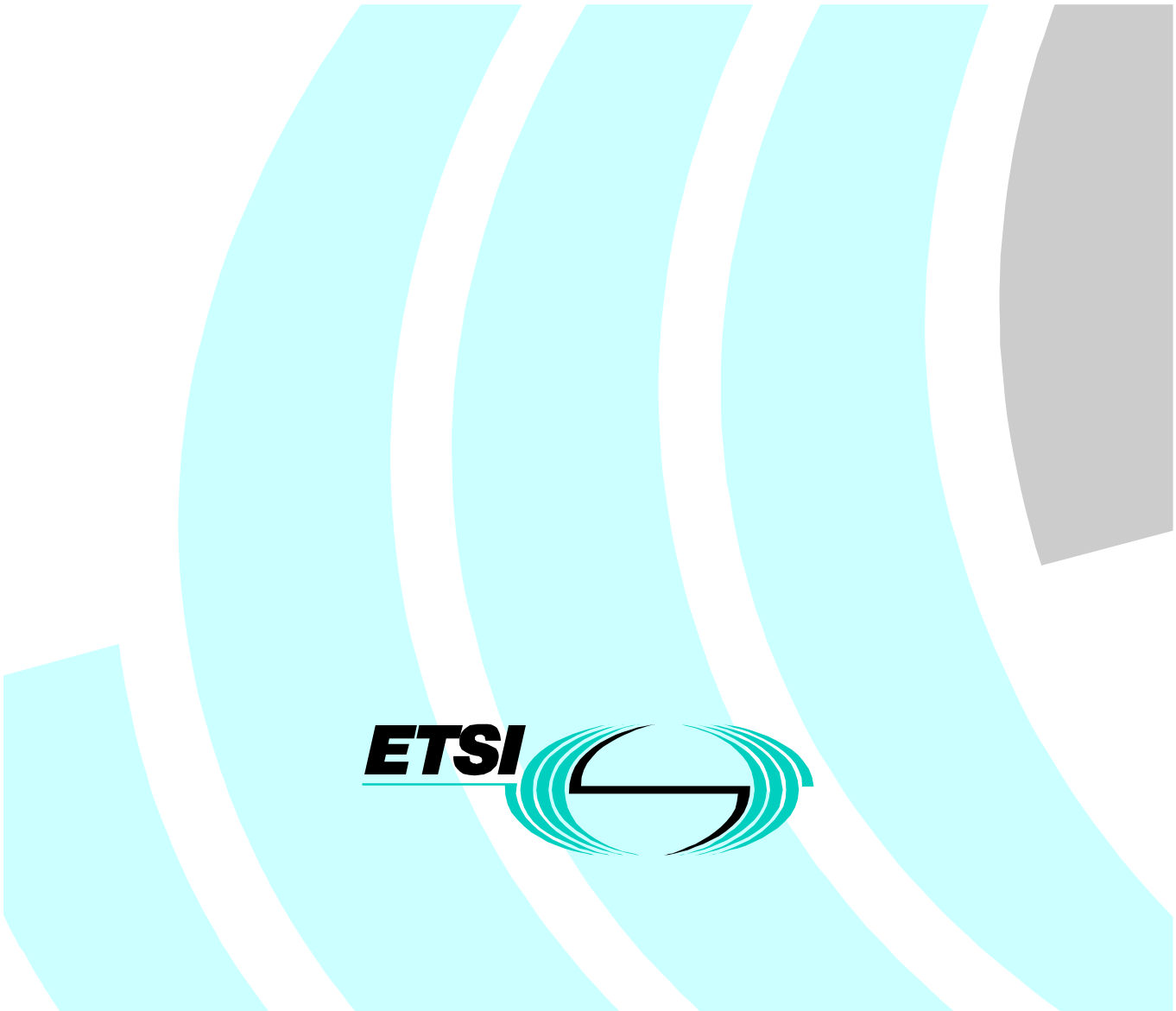
ETSI EN 300 065-2 V1.1.1 (2001-05)

Candidate Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 2: Harmonized EN under article 3.2 of the R&TTE directive



Reference
DEN/ERM-RP01-043-2

Keywords
maritime, NAVTEX, radio, regulation

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Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Contents

