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**Radio Spectrum Policy**

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## **RADIO SPECTRUM COMMITTEE**

### **Working Document**

**Subject: ETSI Report to RSC#13**

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## 1 Issues directly affecting RSCOM work items

### 1.1 Automotive Radar

- 24 GHz anti-collision systems

**EN 302 288** v. 1.1.1 (2005-01) is now awaiting citation in the Official Journal in order for users to claim presumption of conformity with the R&TTE Directive. No listing has been published in the OJ since 30 March 2005.

Version 1.1.1 allows manual de-activation to protect Radio Astronomy sites. A new version is under development under EC/EFTA mandate M/363 to develop a new version (v. 1.2.1) including *inter alia* automatic deactivation based on geographical location information. Work is underway in Technical Committee ERM TG31B to develop this revised standard. This work is based on information recently received from CEPT on the geographical regions where automatic switch off is required. This will allow the development of new version of this Harmonised Standard to continue.

The revised Harmonized Standard is scheduled to be presented for approval at TC ERM in November 2005 for a combined Public Enquiry and Vote procedure. If successful, it is expected to be adopted in April 2006.

The System Reference Document for this application, **TR 101 982** v 1.2.1, is published since July 2002.

- 79 GHz anti-collision systems

Harmonised Standard **EN 302 264** had been held in order to give priority to the 24 GHz Harmonised Standard EN 302 288. A draft is being circulated within TC ERM TG31B, with a view to presenting a draft for approval to TC ERM for Public Enquiry in March 2006. According to this schedule, the Harmonized Standard would be published in January 2007.

- 77 GHz automatic cruise control systems

**EN 301 091-2** v 1.2.1 (2004-01) is awaiting citation on the Official Journal.

### 1.2 Ultra Wide Band

#### Global Radio Standards Collaboration <http://www.gsc.etsi.org>

Ultra Wide Band was discussed as a high-interest area in the Global Radio Standards Collaboration (Sophia Antipolis, 28 August to 2 September 2005), which adopted a resolution on Global UWB Standardization (see annex A). UWB was adopted as a new High Interest Area in GRSC, with ETSI being appointed as prime PSO.

## UWB for Communications purposes (EC/EFTA mandate M/329)

System Reference Document, **TR 101 994-1** (2004-01), has been contributed to CEPT TG3 which is co-ordinating spectrum sharing studies.

The draft Harmonised Standard for this application, **EN 302 065**, is under development in ETSI ERM TG31A. However, this schedule is dependent on successful conclusion of work on regulatory aspects in CEPT.

ETSI ERM TG31A has restarted a process to review and characterise different technologies for UWB, and have identified three technology classes that have significantly different interference-potential.

TG31A has reviewed its work programme and has agreed six new work items for ERM approval in November 2005. These work items include, 'Harmonised Standards' for UWB Technologies, TR on 'Test Methodologies', TRs on Technical Characteristics of UWB, and a Study on Bandsharing and Mitigation techniques.

## UWB for Ground-probing / wall-probing radar (EC/EFTA mandate M/329)

The System Reference Document for GPR, **TR 101 994-2** was published on 8 November 2004.

The Harmonised Standard, **EN 302 066** and the EMC Standard, **EN 301 489-32**, completed National Vote on 26 August 2005, and were published by ETSI on 5 September. The Standard is awaiting citation in the Official Journal, which will allow the presumption of conformity with the R&TTE Directive.

## Tank-Level Probing Radar (TLPR)

The ETSI System Reference Document, **TR 102 347** v 1.1.2 (2005-01) has been submitted to CEPT.

The draft Harmonised Standard, **EN 302 272** v 1.1.1 is on Public Enquiry, scheduled to complete on 28 October 2005. It is expected to be published in June 2006.

## Location application for emergency services (LAES)

ETSI has published a System Reference Document (**TR 102 496** (2005-06)) which defines the requirements for radio frequency usage for a short range location application to be used by authorities (e.g. search & rescue, fire workers, police, civil protection authorities) in disaster situations. A Technical Specification is under development, and a work item for a Harmonized Standard is expected to be proposed shortly.

