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Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics of Short Range Devices (SRD) and RFID in the UHF Band; System Reference Document for Radio Frequency Identification (RFID) and SRD equipment; Part 2: Additional spectrum requirements for UHF RFID, non-specific SRDs and specific SRDs

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Foreword

This Technical Report (TR) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document includes necessary information to support the co-operation under the MoU between ETSI and the Electronic Communications Committee (ECC) of the European Conference of Postal and Telecommunications Administrations (CEPT).

The present document is part 2 of a multi-part deliverable covering RFID and SRD applications in the UHF range as identified below:

Part 1: "RFID equipment operating in the range from 865 MHz to 868 MHz";

Part 2: "Additional spectrum requirements for UHF RFID, non-specific SRDs and specific SRDs".

Introduction

The present document requests additional spectrum for UHF RFID, non-specific SRDs and specific SRDs. The additional spectrum is considered necessary because of the rapid growth rate of all these devices and their use in mass market applications. Furthermore the operation of this equipment in globally harmonized frequency bands is highly desirable, especially in view of the forthcoming SRD studies in the ITU-R as a consequence of the Radio Assembly 07 resolution [i.14] and the WRC 07 Resolution [i.15]. This could potentially lead to the global harmonization of spectrum for some of these applications.

The present document is a revision of the original proposal that includes an update to inform the ECC.

Target version	Pre-approval date version				
V1.2.1	**A**	**s**	**m**	**Date**	**Description**
V1.2.1	0.0.1			? February 2010	1st for approval by TG34
V1.2.1	0.0.2			26 February 2010	Approved by TG34 for submission to ERM
V1.3.1				13 March 2012	Adopted by ERM for consultation

1 Scope

The present document applies to UHF RFID, non-specific SRDs such as Home and Building Automation, Telemetry, Data Transmission and specific SRDs such as Metering (water and energy), Alarms, Automotive applications.

The present document describes the development of the RFID and SRDs industries and requests a study into additional frequency designations in the UHF frequency band to meet the medium and long term market requirements of this equipment.

The present document is intended to include all necessary information required by the Electronic Communications Committee (ECC) under the MoU between ETSI and the ECC.

2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are necessary for the application of the present document.

Not applicable.

2.2 Informative references

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] Commission Decision of 23 November 2006 on harmonization of the radio spectrum for radio frequency identification (RFID) devices operating in the ultra high frequency (UHF) band.

[i.2] "The RFID Revolution: Your voice on the Challenges, Opportunities and Threats".

NOTE: Available at http://ec.europa.eu/information_society/policy/rfid/documents/rfidswp_en.pdf.

[i.3] BRIDGE Building Radio frequency Identification solutions for the Global Environment, European passive RFID Market Sizing 2007 - 2022, GS1.

[i.4] ERC Recommendation 70-03: "Relating to the use of short range devices (SRD)".

NOTE: Available at http://www.erodocdb.dk/doks/implement_doc_adm.aspx?docid=1622.

[i.5] IDTechEx: "Boom in RFID will be reflected in Europe's Leading Conference".

NOTE: Available at http://www.idtechex.com/.

[i.6] Wireless Technology Propels Expansion of European Residential Security Market.

NOTE: Available at http://www.frost.com/prod/servlet/press-release.pag?Src=RSS&docid=95217860.

[i.7] ETSI EN 302 208 (all parts) (V1.3.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W".

[i.8] ETSI EN 300 220 (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW".

[i.9] EC: "Towards an RFID Policy for Europe".

NOTE: Available at http://www.rfidconsultation.eu/docs/ficheiros/RFID_Workshop_Reports_Final.pdf.

[i.10] ISO/IEC 18000-6 (1st edition; 15 August 2004): "Information technology - Radio frequency identification for item management - Part 6: Parameters for air interface communications at 860 MHz to 960 MHz".

[i.11] ISO/IEC 18000-6 (2004) AMD1 (E) (19 June 2006): "Information Technology - Radio frequency identification for item management - Part 6: Parameters for air interface communications at 860 MHz to 960 MHz, Amendment 1: Extension with Type C and update of Types A and B".

[i.12] CEPT Report 14 (July 2006): "Develop a strategy to improve the effectiveness and flexibility of spectrum availability for Short Range Devices (SRDs) in response to the EU Commission mandate".

[i.13] ETSI TR 101 537: "Electromagnetic compatibility and radio spectrum matters (ERM); Second co-existence test between ER-GSM with RFID".

[i.14] ITU-R Radio Assembly 2007 Resolution 953 "Studies to achieve further harmonization for short-range radiocommunication devices (SRDs)".

[i.15] ITU-R World Radio Conference 2007 Resolution [COM6/4] (WRC-07): "Protection of radiocommunication services from emissions by short-range radio devices".

[i.16] Kyoto Protocol to the United Nations framework convention on climate change (United Nations 1998).

[i.17] Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

[i.18] Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC.

[i.19] ECC Report 11: "Strategic plans for the future use of the frequency bands 862-870 MHz and 2400-2483.5 MHz for short range devices".

[i.20] Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products.

[i.21] CEN EN 14604:2005: "Smoke alarm devices".

[i.22] ECC Report 34: "Compatibility between narrow band digital PMR/PAMR and tactical radio relay in the 900 MHz band, Cavtat, May 2003".

[i.23] ECC Report 38: "Technical impact of introducing CDMA-PAMR on the UIC DMO & GSM-R radio systems in the 900 MHZ band, Granada, February 2004".

[i.24] ECC Report 40: "Adjacent band compatibility between CDMA-PAMR mobile services and short range devices below 870 MHz", Granada, February 2004.

[i.25] ECC Report 41: "Adjacent band compatibility between GSM and CDMA-PAMR at 915 MHz", Granada, February 2004.

[i.26] ECC Report 58: "Compatibility between TETRA Release 2 TAPS and tactical radio relays in the 870-876 AND 915-921 MHz bands", Stockholm, October 2004.