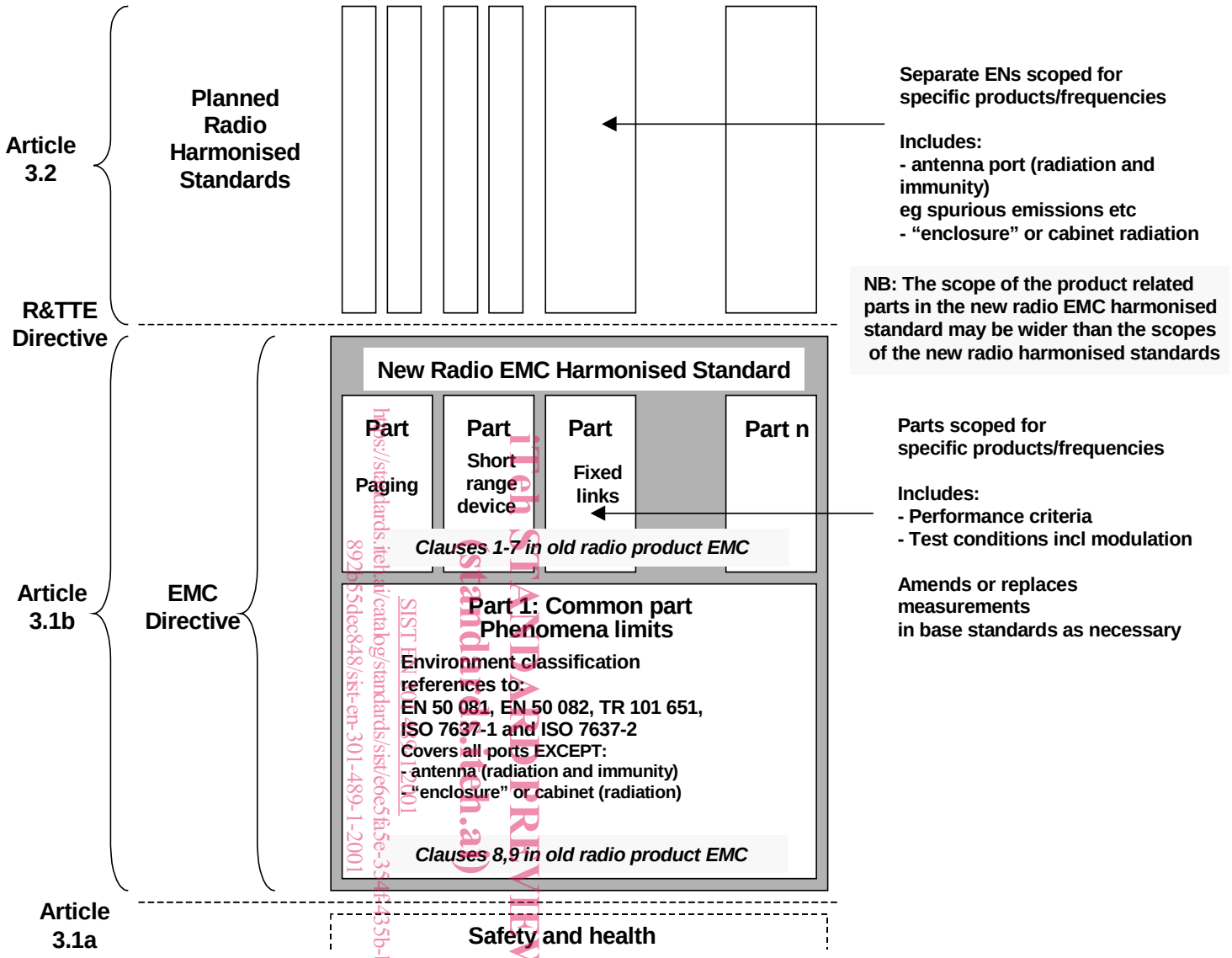

Figure 2: The new radio EMC harmonized standard

The current EMC product standards for radio equipment are all structured as follows:

Clauses 1 to 6 contain information specific to the type of radio equipment covered by the particular standard:

- clause 1, Scope;
- clause 2, Normative references;
- clause 3, Definitions and abbreviations;
- clause 4, Test conditions and configurations;
- clause 5, Perfomance assessment; and
- clause 6, Performance criteria.

Clause 7 contains the applicability overview tables for emission and immunity.

Clause 8 contains the emission requirements and clause 9 contains the immunity requirements. The requirements set out in these clauses are however identical for all types of radio equipment.

A new structure for these standards has been prepared.

This structure is made up in the following way:

- the present document (part 1) contains all the common technical requirements for emission and immunity;
- separate parts cover product related specific radio equipment test conditions, test arrangements, performance criteria, normal test modulation, etc. Further work may be underway in the development of further parts of the present document for other types of radio communications equipment;
- one new clause has been added to each of the specific radio parts of this standard entitled "Special conditions", if appropriate. This subclause contains any deviation from the common requirements set out in the present document.

Table 1: Void