DIGITALEUROPE

Brussels, 22 August 2011

DIGITALEUROPE Position on the inclusion of the 5 GHz bands in Annex 3 of ERC Recommendation 70-03

Introduction of the issue

DIGITALEUROPE is closely monitoring CEPT activities on the 5 GHz bands, and became aware that the ECC WG FM has tasked the SRD MG to discuss in detail the proposal for the removal of the reference to 5 GHz bands for WAS/RLAN in Annex 3 of the ERC Recommendation 70-03 (5150-5350MHz and 5470-5725MHz).

This document contains the position of the WAS/RLAN industry members of DIGITALEUROPE on the subject issue.

1. History of the regulations for the 5GHz bands

Prior to WRC03, the use of the 5 GHz frequency bands by RLANs was regulated by ERC Decision (99)23 and by Annex 3 of ERC Recommendation 70.03 which deals with Short Range Devices. By this early regulation Europe was ahead of the rest of the world which enabled the 5 GHz RLAN technology to further develop.

In preparation of WRC03, Europe took also the lead in proposals towards the ITU which resulted that WRC03 allocated the 5 GHz bands on a primary basis to the mobile service for the implementation of wireless access systems (WAS), including radio local area networks (RLANs). Since that moment, 5 GHz RLANs were no longer SRDs and enjoyed primary status.

This resulted that shortly after WRC03, both the CEPT and the EC developed new deliverables specifically dealing with 5 GHz RLANs and taking the WRC03 outcome into account including their new status as primary user.

Annex 1 to this document provides a complete overview on how the initial regulation as an SRD had developed into the current regulation.

DIGITALEUROPE
Rue Joseph II, 20 >> B-1000 Brussels [Belgium]
T. +32 2 609 53 10 >> **F.** +32 2 609 53 39
www.digitaleurope.org

2. Current work within ITU

Work within ITU-R WP 1B includes work on a draft New Recommendation on "Frequency ranges for global or regional harmonization of short-range devices (SRDs)". Previous versions of that draft New Recommendation did include the 5 GHz WAS/RLAN bands. However the contributions from CEPT, China, UAE, and others addressed removing the 5 GHz WAS /RLAN for SRD use. The current ITU-R Draft New Recommendation SM: [SRD]1-178 is aligned with recent positions and proposals discussed at the last ITU-R WP 1B in Geneva in May of 2011.

3. Problem Statement

According to the considerations *a)* and *b)* from ERC Recommendation 70-03

> *considering*
> *a) that SRDs in general operate in shared bands and* ***are not permitted to cause harmful interference to radio services****;*
> *b) that in general* ***SRDs cannot claim protection from radio services****;*

DIGITALEUROPE is of the view that the highlighted text is clearly in conflict with the allocation as a mobile service on a primary basis granted to 5 GHz WAS/RLANs applications by Article 5 of the RR and *ITU-R Resolution 229*).

Therefore, the inclusion of references to 5 GHz bands for WAS/RLAN applications in Annex 3 of the ERC Recommendation 70-03 on Short Range Devices creates unnecessary confusion and possible legal uncertainty for these applications.

In addition, it has to be considered that although the 5 GHz WAS/RLAN applications has been granted with primary status in the band, they need to protect the other primary services operating in this 5 GHz band (e.g. radiodetermination systems - Military and Civil Radar systems). Technical discussions at ETSI have shown that ensuring spectrum sharing with these radiodetermination systems has been much more challenging than anticipated. The DFS mechanism which is the key mechanism to ensure sharing with these sensitive and important systems was already subject of several revisions of the relevant ETSI harmonized standard.

References to 5 GHz bands for WAS/RLAN applications in a regulatory instrument specifically intended for Short Range Devices represent a risk as it could result in all kinds of low cost mass market consumer products to be developed for these 5 GHz frequency bands (5150-5350MHz and 5470-5725MHz) but which are not an WAS/RLAN application. The CEPT should not give the impression that these 5 GHz bands are available for low cost mass market consumer products (different from WAS/RLAN) as that will result in an uncontrollable escalation of interference cases into these important meteorological and military radars.