Intellectual Property Rights 5
Foreword 5
Introduction 6
1 Scope 8
2 References 8
3 Definitions and abbreviations 8
3.1 Definitions 8
3.2 Abbreviations 9
4 Technical requirements specifications 9
4.1 Environmental profile 9
4.2 Conformance requirements 9
4.2.1 Call sensitivity 9
4.2.1.1 Definition 9
4.2.1.2 Limit 9
4.2.1.3 Conformance 9
4.2.2 Interference rejection and blocking immunity 9
4.2.2.1 Definition 9
4.2.2.2 Limit 9
4.2.2.3 Conformance 9
4.2.3 Co-channel rejection 9
4.2.3.1 Definition 9
4.2.3.2 Limit 10
4.2.3.3 Conformance 10
4.2.4 Intermodulation 10
4.2.4.1 Definition 10
4.2.4.2 Limit 10
4.2.4.3 Conformance 10
4.2.5 Spurious emissions 10
4.2.5.1 Definition 10
4.2.5.2 Limit 10
4.2.5.3 Conformance 10
5 Testing for compliance with technical requirements 10
5.1 Test conditions, power supply and ambient temperatures 10
5.1.1 Test conditions 10
5.1.2 Test power source 10
5.1.3 Environmental conditions for testing 11
5.1.3.1 Normal test conditions 11
5.1.3.1.1 Normal temperature and humidity 11
5.1.3.1.2 Normal test power supply 11
5.1.3.2 Extreme test conditions 11
5.1.3.2.1 Extreme temperatures 11
5.1.3.2.2 Extreme test power supply values 11
5.1.3.3 Procedures for tests at extreme temperatures 11
5.2 Other radio test suites 11
5.2.1 Call sensitivity 11
5.2.2 Interference rejection and blocking immunity 11
5.2.3 Co-channel rejection 11
5.2.4 Intermodulation 11
5.2.5 Spurious emissions 11

Annex A (normative): The EN Requirements Table (EN-RT) 12

Annex B (informative): The EN title in the official languages 13

History 14

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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 is part 2 of a multi-part deliverable covering the Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX), as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN under article 3.2 of the R&TTE directive";

Part 3: "Harmonized EN under article 3.3 (e) 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 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").

National transposition dates	
Date of adoption of this EN:	27 April 2001
Date of latest announcement of this EN (doa):	31 July 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2002
Date of withdrawal of any conflicting National Standard (dow):	31 January 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.

