

Report on the implications of the R&TTE Directive; Part 3: Existing EMC product standards



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Foreword

This Special Report (SR) has been produced by the Advisory Committee Operational Co-ordination Group (OCG).

1 Introduction

1.1 Scope

The present document gives guidance on the implications of the R&TTE Directive [1] for the existing EMC standards produced by ETSI, and for EMC standards to be produced in the future. It shows the state of all existing ETSI EMC standards, and indicates where there are corresponding radio equipment standards, where there is no corresponding radio equipment standard, and cases where a radio equipment standard exists but there is no corresponding EMC standard.

The present document identifies the TC-ERM EMC work item REN/ERM-EMC-219 which is consolidating the requirements from existing radio product EMC standards into a new 22 part structured set of standards. This set is being produced to meet the Article 3.1(b) requirements of the R&TTE Directive [1].

The status of EMC standards for non-radio TTE has also been investigated.

NOTE: The implications of the R&TTE Directive [1] on CENELEC EMC standards are not considered in this report.

1.2 Modular structure

For telecommunications terminal equipment, the existing generic EMC standards that are harmonized under the EMC Directive will continue to apply and the Commission is expected to notify them as harmonized standards additionally under the R&TTE Directive [1].

For radio equipment, TC ERM is in the process of rationalizing the EMC harmonized standards. The technical content from the existing radio product EMC standards will be replaced by a single multi-part standard. There will be a common part plus parts specific to product types and frequency bands and applications. Figure 1 shows the way in which this new standard will fit into the structure.