## UWB Sensors

ETSI is continuing to work on System Reference Documents (**TR 102 495**, 3 parts) and Harmonized Standards for UWB sensors covering building analysis, object classification and location tracking.

This technical work is concentrated ETSI TC ERM, TG31C.

## 1.3 Radio LAN

### 5 GHz

**EN 301 893** v 1.3.1, the Harmonised Standard for 5 GHz Radio LANs, was published in 4 August 2005 and is awaiting citation in the Official Journal.

ETSI BRAN is working on a revised version, expected to become version 1.4.1, which will cover high throughput 5GHz RLAN technologies. This would allow the use of techniques such as Channel

Bonding (e.g. using 40 MHz channels), and the Multiple Input Multiple Output (MIMO) technology based on guidance from JPT5G and confirmed by WGFM. ETSI BRAN will reconsider the method of measurement for spurious emissions in the development of this new Harmonized Standard..

## 2,45 GHz

**EN 300 328** v 1.6.1 was published on 9 November 2004 and cited in the OJEU on 30 March 2005.

Work has started within ETSI ERM TG11 to revise this standard to revise the method of measurement for peak power as the current method is not adequate for some wide band modulation schemes. Other test methods will also be reviewed to accommodate high throughput technologies such as MIMO, channel bonding, etc.. The new version (expected to be v 1.7.1) is scheduled to be submitted to the Technical Committee ERM on June 2006, and to be published in December 2006.

ETSI ERM TG11 is also developing a test report template for testing against EN 300 328.

## 1.4 Short Range Devices

### Generic SRDs

The National Vote in a revised version of **EN 300 330** (Harmonised standard for generic short-range devices operating below 25 MHz) was interrupted at the request of CEPT/ECC who had expressed concerns over magnetic field limits. This matter will be discussed at the forthcoming meeting of TC ERM.

A revised draft on **EN 300 220** (Harmonised Standard for generic harmonised standards operating in the range 25 MHz to 1 GHz) has completed its Public Enquiry on 5<sup>th</sup> August, and is expected to be presented to TC ERM for approval for National Vote in November 2005. Publication is anticipated in February 2006.

### Euroloop / Eurobalise (EC/EFTA mandate M/364)

ETSI have started work to include the current technical requirements for Eurobalise and Euroloop (currently embedded in CEPT/ECC Recommendation 70-03) in a new Harmonized Standard for this application. It is expected that this standard will need to be revised shortly afterwards to include new spectrum masks, which are currently the subject of compatibility studies in CEPT/ECC SRDMG.

### Low Power FM Transmitters

ETSI is revising **EN 300 357** (cordless audio devices) to cover short-range devices operating in the FM Broadcast band. The standard specifies a power level of 50 nW, as proposed by CEPT/ECC WG SE Report 73. This standard will complete Public Enquiry on 30 December 2005, and is scheduled to be published in June 2006.

## 1.5 Intelligent Transport Systems

ETSI has published a System Reference Document, **TR 102 492-1**, on pan-European harmonized communications equipment operating in the 5 GHz frequency range and intended for critical road-safety applications. A Harmonized Standard is under preparation in ETSI ERM TG37.

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## 2 Other issues of interest to RSCOM

### Harmonised Standards under the R&TTE Directive

In response to a number of comments on Harmonised Standards which were received via TCAM & RTTE ADCO, ETSI OCG RTED has conducted a review of the guidance material used with ETSI to prepare Harmonized Standards under the R&TTE Directive. The revised Guide **EG 201 399** has been approved by an ad-hoc group of TC ERM, and is awaiting formal adoption by a 60-day vote of ETSI members. This revised guidance is intended to align the ETSI standards with the understanding of the Directive developed in TCAM, and lead to a simplified structure of Harmonized Standards and a greater coherence in the specification of technical requirements by different technical committees.