4. DIGITALEUROPE proposal

WAS/RLAN industry is aware that the appropriate regulation for the 5 GHz bands is contained in the latest version of ECC Decision (04)08 and in EC Decision 2005/513/EC (amended by EC Decision 2007/90/EC).

In order to secure the spectrum for WAS/RLAN applications in the 5 GHz bands (5150-5350MHz and 5470-5725MHz), and in order to provide maximum protection to the civil and military radars operating in these bands, the SRD MG is invited to consider the removal of references to 5 GHz bands in Annex 3 (bands *b* and *c*) of the ERC Recommendation 70-03.

This will also remove the ambiguity regarding the status of these applications since primary status was decided at WRC03.

Annex 1: History of the regulations for the 5GHz bands

Initial regulation for the 5 GHz bands

- ***ERC Decision (99)23***

  In 1999, the former ERC developed the ERC Decision (99)23 on the harmonised frequency bands to be designated for the introduction of High Performance Radio Local Area Networks (HIPERLANs). There was no existing ITU designation at that time.

  Copied from ERC Decision (99)23 - decides 2:

  > *2) to designate the frequency bands 5150-5350 MHz and 5470–5725 MHz for the use of HIPERLANs;*

- ***ERC Recommendation 70.03 – Annex 3 (versions prior to WRC2003)***

  In addition to the ERC Decision (99)23, the 5 GHz HIPERLANs were also added into annex 3 of ERC Recommendation 70.03. This was prior to WRC03 which means these applications did not have any status under the ITU regulations at that moment therefore having them added into the ERC Recommendation for Short Range Devices did make sense.

WRC2003

ITU-R adopted Resolution 229: “Use of the bands 5150-5250 MHz, 5250-5350 MHz and 5470-5725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks”. There is a mandatory reference to Resolution 229 in provision No. 5.446A.

Copied from considering a):

> *a) that this Conference has allocated the bands 5 150-5 350 MHz and 5 470-5 725 MHz **on a primary basis to the mobile service** for the implementation of wireless access systems (WAS), including radio local area networks (RLANs);*

Current Regulation for the 5 GHz bands

- **ECC Decision (04)08 (latest amendment of October 2009)**

  In 2004, the CEPT had developed ECC Decision (04)08 for 5 GHz WAS/RLAN systems to replace the existing regulation (ERC Decision (99)23) and to align their regulation with the WRC03 outcome:

  > *ECC Decision of 12 November 2004 on the harmonised use of the 5 GHz frequency bands for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).*

  Copied from the introduction:

  > *This CEPT/ECC Decision addresses the designation of the frequency bands 5 150-5 350 MHz and 5 470-5 725 MHz for the implementation of Wireless Access Systems including Radio Local Area Networks (WAS/RLANs).* ***These frequency bands have been allocated to the mobile service except aeronautical mobile service on a primary basis in all three regions*** *by World Radiocommunication Conference 2003 (WRC-03), taking into account the need to protect primary services in these frequency bands. Furthermore WRC-03 adopted ITU-R Resolution 229 on "Use of the bands 5 150-5 250, 5 250-5 350 MHz and 5 470-5 725 MHz by the mobile service for the implementation of Wireless Access Systems including Radio Local Area Networks".*

  Copied from considering b):

  > *b. that the frequency bands 5 150-5 350 MHz and 5 470-5 725 MHz have been allocated* ***to the mobile service except aeronautical mobile service on a primary basis*** *for the implementation of WAS/RLANs by WRC-03, taking into account the need to protect primary services in these frequency bands;*

- **ERC Recommendation 70-03 – Annex 3**

  In addition to the specific ECC Decision prepared in 2004, Annex 3 of ERC Recommendation 70-03 was updated to remove the specific references to HIPERLAN and to align the 5 GHz entries with the ITU-R results (Article 5 of RR, Resolution 229). At that moment several administrations already questioned the need to have these 5 GHz bands remain in ERC Recommendation 70-03 because of the different status now assigned to these applications and because of the specific ECC and EC Decision which already existed.