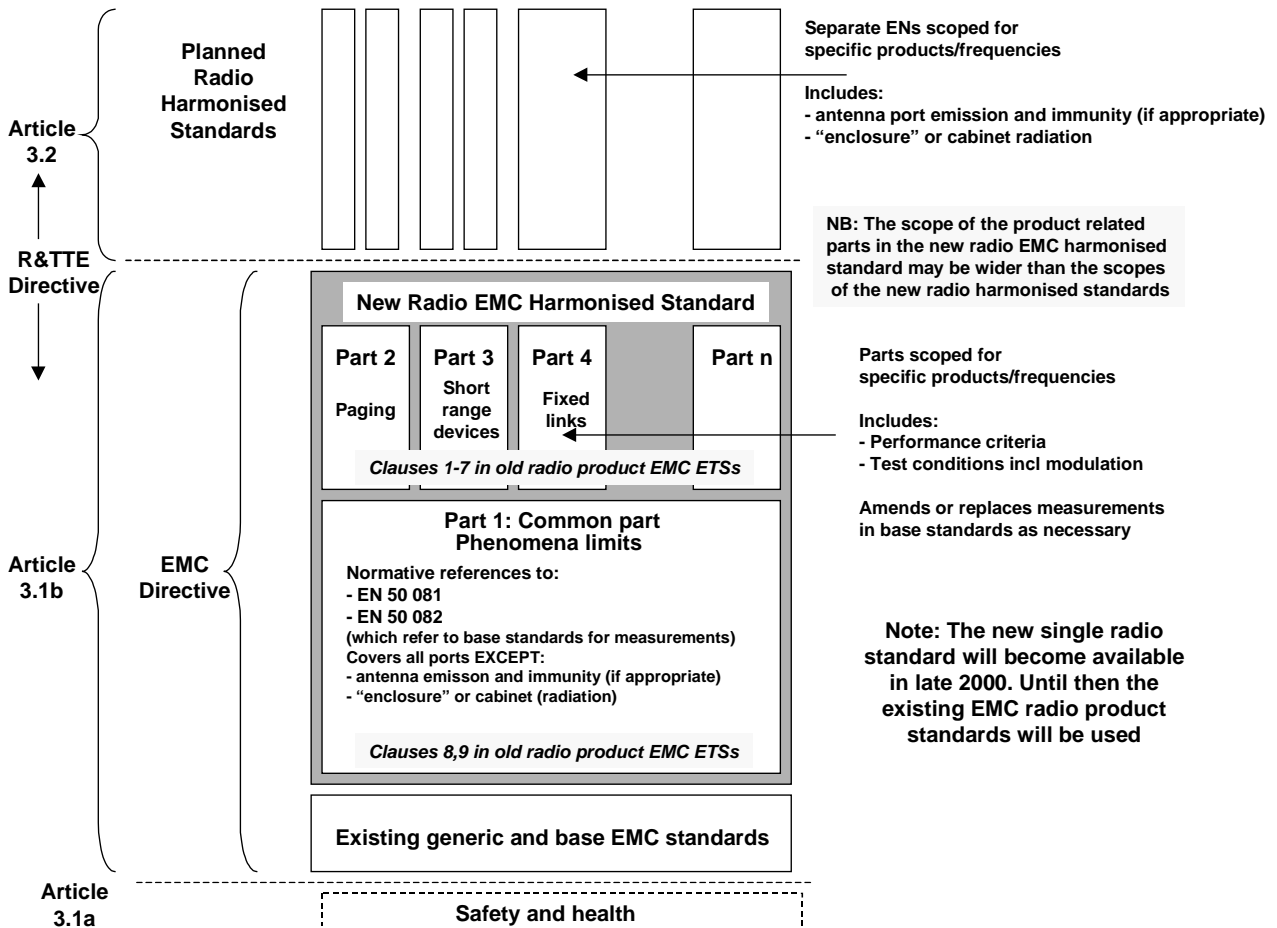


Figure 1: EMC standards in modular structure

The product specific parts planned at present are listed in table 1, which also shows the relationship to the current harmonized standards. In many cases a single part will replace the existing standard.

Table 1: New EMC radio product standard

	Product area	Replaces
Part 2	Paging	EN 301 670
Part 3	Short range devices	ETS 300 683
Part 4	Fixed links	EN 300 385
Part 5	Land mobile radio	EN 300 279
Part 6	DECT	ETS 300 329
Part 7	GSM mobiles	EN 300 342-1
Part 8	GSM base stations	ETS 300 342-3
Part 9	Wireless microphones	ETS 300 445
Part 10	Cordless telephones (CT2)	ETS 300 446
Part 11	VHF FM broadcast transmitters	ETS 300 447
Part 12	VSAT, SNG, SIT, SUT satellite earth stations	ETS 300 673
Part 13	CB radio	ETS 300 680-1 & 2
Part 14	Void	
Part 15	Amateur radio	ETS 300 684
Part 16	Analogue cellular radio	ETS 300 717
Part 17	Wideband data and HIPERLAN	ETS 300 826
Part 18	TETRA	ETS 300 827
Part 19	Rx only earth stations	ETS 300 830
Part 20	S-PCN	ETS 300 831
Part 21	LEO mobile earth stations	ETS 300 832
Part 22	VHF aeronautical mobile and fixed radios	

The radio product EMC standard will be notified under both the R&TTE Directive [1] and the EMC Directive [2].

Harmonized standards produced for RE under Article 3.1(b) of the R&TTE Directive [1] do not cover emissions from the "enclosure" (cabinet radiation) or emissions and immunity at the antenna port; any technical requirements necessary to cover these items should be included in the appropriate harmonized standard referencing Article 3.2 of the R&TTE Directive [1].

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.

- [1] Directive 1999/05/EC of the European Parliament and of the Council of 9 March 1999 on radio and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).
- [2] Council Directive of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (89/336/EEC) (EMC Directive).
- [3] International Telecommunications Union Radio Regulations, Edition of 1998.
- [4] SR 001 478-2: "Report on the implications of the R&TTE Directive; Part 2: Existing radio (not EMC) product standards".

- [5] Commission Directive 98/85/EC of 11 November 1998 amending Council Directive 96/98/EC on marine equipment. (ME Directive).
- [6] EUROCAE ED-14 / RTCA DO-160 Environmental conditions and test procedures for airborne equipment.
- [7] Annex to EC Mandate/284.

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

interference: as defined in S1.166 of the International Telecommunications Union Radio Regulations, Edition of 1998 [3] "The effect of unwanted energy due to one or a combination of emissions, radiations or inductions upon reception in a radio-communications system, manifested by any performance degradation, misinterpretation or loss of information which could be extracted in the absence of such unwanted energy"

radio equipment: as defined in R&TTE Directive [1] Article 2(c), subject to general exclusions in the scope and aim of the Directive - Article 1

telecommunications terminal equipment: as defined in R&TTE Directive [1] Article 2(b), subject to general exclusions in the scope and aim of the Directive - Article 1

3.2 Abbreviations

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

3GPP	3 rd Generation Partnership Project
ATA	Analogue Terminals and Access
CENELEC	Comité Européen de Normalisation Electrotechnique
DECT	Digital Enhanced Cordless Telecommunications
EBU	European Broadcasting Union
EC	European Commission
EEC	European Economic Community
EMC	ElectroMagnetic Compatibility
EN	European Standard
EP	ETSI Project
ERM	Electromagnetic compatibility and Radio spectrum Matters
ETS	European Telecommunication Standard
JTC	Joint Technical Committee
ME	Marine Equipment
R&TTE	Radio and Telecommunications Terminal Equipment
RE	Radio Equipment
SMG	Special Mobile Group
TC	Technical Committee
TNE	Telecommunication Network Equipment
TTE	Telecommunications Terminal Equipment

4 Statements in the R&TTE Directive relevant to EMC

4.1 Whereas (11)

"Whereas the electromagnetic compatibility related protection requirements laid down by Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of Member States relating to electromagnetic compatibility are sufficient to cover radio equipment and telecommunications terminal equipment;