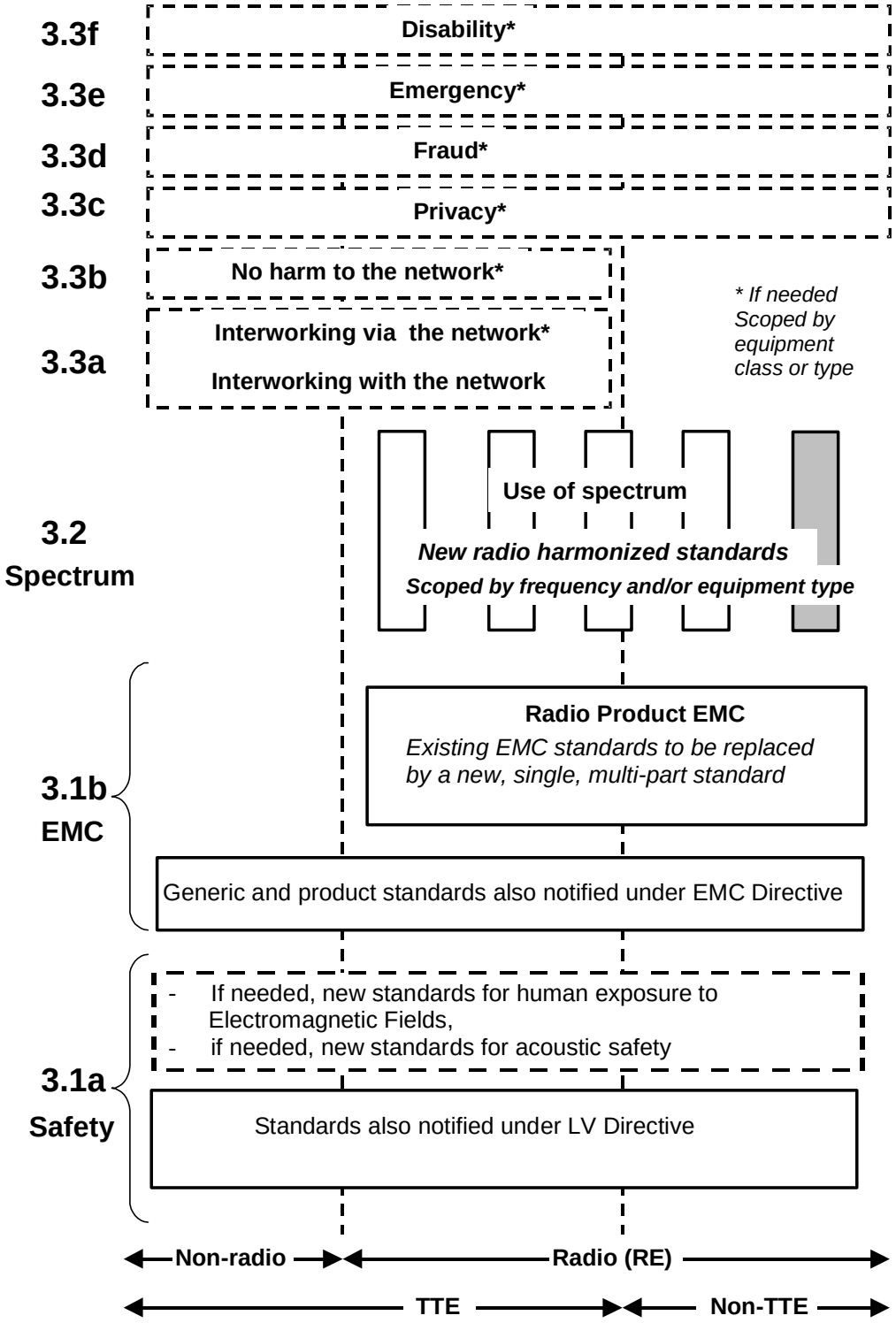

Figure 1: Modular structure for the various standards used under the R&TTE Directive

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 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 [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.

1 Scope

The present document applies to the Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX) radio equipment operating on a frequency of 518 kHz.

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

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] may apply to equipment within the scope of the present document.

NOTE: A list of such ENs is included on the ETSI web site at http://www.newapproach.org/.

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, subsequent revisions do apply.

[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] 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).

[3] Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (LV Directive).

[4] ETSI EN 300 065-1: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 1: Technical characteristics and methods of measurement".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [1], and the following apply:

environmental profile: range of environmental conditions under which equipment within the scope of the present document is required to comply with the provisions of the present document

supplier: entity referred to in the R&TTE Directive [1] responsible for the placing on the market of an equipment within the scope of the Directive

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

R&TTE Radio and Telecommunications Terminal Equipment

4 Technical requirements specifications

4.1 Environmental profile

The technical requirements of the present document apply under the environmental profile for operation of the equipment, which shall be determined by the environmental class of the equipment. The equipment shall comply with all the technical requirements of the present document at all times when operating within the boundary limits of the required operational environmental profile.

4.2 Conformance requirements

4.2.1 Call sensitivity

4.2.1.1 Definition

The call sensitivity of the receiver is defined in EN 300 065-1 [4], clause 5.1.1.

4.2.1.2 Limit

The character error ratio shall be less than 4×10^{-2}.

4.2.1.3 Conformance

Conformance tests as defined in 5.2.1 may be performed.

4.2.2 Interference rejection and blocking immunity

4.2.2.1 Definition

Interference rejection and blocking immunity is defined in EN 300 065-1 [4], clause 5.2.1.

4.2.2.2 Limit

The unwanted signal shall not induce a character error ratio of more than 4×10^{-2}.

4.2.2.3 Conformance

Conformance tests as defined in 5.2.2 may be performed.

4.2.3 Co-channel rejection

4.2.3.1 Definition

The co-channel rejection is defined in EN 300 065-1 [4], clause 5.3.1.