ETSI has initiated a second phase of the Specialist Task Force to review existing Harmonized Standards. The STF will advise the responsible Technical Bodies of the necessary corrective action to bring existing Standards into line with the new guidance. This phase of the STF is expected to start in October 2005 and complete at the latest in March 2006.

#### Harmonized Standards published since RSCOM#12

EN	302 017	1.1.1	2005-09	Transmitting equipment for the amplitude-modulated broadcast radio service
EN	302 291	1.1.1	2005-07	Close Range Inductive Data Communication equipment operating in the 13,56MHz ISM band
EN	302 066	1.1.1	2005-09	UWB for purposes other than communications
EN	301 893	1.3.1	2005-08	BRAN: 5 GHz high performance RLAN
EN	301 459	1.3.1	2005-09	SES: Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) transmitting towards satellites in geostationary orbit in the 29,5 GHz to 30,0 GHz frequency bands

#### Harmonized Standards in public approval

EN 302 018 v 1.2.1 (2 parts)	FM sound broadcast transmitters	on PE until 7/10/2005
EN 301 357-2 v 1.3.1	Short Range Devices in the FM Broadcast bands	On PE until 30/12/2005
EN 300 220 v 1.4.1 (2 parts)	Generic SRDs (25 MHz to 1 GHz)	Completed PE 5/8/2005 Expected for Vote 18/11/2005
EN 300 330 v 1.4.1 (2 parts)	Generic SRDs (below 25 MHz)	Vote stopped by ERM Chairman ERM#27, 18/11/2005: Review
EN 302 372 v 1.1.1 (2 parts)	Tank Level Probing Radar (TLPR)	On PE until 28/10/2005

EN 301 449 v 1.1.1	CDMA base station equipment	Completed PE 9/9/2005 Expected for Vote 18/11/2005
EN 302 426 v 1.1.1	CDMA repeater equipment	On PE until 28/10/2005
EN 301 526 v 1.1.1	CDMA mobile station equipment	Completed PE on 16/9/2005 Expected for Vote 17/3/2006
EN 302 502 v 1.1.1 DEN/BRAN-0040006	5,8 GHz fixed broadband data transmitting systems	On PE until 23/12/2005
EN 301 428 v 1.2.7 REN/SES-00270	Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive-only satellite earth stations operating in the 11/12/14 GHz frequency bands	On PE until 2/12/2005
EN 301 443 v 1.2.5 REN/SES-00276	Very Small Aperture Terminal (VSAT); Transmit-only, transmit-and-receive, receive-only satellite earth stations operating in the 4 GHz and 6 GHz frequency bands	On PE until 18/11/2005
EN 301 360 v 1.1.6 REN/SES-00277	Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) transmitting towards geostationary satellites in the 27,5 GHz to 29,5 GHz frequency bands	On PE until 18/11/2005
EN 302 340 v 1.0.1 DEN/SES-00110	satellite Earth Stations on board Vessels (ESVs) operating in the 11/12/14 GHz frequency bands allocated to the Fixed Satellite Service (FSS)	On PE until 30/9/2005
EN 302 326-2 v 1.1.1 DEN/TM-04130-2	Digital Multipoint Radio Equipment	Completed PE 1/7/2005 Expected for V: 14/10/2005
EN 302 326-3 v 1.1.1 DEN/TM-04130-3	Multipoint Radio Antennas	Completed PE 1/7/2005 Expected for V: 14/10/2005

## Electromagnetic Compatibility (EMC)

Modifications to EMC standards have been caused by the adoption of the Automotive EMC Directive 2004/104/EC (**mandate M/358**). Of the modified standards, **EN 301 489-1** (General EMC requirements for radio equipment), is published and awaiting citation in the OJEU. **EN 301 489-7** (Specific EMC requirements for GSM terminals) and **EN 301 489-24** (Specific EMC requirements for IMT-2000 UTRA terminals) are scheduled to complete the combined Public Enquiry and Vote procedure on 28 October 2005, and are expected to be published in November 2005.