4.2 Whereas (21)

"Whereas unacceptable degradation of service to persons other than the user of radio equipment and telecommunications terminal equipment should be prevented; whereas manufacturers of terminals should construct equipment in a way which prevents networks from suffering harm which results in such degradation when used under normal operating conditions; whereas network operators should construct their networks in a way that does not oblige manufacturers of terminal equipment to take disproportionate measures to prevent networks from being harmed; whereas the European Telecommunications Standards Institute (ETSI) should take due account of this objective when developing standards concerning access to public networks;"

4.3 Whereas (39)

"Whereas it is appropriate that compliance of radio equipment and telecommunications terminal equipment with the requirements of Directives 73/23/EEC and 89/336/EEC may be demonstrated using the procedures specified in those Directives where the apparatus is within their scope; whereas, as a result, the procedure provided for in Article 10(1) of Directive 89/336/EEC may be used where the application of harmonized standards gives rise to a presumption of conformity with the protection requirements; whereas the procedure provided for in Article 10 (3) may be used where the manufacturer has not applied harmonized standards or where no such standards exist;"

4.4 Whereas (45)

"Whereas it is necessary to ensure that with the introduction of changes to the regulatory regime there is a smooth transition from the previous regime in order to avoid disruption to the market and legal uncertainty;"

4.5 Whereas (46)

"Whereas this Directive replaces Directive 98/13/EC, which should accordingly be repealed; whereas Directives 73/23/EEC and 89/336/EEC will no longer apply to apparatus within the scope of this Directive, with the exception of protection and safety requirements and certain conformity assessment procedures,"

4.6 Article 2 (h)

""harmonized standard" means a technical specification adopted by a recognized standards body under a mandate from the Commission in conformity with the procedures laid down in Directive 98/34/EC for the purpose of establishing a European requirement, compliance with which is not compulsory."

4.7 Article 3.1 (b)

(The following essential requirements are applicable to all apparatus) "the protection requirements with respect to electromagnetic compatibility contained in Directive 89/336/EEC."

4.8 Article 10.1

"The conformity assessment procedures identified in this Article shall be used to demonstrate the compliance of the apparatus with all the relevant essential requirements identified in Article 3."

4.9 Article 10.2

"At the choice of the manufacturer, compliance of the apparatus with the essential requirements identified in Article 3.1(a) and (b) may be demonstrated using the procedures specified in Directive 73/23/EEC and Directive 89/336/EEC respectively, where the apparatus is within the scope of those Directives, as an alternative to the procedures laid out below."

4.10 Article 18.1

"Standards under Directive 73/23/EEC or 89/336/EEC whose references have been published in the Official Journal of the European Communities may be used as the basis for a presumption of conformity with the essential requirements referred to in Article 3.1(a) and Article 3.1(b). Common technical regulations under Directive 98/13/EC whose references have been published in the Official Journal of the European Communities may be used as the basis for a presumption of conformity with the other relevant essential requirements referred to in Article 3. The Commission shall publish a list of references to those standards in the Official Journal of the European Communities immediately after this Directive enters into force."

4.11 Article 20.2

"This Directive is not a specific directive within the meaning of Article 2(2) of Directive 89/336/EEC. The provisions of Directive 89/336/EEC shall not apply to apparatus falling within the scope of this Directive, with the exception of the protection requirements in Article 4 and Annex III and the conformity assessment procedure in Article 10(1) and (2) of, and Annex I to, Directive 89/336/EEC, as from 8 April 2000."

5 EMC standards

5.1 Radio (including TTE which is also radio) EMC standards

5.1.1 Existing radio harmonized standards

Table 2 lists those EMC standards that have been investigated and are considered to be candidates for harmonization under the R&TTE Directive [1]. Where appropriate the equipment product standard number has been included. All the EMC standards are, or are proposed to be, harmonized under the EMC Directive [2] unless otherwise indicated in the Comments column.

NOTE: The classical EMC standards do not include radiation from the enclosure (cabinet radiation) and radiation or immunity at the antenna port. These items are covered in the appropriate product radio standard. The essential requirements of the EMC Directive [2] are covered by referencing the product standard or TBR under the EMC Directive [2]. Details of which standards/TBRs are referenced under the EMC Directive [2] are contained in the Report on the implications of the R&TTE Directive for existing radio (not EMC) product standards [4].

A general EMC standard covers most of the equipment in a specified grouping for which neither a harmonized product standard nor a harmonized family standard exists. A family standard covers all equipment in a specified grouping for which a harmonized product EMC standard does not exist.

In the EMC standard column the reference "(98/85EC) [5]" indicates that the ETSI standard is quoted in the ME Directive [5] as an alternative test standard for that equipment. These standards are to be cited in the *Official Journal of the European Communities* under the R&TTE Directive [1], the EMC Directive [2] and the ME Directive [5].