4.2.3.2 Limit

The unwanted signal shall not induce a character error ratio of more than 4×10^{-2}.

4.2.3.3 Conformance

Conformance tests as defined in 5.2.3 may be performed.

4.2.4 Intermodulation

4.2.4.1 Definition

Intermodulation is defined in EN 300 065-1 [4], clause 5.4.1.

4.2.4.2 Limit

Intermodulation shall not induce a character error ratio of more than 4×10^{-2}.

4.2.4.3 Conformance

Conformance tests as defined in 5.2.4 may be performed.

4.2.5 Spurious emissions

4.2.5.1 Definition

Spurious emissions are defined in EN 300 065-1 [4], clause 5.5.1.

4.2.5.2 Limit

The power of any discrete component within the frequency range 9 kHz to 2 000 MHz shall not exceed 1 nW (1×10^{-9} W).

4.2.5.3 Conformance

Conformance tests as defined in 5.2.5 may be performed.

5 Testing for compliance with technical requirements

5.1 Test conditions, power supply and ambient temperatures

5.1.1 Test conditions

These shall be as defined in EN 300 065-1 [4], clause 4.1.

5.1.2 Test power source

This shall be as defined in EN 300 065-1 [4], clause 4.2.

5.1.3 Environmental conditions for testing

5.1.3.1 Normal test conditions

5.1.3.1.1 Normal temperature and humidity

The normal temperature and humidity conditions for tests shall be as defined in EN 300 065-1 [4], clause 4.3.1.

5.1.3.1.2 Normal test power supply

The test power supply shall meet the requirements of EN 300 065-1 [4], clause 4.3.2.

5.1.3.2 Extreme test conditions

5.1.3.2.1 Extreme temperatures

The extreme temperature conditions for tests shall be as defined in EN 300 065-1 [4], clause 4.4.1.

5.1.3.2.2 Extreme test power supply values

The extreme test power supply values shall meet the requirements of EN 300 065-1 [4], clause 4.4.2.

5.1.3.3 Procedures for tests at extreme temperatures

The procedures for test at extreme temperatures shall be as defined in EN 300 065-1 [4], clause 4.5.

5.2 Other radio test suites

5.2.1 Call sensitivity

The test specified in EN 300 065-1 [4], clause 5.1.2 shall be carried out.

5.2.2 Interference rejection and blocking immunity

The test specified in EN 300 065-1 [4], clause 5.2.2 shall be carried out.

5.2.3 Co-channel rejection

The test specified in EN 300 065-1 [4], clause 5.3.2 shall be carried out.

5.2.4 Intermodulation

The test specified in EN 300 065-1 [4], clause 5.4.2 shall be carried out.

5.2.5 Spurious emissions

The test specified in EN 300 065-1 [4], clause 5.5.2 shall be carried out.

Annex A (normative): The EN Requirements Table (EN-RT)

The EN Requirements Table (EN-RT) serves a number of purposes, as follows:

- it provides a tabular summary of all the requirements;
- it shows the status of each EN-R, whether it is essential to implement in all circumstances (Mandatory), or whether the requirement is dependent on the supplier having chosen to support a particular optional service or functionality (Optional). In particular it enables the EN-Rs associated with a particular optional service or functionality to be grouped and identified;
- when completed in respect of a particular equipment it provides a means to undertake the static assessment of conformity with the EN.

Table A.1: EN Requirements Table (EN-RT)

EN Reference		EN 300 065-2				Comment
No.	Reference	EN-R (note)	Status			
1	4.2.1	Call sensitivity	M			
2	4.2.2	Interference rejection and blocking immunity	M			
3	4.2.3	Co-channel rejection	M			
4	4.2.4	Intermodulation	M			
5	4.2.5	Spurious emissions	M			
NOTE: These EN-Rs are justified under Article 3.2 of the R&TTE Directive.						