ETSI published a Guide to the revised automotive EMC Directive, **EG 202 414** (2005-06), during this period.

The following other EMC standards are currently on public approval process (**mandate M/284**):

- EN 301 843-6 v 1.1.1, Satellite equipment on board ships, to complete Public Enquiry, 4/11/2005
- EN 301 489-11 v 1.3.1, EMC for digital sound broadcast transmitters, Completed Public Enquiry on 9/9/2005

#### **EMC Harmonized Standards published since RSCOM#12**

EN	301 489-1	1.6.1	2005-09	General EMC for radio
EN	301 489-25	2.3.1	2005-07	EMC for IMT-2000 CDMA Multi-carrier Mobile Stations
EN	301 489-26	2.3.1	2005-07	EMC for IMT-2000 CDMA Multi-carrier Base Stations
EN	301 489-31	1.1.1	2005-09	EMC for inductive loop ULP-AMI, 9 to 315 kHz
EN	301 489-32	1.1.1	2005-09	EMC for Ground & Wall Probing Radar

## ETSI/CENELEC Joint Working Group on EMC of conducted telecommunications networks

The Joint Working Group continues to work on mandate M/313 on EMC requirements for conducted transmission networks. Following the publication of Commission Recommendation 2005/292/EC on the introduction of power line telecommunication, the JWG have decided to concentrate on the development of the Harmonised Standard originally requested under mandate M/313.

The draft Harmonised Standard **EN 302 282** is due to complete Public Enquiry on 18 November 2005. A joint meeting with CENELEC to resolve Public Enquiry comments has been arranged on 21 and 22 February 2006. The standard is scheduled to be published in June 2006.

## Radio Spectrum Matters

ERM has published System Reference Documents for the following applications, with a view to initiating the frequency allocation process in CEPT:

TR	102 433	1.1.1	2005-06	System Reference Document for Digital Private Mobile Radio
TR	102 434	1.1.1	2005-06	System Reference Document for ULP-AMI with duty cycle of equal or less than 0,01%
TR	102 491	1.1.1	2005-06	System Reference Document for TETRA TEDS
TR	102 492-1	1.1.1	2005-06	SRDoc for RTTT protected pan-European 5 GHz equipment for critical road safety applications
TR	102 496	1.1.1	2005-06	System Reference Document for short range location application for emergency services ( <b>EMTEL</b> )

## Radio measurements

ETSI has published the following document:

EG	202 373	1.1.1	2005-08	Guide to on-site methods of measurement of Radiated RF fields
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This has been contributed to CENELEC for consideration in its drafting of Harmonized Standards for the assessment of radio sites to limit human exposure to electromagnetic fields.

## Aeronautical equipment

### Cellphones on aircraft

ETSI MSG are working with CEPT SE7 on specifications to allow the use of cell phones on aircraft, using a Network Control Unit on board to prevent the hand-held causing interference with the ground network.

### Application of the R&TTE Directive to ground-based aeronautical equipment

Following advice from the Commission Legal Services that ground-based aeronautical equipment is covered by the R&TTE Directive, ETSI is investigating Harmonized Standards for such equipment.

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## Annex A: Resolution GSC-10/11 (GRSC) Global UWB Standardization

The 10th Global Standards Collaboration meeting (Sophia-Antipolis, 2005)

### Recognizing:

- a) that UWB services could assist in the social and economic development on a Global basis using Personal Area Networks;
- b) that UWB services can help to provide local, very high speed, broadband links for use in the personal space including government, education, and individuals in the global community to develop the delivery of combined audio/visual services alongside normal Wide Area Networks;
- c) that there is increasing demand for personal broadband services on a Global basis providing full cross/border/regional mobility and compatibility for end users;
- d) that there are challenges in delivering broadband services to intelligent user terminals for real time multimedia services;
- e) that standardization of UWB systems is currently taking place in Participating Standards Organizations (PSOs);
- f) that well-accepted standards have the potential to increase product availability and to support a diverse range of applications which can benefit the delivery of broadband multimedia services in the personal space;
- g) that through the emergence and evolution of technology, the delivery of real-time multimedia services is now a real possibility in a cost effective way;
- h) that standards should facilitate the free circulation on a global basis, in a license exempt environment;
- i) that telecommunications needs may vary considerably between end users in their own personal space;
- j) that the telecommunication requirements of developed and developing countries are similar but the implementation challenges may be vastly different;
- k) that there has been no major deployment of UWB services to date;