Table 2: EMC Standards – identified radio equipment

Work Item	EMC standard	Abbreviated Title	Equipment standard	Comments
DEN/ERM-EMC-003	EN 300 339	Radio communications equipment		General Standard
DEN/ERM-EMC-106		Radio and network telecommunications equipment		Stopped 17/09/99
REN/ERM-EMC-204	EN 300 385	Fixed radio links and ancillary equipment		Family Standard
DE/RES-09016	ETS 300 684	Commercially available amateur radio equipment		Family Standard
DE/ERM-EMC-025	ETS 300 717	Analogue cellular radio communications equipment; Mobile and portable equipment		Family Standard
RE/RES-09036	ETS 300 329	Digital Enhanced Cordless Telecommunications (DECT) equipment	TBR 6	
RE/RES-09035-1	ETS 300 342-1	European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz) Part 1: Mobile and portable radio and ancillary equipment	ETS 300 607-1 TS 100 607-1 ETS 300 577 ETS 300 020-3 ETS 300 910 GSM 05.05	Under revision REN/ERM-EMC-207
DE/RES-09004-2	ETS 300 342-2	European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz) Part 2: Base station radio and ancillary equipment	ETS 300 609-1 ETS 300 609-4 EN 301 087	Not harmonized Under revision REN/ERM-EMC-208
DE/ERM-EMC-035-3	ETS 300 342-3	European digital cellular telecommunications system (GSM 900 MHz and DCS 1 800 MHz) Part 3: Base station radio and ancillary equipment and repeaters meeting Phase 2 GSM requirements	ETS 300 609-4	
DE/RES-09015	ETS 300 445	Wireless microphones and similar Radio Frequency (RF) audio link equipment	ETS 300 454 EN 300 422	
RE/RES-09037	ETS 300 446	Second generation Cordless Telephone (CT2) apparatus operating in the frequency band 864,1 MHz to 868,1 MHz, including public access services	I-ETS 300 131	
DE/RES-09009	ETS 300 447	VHF FM broadcasting transmitters	ETS 300 384	
DE/RES-09007	ETS 300 683	Short Range Devices (SRD) operating on frequencies between 9 kHz and 25 GHz	ETS 300 220-1/2 ETS 300 330 ETS 300 440	Under revision REN/ERM-EMC-214
DE/RES-09021-1	ETS 300 680-1	Citizens' Band (CB) radio and ancillary equipment (speech and/or non-speech); Part 1: Angle-modulated	ETS 300 135	
DE/RES-09021-2	ETS 300 680-2	Citizens' Band (CB) radio and ancillary equipment (speech and/or non-speech); Part 2: Double Side Band (DSB) and/or Single Side Band (SSB)	ETS 300 433	
DE/ERM-EMC-014	ETS 300 826	2,4 GHz wideband transmission systems and High Performance Radio Local Area Network (HIPERLAN) equipment	ETS 300 836-1/4 ETS 300 328 EN 300 652	

Work Item	EMC standard	Abbreviated Title	Equipment standard	Comments
REN/ERM-EMC-017	EN 300 279	Private land Mobile Radio (PMR) and ancillary equipment (speech and/or non-speech)	I-ETS 300 219 ETS 300 086 ETS 300 113 ETS 300 296 ETS 300 341 ETS 300 390 EN 301 166	
REN/ERM-EMC-201	EN 300 673	Very Small Aperture Terminal (VSAT), Satellite News Gathering (SNG) Transportable Earth Station (TES), Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS)	TBR 28 TBR30 TBR43 EN 301 359 EN 301 358	
DEN/ERM-EMC-018	EN 300 827	Terrestrial Trunked Radio (TETRA) and ancillary equipment	TBR 35 EN 301 435-1 EN 301 435-2 ETS 300 392-2 ETS 300 394-1 ETS 300 396-2	Under revision DEN/ERM-EMC-215
DEN/ERM-EMC-019	EN 300 828 (98/85/EC [5])	Radiotelephone transmitters and receivers for the maritime mobile service operating in the VHF bands	ETS 300 162	
DEN/ERM-EMC-022	EN 300 829 (98/85/EC [5])	Maritime Mobile Earth Stations (MMES) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDC) for the Global Maritime Distress and Safety System (GMDSS)	ETS 300 460	
DEN/ERM-EMC-022	EN 300 829 (98/85/EC [5])	Maritime Mobile Earth Stations (MMES) operating in the 1,5/1,6 GHz bands providing Low Bit Rate Data Communications (LBRDC) for the Global Maritime Distress and Safety System (GMDSS)	ETS 300 460	
DEN/ERM-EMC-023	EN 300 830	Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications	ETS 300 487	
REN/ERM-EMC-025	EN 300 831	Mobile Earth Stations (MES) used within Satellite Personal Communications Networks (S-PCN) operating in the 1,5/1,6/2,4 GHz and 2 GHz frequency bands	TBR 41 TBR 42 EN 301 681	
DEN/ERM-EMC-026	EN 300 832	Mobile Earth Stations (MES) providing Low Bit Rate Data Communications (LBRDC) using satellites in Low Earth Orbits (LEO) operating in frequency bands below 1 GHz	EN 300 721	
DEN/ERM-EMC-027	EN 301 011 (98/85/EC [5])	Narrow-Band Direct-Printing (NBDP) NAVTEX receivers operating in the maritime mobile service	ETS 300 065	
DEN/ERM-EMC-028	EN 301 090 (98/85/EC [5])	Maritime radiotelephone watch receivers operating on 2 182 kHz	ETS 300 441	
DE/RES-09005	ETS 300 340	European Radio Message System (ERMES) paging	TBR 7	See EN 301 670