Key to columns:

No Table entry number;

Reference Clause reference number of conformance requirement within this EN;

EN-R Title of conformance requirement within this EN;

Status Status of the entry as follows:

- M Mandatory, shall be implemented under all circumstances;
- O Optional, may be provided, but if provided shall be implemented in accordance with the requirements;
- O.n This status is used for mutually exclusive or selectable options among a set. The integer “n" shall refer to a unique group of options within the EN-RT. A footnote to the EN-RT shall explicitly state what the requirement is for each numbered group. For example, “It is mandatory to support at least one of these options", or, “It is mandatory to support exactly one of these options".

Comments To be completed as required.

Annex B (informative): The EN title in the official languages

Language	EN title
Danish	Elektromagnetisk kompatibilitet og Radiospektrum Anliggender (ERM); Smalbånds telegrafudstyr med direkte udskrift beregnet til modtagning af meteorologiske eller navigationsdata (NAVTEX); Del 2: Harmoniseret EN som dækker de væsentlige krav I R&TTE direktivets artikel 3.2
Dutch	Elektromagnetische compatibiliteit en radiospectrum zaken (ERM); Narrow-Band Direct-Printing telegrafie ontvangers voor meteorologische informatie en informatie tbv navigatie (NAVTEX) ontvangers; Deel 2: Geharmoniseerde EN welke invulling geeft aan de wezenlijke vereisten, neergelegd in artikel 3.2 van de R&TTE Directive
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); Narrow-band direct-printing telegraph equipment for receiving meteorological or navigational information (NAVTEX); Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE directive
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); Kapeakaistaiset suoraan tulostavat lennätinlaitteet sään ja merenkulun tietojen vastaanottoon (NAVTEX); Osa 2: Harmonisoitu EN, joka kattaa R&TTE - direktiivin artiklan 3.2 olennaiset vaatimukset
French	Equipement télégraphique en bande étroite à impression directe pour recevoir des informations météorologiques ou de navigation (NAVTEX); Partie 2 : Norme harmonisée couvrant l'article 3.2 de la Directive R&TTE.
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM); Direkt druckende Schmalband-Telegrafieempfänger für meteorologische oder die Navigation betreffende Informationen (NAVTEX); Teil 2: Harmonisierte Europäische Norm (EN) mit wesentlichen Anforderungen nach R&TTE-Richtlinie Artikel 3.2
Greek	Ηλεκτρομαγνητική συμβατότητα και Θέματα Ραδιοφάσματος (ERM) - Στενοζωνικός τηλεγραφικός εξοπλισμός άμεσης εκτύπωσης για λήψη μετεωρολογικών ή ναυσιπλοϊκών πληροφοριών (NAVTEX) - Μέρος 2: Εναρμονισμένο EN για την κάλυψη των ουσιωδών απαιτήσεων του άρθρου 3.2 της Οδηγίας R&TTE
Icelandic	
Italian	Compatibilità elettromagnetica e Questioni relative allo spettro delle radiofrequenze (ERM); Apparecchiature telegrafiche in banda stretta a stampa diretta per la ricezione di informazioni meteorologiche o di navigazione (NAVTEX); Parte 2: Norma armonizzata relativa ai requisiti essenziali dell'articolo 3.2 della direttiva R&TTE
Portuguese	Assuntos de Espectro Radioeléctrico e Compatibilidade Electromagnética (ERM); Equipamento receptor telegráfico de faixa estreita para impressão directa de informação meteorológica ou navegação (NAVTEX); Parte 2: EN harmonizada cobrindo os requisitos essenciais no âmbito do Artigo 3.2 da Directiva R&TTE
Spanish	Equipos telegráficos de impression directa de banda ancha para recepción de información meteorológica o de navegación (NAVTEX); Parte 2: EN armonizada cubriendo los requisitos esenciales según el artículo 3.2 de la directiva de R&TTE
Swedish	Elektromagnetisk kompatibilitet och radiospektrumfrågor (ERM); Smalbandig direktskrivande telegrafutrustning för mottagning av meteorologisk information eller navigeringsinformation (NAVTEX); Del 2: Harmoniserad EN omfattande väsentliga krav enligt artikel 3.2 i R&TTE-direktivet

History

Document history			
V1.1.1	December 2000	One-step Approval Procedure	OAP 20010427: 2000-12-27 to 2001-04-27
V1.1.1	May 2001	Publication	