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Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD) - Technical characteristics for SRD equipment using Ultra WideBand technology (UWB) - Building Material Analysis and Classification equipment applications operating in the frequency band from 2,2 GHz to 8 GHz - Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

<https://standards.iteh.ai/catalog/standards/sist/ee6eaaa5-6fb0-4fdf-9b27-9fb49244a369/sist-en-302-435-2-v1-2-1-2008>

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ICS:

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

cSIST dfEN 302 435-2 V1.%1:200* **en**

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Candidate Harmonized European Standard (Telecommunications series)

**Electromagnetic compatibility and Radio spectrum Matters (ERM);
Short Range Devices (SRD);
Technical characteristics for SRD equipment using
Ultra Wide Band technology (UWB);
Building Material Analysis and Classification equipment
applications operating in the frequency band
from 2,2 GHz to 8 GHz;
Part 2: Harmonized EN covering essential requirements
of article 3.2 of the R&TTE Directive**

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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
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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), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is part 2 of a multi-part deliverable covering Ultra-Wide Band Location Tracking applications operating in the frequency range from 2,2 to 8 GHz, as identified below:

Part 1: "Technical characteristics and test methods";

Part 2: "Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive".

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 [3] 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").

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):	18 months after doa

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. Each standard is a module in the structure. The modular structure is shown in figure 1.

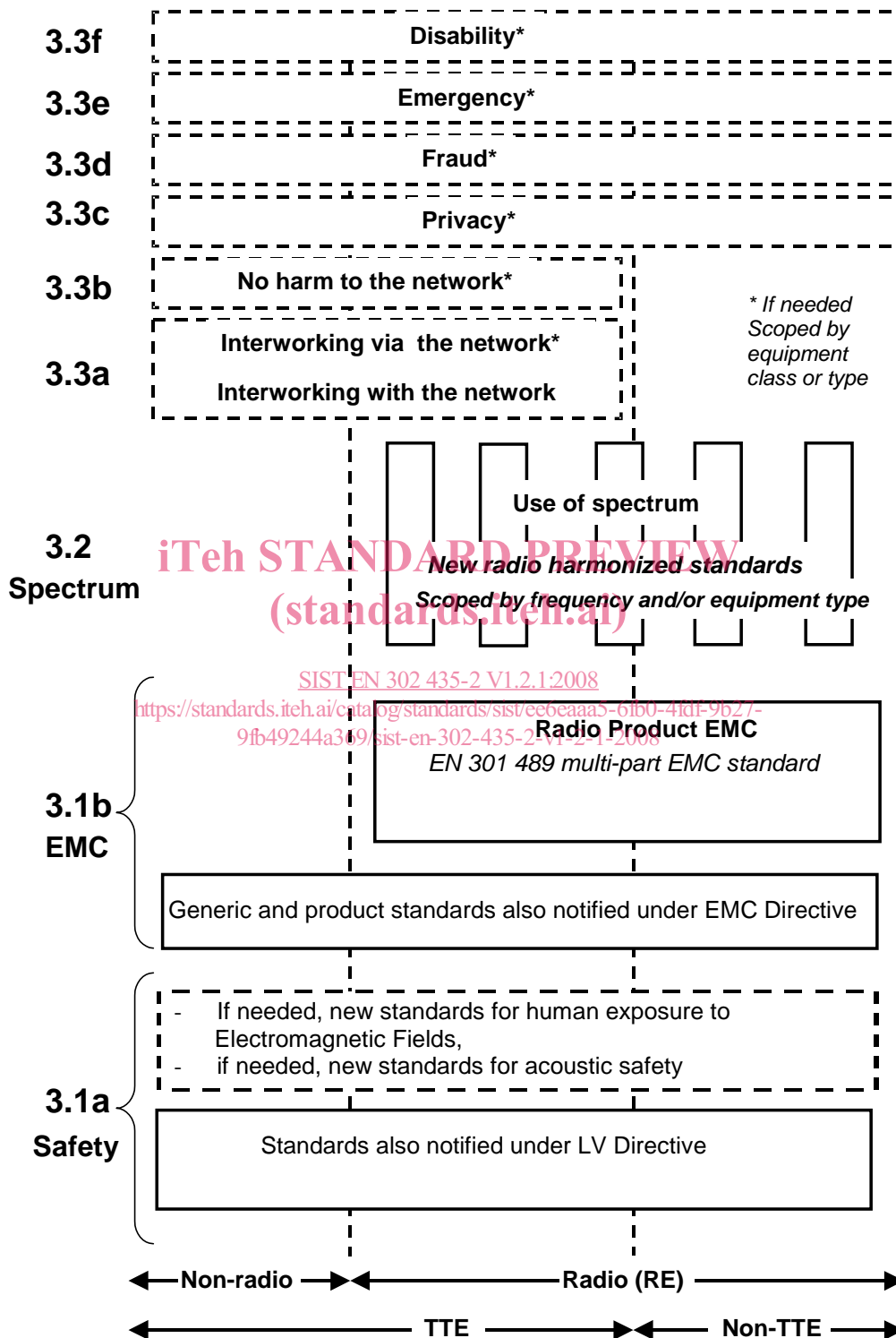


Figure 1: Modular structure for the various standards used under the R&TTE Directive

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

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, the multi-part product EMC standard for radio used under the EMC Directive [2].

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 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 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 specifies the requirements for Building Material Analysis and Classification (BMA&C) Applications operating in all or part of the frequency band from 2,2 GHz to 8 GHz. Reduced emissions in the range from 0,96 GHz to 2,2 GHz and 8 GHz to 10,6 GHz are permitted and defined in clause 4.2.1.1.

The document applies to:

- a) UWB building material analysis and classification equipment for imaging and object detection applications;
- b) equipment fitted with an integral antenna;
- c) handheld devices;
- d) equipment with an activation switch which allows emissions only when the equipment is in direct contact to the material to be investigated.

The document does not apply to:

- UWB communication applications; and
- Ground probing and through-wall equipment.

The present document specifies the equipment which is designed to not radiate into the free air. It is designed to function only when positioned such that it radiates directly into the absorptive material such as walls and other building materials which absorb emissions. Any leakage or residual emissions appearing e.g. behind the wall or outside the backwards and sideways screened antenna is defined as undesired emission.

The present document does not necessarily include all the characteristics which may be required by a user, nor does it necessarily represent the optimum performance achievable.

The present document contains all technical characteristics and test methods for Building Material Analysis and Classification equipment operated in accordance with the ECC Decision ECC/DEC/(06)xy [4] for imaging devices.

The present document is intended to cover the provisions of article 3.2 of Directive 1999/5/EC [1] (R&TTE Directive), 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".

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.

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

- [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 EN 302 435-1 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD) using Ultra-WideBand technology, Location Tracking equipment operating in the frequency range from 6 GHz to 9 GHz; Part 1: Technical characteristics and test methods".