Work Item	EMC standard	Abbreviated Title	Equipment standard	Comments
		receivers		
DE/RES-09006	ETS 300 682	On-Site Paging equipment	ETS 300 224	See EN 301 670
DE/ERM-EMC011	ETS 300 741	Wide-area paging equipment	ETS 300 719-1	See EN 301 670
DEN/ERM-EMC-213	EN 301 670	Radio paging equipment	TBR 7 ETS 300 224 ETS 300 719-1	Combines the EMC requirements of: ETS 300 340 ETS 300 682 ETS 300 741

5.1.2 Current EMC activities

Table 3 lists the components of the draft standard currently being prepared by TC/ERM/EMC which indicates that it is intended to be harmonized under the EMC Directive [2].

The present document consists of 22 parts, Part 1 "common requirements" applicable to all radio equipments and 21 additional, product-specific parts. It is intended to supersede the existing EMC radio product standards and constitutes a change of presentation of technical requirements rather than a change in the technical substance. It is expected that a transition period to adopt usage of the new standard of three years will be applied.

NOTE: As this multi-part standard relates directly to RE, for which the EMC Directive [2] as such is no longer directly applicable, it would be appropriate to harmonize it under the R&TTE Directive [1].

Table 3: Radio equipment standards – Current EMC activities

Work Item	Equipment standard	Abbreviated Title	Comments
REN/ERM-EMC-219-1	EN 301 489-1	EMC standard for radio equipment, common requirements.	General Standard
REN/ERM-EMC-219-2	EN 301 489-2	EMC standard for radio paging equipment, specific requirements.	EMC requirements currently covered by EN 301 670
REN/ERM-EMC-219-3	EN 301 489-3	EMC standard for Short Range Devices (SRD) operating on frequencies between 9 kHz and 25 GHz, specific requirements.	EMC requirements currently covered by ETS 300 683
REN/ERM-EMC-219-4	EN 301 489-4	EMC standard for fixed radio links and ancillary equipment, specific requirements.	EMC requirements currently covered by EN 300 385
REN/ERM-EMC-219-5	EN 301 489-5	EMC standard for Private land Mobile Radio (PMR) and ancillary equipment (speech and/or non-speech), specific requirements.	EMC requirements currently covered by EN 300 279
REN/ERM-EMC-219-6	EN 301 489-6	EMC standard for Digital Enhanced Cordless Telecommunications (DECT) equipment;	EMC requirements currently covered by ETS 300 329
REN/ERM-EMC-219-7	EN 301 489-7	EMC standard for European digital cellular telecommunication systems (GSM 900 MHz and DCS 1800 MHz); Part 1: Mobile and portable radio and ancillary equipment	EMC requirements currently covered by EN 300 342-1
REN/ERM-EMC-219-8	EN 301 489-8	EMC standard for European digital cellular telecommunications systems (GSM 900 MHz and DCS 1800 MHz); Part 3: Base station radio and ancillary equipment and repeaters meeting Phase 2 GSM requirements	EMC requirements currently covered by ETS 300 342-3
REN/ERM-EMC-219-9	EN 301 489-9	EMC standard for wireless microphones and similar RF audio link equipment	EMC requirements currently covered by ETS 300 445
REN/ERM-EMC-219-10	EN 301 489-10	EMC standard for Cordless Telephone (CT2) apparatus operating in the frequency band 864,1 - 868,1 MHz, including public access services	EMC requirements currently covered by ETS 300 446
REN/ERM-EMC-219-11	EN 301 489-11	EMC standard for VHF FM broadcasting transmitters	EMC requirements currently covered by ETS 300 447
REN/ERM-EMC-219-12	EN 301 489-12	EMC standard for Very Small Aperture Terminal (VSAT), Satellite News Gathering (SNG), Transportable Earth Station (TES), Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) Earth Stations operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS)	EMC requirements currently covered by EN 300 673
REN/ERM-EMC-219-13	EN 301 489-13	EMC standard for Citizen's Band (CB) Radio and ancillary equipment (speech and/or non-speech); Part 1: angle-modulated, and Part 2: Double Side Band (DSB) and/or Single Side Band (SSB)	EMC requirements currently covered by ETS 300 680-1 ETS 300 680-2
REN/ERM-EMC-219-14	EN 301 489-14	Void	
REN/ERM-EMC-219-15	EN 301 489-15	EMC standard for commercially available amateur radio equipment	EMC requirements currently covered by ETS 300 684