### Considering:

- 1) that various countries and regions are establishing UWB deployment programs, including real-time multimedia applications, in recognition that UWB has the potential to enhance the quality of life of the general public, also giving access to services to the physically impaired that otherwise would not be available from previous broadband services in the personal space (e.g., strengthening economy, improving health care, creating new learning opportunities);
- 2) that the World Summit on Information Society (Geneva, December 2003) adopted a plan of action calling on countries to develop and strengthen national, regional and international broadband network infrastructure, including delivery by satellite and other systems, to help in providing the capacity to match the needs of countries and their citizens and for the delivery of new Information and Communication Technology based services.

### Resolves:

- 1) to facilitate a strong and effective global radio standards collaboration on UWB standardization in a technology neutral environment;
- 2) to encourage PSOs and other standards bodies to develop globally compatible UWB standards to support delivery of real-time multimedia services in the personal space;

- 3) to encourage PSOs to take into account, in the development of UWB standards, the need for cost-effective solutions with supporting simplified measurement and regulatory procedures for placing UWB solutions on the Global markets;
- 4) to encourage PSOs to develop innovative solutions that would support the use of low power UWB short range devices to achieve reliable delivery of broadband services in the personal space; and
- 5) to encourage standards development in UWB hybrid fixed and mobile broadband wireless personal access, recognizing the technology solutions available or under development.
- 6) communicate effectively with Regional and International Regulatory Administrations having regard to the efficient use of spectrum and regulations that protects existing allocated services.

## Annex B: List of GSC#10 Resolutions

<a href="#">Resolution GSC-10/01:</a>	(Joint) Mapping Standards for “Systems Beyond IMT 2000”
<a href="#">Resolution GSC-10/02:</a>	(Joint) Emergency Communications
<a href="#">Resolution GSC-10/03:</a>	(Joint) Broadband Services in Rural and Remote Areas
<a href="#">Resolution GSC-10/04:</a>	(Joint) Open Standards
<a href="#">Resolution GSC-10/05:</a>	(GRSC) Facilitating Liaison in Relation to Measurement Methodologies for Assessing Human Exposure to RF Energy
<a href="#">Resolution GSC-10/06:</a>	(GRSC) Global Radio Standards Collaboration on Wireless Access Systems including Radio Local Area Network and Ad Hoc Networking, particularly for systems providing broadband wireless access
<a href="#">Resolution GSC-10/07:</a>	(GRSC) Supporting Automotive Crash Notification (“ACN”) by Public Wireless Communications Networks
<a href="#">Resolution GSC-10/08</a>	(GRSC) Radio Microphones and Cordless Audio Standardization
<a href="#">Resolution GSC-10/09</a>	(GRSC) RFID Systems, Services and Networking
<a href="#">Resolution GSC-10/10</a>	(GRSC) Public Protection and Disaster Relief (PPDR)
<a href="#">Resolution GSC-10/11</a>	(GRSC) Global UWB Standardization
<a href="#">Resolution GSC-10/12</a>	(GTSC) Next Generation Networks (NGN)
<a href="#">Resolution GSC-10/13</a>	(GTSC) Cybersecurity
<a href="#">Resolution GSC-10/14</a>	(GTSC) Home Networking
<a href="#">Resolution GSC-10/15</a>	(IPR WG) Intellectual Property Rights Policies
<a href="#">Resolution GSC-10/16</a>	(UWG) User Interest Working Group