Work Item	Equipment standard	Abbreviated Title	Comments
REN/ERM-EMC-219-16	EN 301 489-16	EMC standard for analogue cellular radio communications equipment; mobile and portable equipment	EMC requirements currently covered by ETS 300 717
REN/ERM-EMC-219-17	EN 301 489-17	EMC standard for 2,4 GHz Wideband Data Transmission Systems (WDS) and HIPERLAN equipment in the 5,2 and 17,2 GHz bands	EMC requirements currently covered by ETS 300 826
REN/ERM-EMC-219-18	EN 301 489-18	EMC standard for TERrestrial Trunked RAdio (TETRA) and ancillary equipment	EMC requirements currently covered by EN 300 827
REN/ERM-EMC-219-19	EN 301 489-19	EMC for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications	EMC requirements currently covered by EN 300 830
REN/ERM-EMC-219-20	EN 301 489-20	EMC for Mobile Earth Stations (MES) used within Satellite Personal Communications Networks (S-PCN) operating in the 1,5/1,6/2,4 GHz and 2 GHz frequency bands	EMC requirements currently covered by EN 300 831
REN/ERM-EMC-219-21	EN 301 489-21	EMC for Mobile Earth Stations (MES) providing Low Bit Rate Data communications (LBRDC) using satellites in Low Earth Orbit (LEO) operating in frequency band below 1 GHz	EMC requirements currently covered by EN 300 832
REN/ERM-EMC-219-22	EN 301 489-22	EMC Standard for ground based VHF hand held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service	EMC requirements currently covered by EN 301 467 (1999-09)

5.1.3 Existing radio equipment standards

Table 4a lists those RE standards for marine equipment for which no corresponding EMC standard been identified. Any future marine equipment EMC standards will be referenced in the *Official Journal of the European Communities* under the EMC Directive [2], the R&TTE Directive [1] and the ME Directive [5].

Table 4a: Radio equipment standards - EMC standards unidentified – marine equipment

Work Item	Equipment standard	Abbreviated Title	Comments
DE/RES-01001	ETS 300 067	Radiotelex equipment operating in the maritime MF/HF service	TC/ERM-RP01
REN/ERM-RP01-029	ETS 300 152	Maritime Emergency Position Indicating Radio Beacons (EPIRBs) intended for use on the frequency 121,5 MHz, or the frequencies 121,5 MHz and 243 MHz for homing purposes only	TC/ERM-RP01
RE/RES-01-10	ETS 300 066	Float-free maritime satellite Emergency Position Indicating Radio Beacons (EPIRBs) operating on 406,025 MHz	TC/ERM-RP01
DE/RES-01009	ETS 300 372	Maritime float-free satellite Emergency Position Indicating Radio Beacon (EPIRB) operating in the 1,6 GHz band through geostationary satellites	TC/ERM-RP01
RE/ERM-RP01-032	ETS 300 225	Survival craft portable VHF radiotelephone apparatus	TC/ERM-RP01
DE/RES-01-05	EN 300 338	Equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service	TC/ERM-RP01
DEN/ERM-RP01-019	EN 301 025	VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC)	TC/ERM-RP01
DEN/ERM-RP01-017	EN 301 033	Shipborne watchkeeping receivers for reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and VHF bands	TC/ERM-RP01
DE/RES-01-03	ETS 300 373	Maritime mobile transmitters and receivers for use in the MF and HF bands	TC/ERM-RP01
DE/RES-01014	ETS 300 698	Radio telephone transmitters and receivers for the maritime mobile service operating in the VHF bands used on inland waterways	TC/ERM-RP01
DEN/ERM-RP01-012	EN 301 178	Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands (for non-GMDSS applications only)	TC/ERM-RP01
DE/RES-01011	ETS 300 720	UHF on-board communications systems and equipment	TC/ERM-RP01
DTS/ERM-RP01030	TS 101 089	Maritime Very High Frequency (VHF) distress radio equipment operating on aeronautical frequencies	TC/ERM-RP01

Table 4b lists those RE standards for non-marine equipment which no corresponding EMC standard been identified. Any future EMC standards will be referenced in the *Official Journal of the European Communities* under the EMC Directive [2] and the R&TTE Directive [1].P

Table 4b: Radio equipment standards - EMC standards unidentified – non-marine equipment

Work Item	Equipment standard	Abbreviated Title	Comments
DE/JTC-00VHFTXHU	ETS 300 750	Very High Frequency (VHF), frequency modulated, sound broadcasting transmitters in the 66 to 73 MHz band	ETSI/EBU JTC
RE/ERM-RP04-007-6	ETS 300 133-6	Enhanced Radio Message System (ERMES); Base station conformance specification	TC/ERM-RP04
DEN/ERM-RP08-0307	EN 301 357	Analogue cordless wideband audio devices using integral antennas operating in the CEPT recommended 863 MHz to 865 MHz frequency range	TC/ERM-RP08
DE/RES-080402	ETS 300 761	Automatic Vehicle Identification (AVI) for railways	TC/ERM-RP08
DE/RES-08-0501	ETS 300 718	Avalanche Beacons; Transmitter-receiver systems	TC/ERM-RP08
DTBR/ERM-RP05-002	TBR 23 (Harmonized)	Terrestrial Flight Telecommunications System (TFTS); Technical requirements for TFTS	TC/ERM-RP05 See Note
RE/ERM-RP05-005-2	ETS 300 326-2	Terrestrial Flight Telecommunications System (TFTS); Part 2: Speech services, radio interface	TC/ERM-RP05 See Note
DEN/ERM-RP08-0105	EN 300 674 (Harmonized)	Road Transport and Traffic Telematics (RTTT); Dedicated Short Range Communication (DSRC) transmission equipment (500 kbit/s / 250 kbit/s) operating in the 5,8 GHz Industrial, Scientific and Medical (ISM) band	TC/ERM-RP08 Co-ordinate with CEN
DEN/ERM-RP08-0401	EN 301 091 (Harmonized)	Road Transport and Traffic Telematics (RTTT); radar equipment operating in the 76 GHz to 77 GHz band	TC/ERM-RP08
DE/RES-00007	ETS 300 676	Radio transmitters and receivers at aeronautical stations of the aeronautical mobile service operating in the VHF band (118 MHz - 137 MHz) using amplitude modulation and 8,33 kHz channel spacing	TC/ERM-RP05
DI/RES-00002	I-ETS 300 235	Radio aspects of cordless telephones CT1	TC/ERM-RP08
NOTE: The EMC standards for this equipment are covered by EUROCAE ED-14 / RTCA DO-160 [6].			

5.1.4 New work items

Table 5 lists those work items that have been identified where the corresponding RE standard has not been identified.

Table 5: EMC work items for which the RE standard is unidentified

Work Item	EMC standard	Abbreviated Title	Comments
DEN/ERM-EMC-029 (DEN/ERM-EMC-202 Stopped 18/03/99)	EN 301 467	VHF ground-based and portable aeronautical equipment	
DEN/ERM-EMC-030		Wireless Video Links (WVL) operating in the 1,3 GHz to 50 GHz band	Stopped 17/09/99

5.1.5 RE emerging technologies

Table 6 lists the possible deliverables that could include requirements considered essential under the R&TTE Directive [1] and includes those deliverables for radio equipment listed in EC Mandate/284 [7]. No EMC standards have been produced for these equipments.

Table 6: RE emerging technologies

Work Item	Equipment standard	Abbreviated Title	Comments
		Digital Video Broadcasting	ETSI/EBU JTC
DTS/TSGR-0425103U		RF parameters in support of Radio Resource Management	EP 3GPP
DTS/TSGR-0425101U		UE Radio transmission and reception (FDD)	EP 3GPP
DTS/TSRG-0425102U		UTRA (UE) MS Radio transmission and reception (TDD)	EP 3GPP
DTS/TSGR-0425104U		UTRA (BS) Radio transmission and reception (FDD)	EP 3GPP
DTS/TSGT-01MS-CS U		Mobile Station (MS) conformance specification; Part 1: Conformance specification (3G TS 11.110-1)	EP 3GPP

The Technical Specifications being prepared by EP 3GPP may, or may not, contain requirements considered essential under Articles 3.1(b) of the R&TTE Directive [1]. It is possible that any requirements under Article 3.1(b) could be combined in one candidate harmonized standard.

5.2 Non-radio TTE EMC standards

5.2.1 Overview

The R&TTE Directive [1] Article 2(b) defines telecommunications terminal equipment. In general telecommunications network equipment (TNE) does not come within the scope of this definition; however some types of TNE may be dual purpose and may be used as TTE in which case they would come within the scope of the R&TTE Directive [1].

5.2.2 Existing TNE EMC Standards

Table 7 lists those TNE EMC standards, parts of which may be suitable for application to TNE used as TTE, and so those parts may be suitable as a basis for harmonization under the R&TTE Directive [1]; however this would require more detailed study. Where appropriate the equipment standard number has been included. All the EMC standards are, or are proposed to be, harmonized under the EMC Directive [2] unless otherwise indicated in the Comments column.

Table 7: TNE EMC Standards

Work Item	EMC standard	Abbreviated Title	Equipment standard	Comments
DEN/ERM-EMC-106		Radio and network telecommunications equipment		Stopped 17/09/99
REN/ERM-EMC-112	EN 300 127	Radiated emission testing of physically large telecommunication systems		Basic Standard Not harmonized
REN/ERM-EMC-111 (REN/ERM-EMC-210 Stopped 16/04/99)	EN 300 386	Telecommunication network equipment		General Standard
DEN/ERM-EMC-103-2-2	EN 300 386-2	Telecommunication network equipment; Part 2: Product family standard		Family Standard

Table 8 lists the EMC work items for which no equivalent product standards have been identified.

Table 8: TNE EMC work items for which no equivalent product standard has been identified

Work Item	EMC standard	Abbreviated Title	Comments
DEN/ERM-EMC-203		Telecommunications network equipment	Reliability requirements - not essential under R&TTE Directive [1] or EMC Directive [2]. Not harmonized
DES/ERM-EMC-206		Prevention of interference between different services sharing the same access network cable	Not harmonized

5.2.3 Existing non-radio TTE EMC standards

No specific ETSI EMC standards for non-radio TTE have been identified.

NOTE: EMC aspects of non-radio TTE are covered by standards published by CENELEC.

5.2.4 TTE emerging technologies

EC Mandate/284 [7] lists some TTE items as emerging technologies. As these may lead to a need for corresponding EMC harmonized standards under the R&TTE Directive [1], they are listed below in table 9, together with supporting information where available.

It should be noted that because of their capability for high rates of transmission, some of these technologies may generate unintentional emissions which may be capable of causing harmful interference to services in the radio spectrum, and to services carried on nearby lines. In these cases, R&TTE Directive [1] Article 3.1(b) essential requirements may apply at higher frequencies than traditionally considered for EMC.

In the same manner, some of these new technologies TTEs should be immune to received signals on their transmission media (line, cable, eventually fibre) from nearby line, cable and/or radio ingress.

Table 9: TTE emerging technologies

Abbreviated Title	Responsible TB	Associated Document	Work Item
Digital Subscriber Line technologies (e.g. HDSL, ADSL, VDSL)	EP ATA TC ERM TC TM6	TS 101 135 TS 101 388 TS 101 270-1	
Telecommunications on power lines (note 1)	EP PLT		
Telecommunications on Cable TV networks (note 2)			
Optical interfaces			
NOTE 1: Co-ordination with CENELEC SC210A-WG1 will be necessary.			
NOTE 2: Co-ordination with CENELEC TC 209 will be necessary.			

6 Conclusions

- 1) In view of the statements in the R&TTE Directive [1] referred to in clause 4 above, it appears that for the essential requirements of Article 3.1(b) (EMC) of the R&TTE Directive [1], there is no difference in the conformity assessment procedure options and requirements if a standard for EMC purposes is harmonized under the EMC Directive [2] or under the R&TTE Directive [1]. However, the Commission has indicated that it intends to harmonize the existing EMC standards under the R&TTE Directive [1]. It would therefore appear that equipment suppliers will be able to continue to use the existing EMC standards as a route to market.
- 2) TC-ERM EMC is currently following a programme under work item REN/ERM-EMC-211 of consolidating the requirements from existing radio product EMC standards into a new 22 part structured set of standards. This set is being produced to meet the Article 3.1(b) requirements of the R&TTE Directive [1]. This multi-part standard is intended to supersede the existing EMC radio product standards and constitutes a change of presentation of technical requirements rather than a change in the technical substance. It is expected that a transition period to adopt usage of the new standard of six months will be applied.
- 3) Harmonized standards produced for RE under Article 3.1(b) of the R&TTE Directive [1] do not cover emissions from the "enclosure" (cabinet radiation) or emissions and immunity at the antenna port; any technical requirements necessary to cover these items should be included in the appropriate harmonized standard referencing Article 3.2 of the R&TTE Directive [1].
- 4) For radio equipments that do not have a corresponding EMC standard identified, it should be considered whether the "common requirements" Part 1 of the new set of EMC standards is adequate, whether they are within the scope of planned product-specific parts, or whether additional parts are needed.
- 5) There are no existing ETSI EMC standards specifically for non-radio TTE. It should be considered whether EMC standards will be required for any of the emerging technologies which have been identified.
- 6) It is understood that new EMC standards that are produced for equipment within the scope of the R&TTE Directive [1], should be harmonized under the R&TTE Directive [1] and under the EMC Directive [2].

Bibliography

The following material, though not specifically referenced in the body of the present document gives supporting information.

- Council Directive 96/98/EC of 20 December 1996 on marine equipment.
- Council Directive of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (73/23/EC) (Low Voltage Directive) (LVD).

History

Document history		
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