  Copied from the scope of the revised Annex 3:

  > *This annex covers frequency bands and regulatory as well as informative parameters recommended for Wideband Data Transmission Systems and Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) (formerly known as Radio Local Area Networks (RLANs)) within the band 2400-2483.5 MHz, for Wireless Access Systems including Radio Local Area Networks (WAS/RLANs) within the bands 5150-5350 MHz, 5470-5725 MHz and 17.1-17.3 GHz and for Multiple-Gigabit WAS/RLAN Systems within the band 57-66 GHz.*

- **EC Decision 2005/513/EC (amended by 2007/90/EC)**

  Following the allocation of the 5 GHz bands and the adoption of ITU-R Resolution 229 during the WRC 2003 and following the development of the EC Decision (04)08 by the CEPT, the European Commission in 2005 adopted the Commission Decision 2005/513/EC on the harmonised use of radio spectrum in the 5 GHz frequency band for the implementation of wireless access systems including radio local area networks (WAS/RLANs).

  Copied from the whereas 3) and 4):

  > *(3) The relevant parts of the 5 GHz band have been allocated **to the mobile service**, except aeronautical mobile service, **on a primary basis, in all three Regions** of the International Telecommunication Union (ITU) by the World Radiocommunication Conference 2003 (WRC-03), taking into account the need to protect other primary services in these frequency bands.*
  >
  > *(4) WRC-03 adopted ITU-R Resolution 229 on the 'Use of the bands 5 150-5 250, 5 250-5 350 MHz and 5 470-5 725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks' which was an incentive for further European harmonisation to allow R-LAN systems to rapidly access the European Union.*

ABOUT DIGITALEUROPE

DIGITALEUROPE is the voice of the European digital economy including information and communication technologies and consumer electronics. DIGITALEUROPE is dedicated to improving the business environment for the European digital technology industry and to promoting our sector's contribution to economic growth and social progress in the European Union.

DIGITALEUROPE ensures industry participation in the development and implementation of EU policies. DIGITALEUROPE's members include 60 global corporations and 37 national trade associations from across Europe. In total, 10,000 companies employing two million citizens and generating €1 trillion in revenues. Our website provides further information on our recent news and activities: http://www.digitaleurope.org

THE MEMBERSHIP OF DIGITALEUROPE

COMPANY MEMBERS:

Acer, Alcatel-Lucent, AMD, APC by Schneider Electric, Apple, Bang & Olufsen, BenQ, Bose, Brother, Buffalo, Canon, Cassidian, Cisco, Corning, Dassault Systems, Dell, Epson, Ericsson, Fujitsu, Hitachi, HP, Huawei, IBM, Ingram Micro, Intel, JVC, Kenwood, Kodak, Konica Minolta, Lexmark, LG, Loewe, Microsoft, Mitsubishi, Motorola Mobility, Motorola Solutions, NEC, Nokia, Nokia Siemens Networks, Océ, Oki, Oracle, Panasonic, Philips, Pioneer, Qualcomm, Research In Motion, Ricoh International, Samsung, Sanyo, SAP, Sharp, Siemens, Sony, Sony Ericsson, Swatch Group, Technicolor, Texas Instruments, Toshiba, Xerox.

NATIONAL TRADE ASSOCIATIONS:

Austria: FEEI; **Belgium:** AGORIA; **Bulgaria:** BAIT; **Cyprus:** CITEA; **Czech Republic:** ASE; **Denmark:** DI ITEK, IT-BRANCHEN; **Estonia:** ITL; **Finland:** FFTI; **France:** SIMAVELEC; **Germany:** BITKOM, ZVEI; **Greece:** SEPE; **Hungary:** IVSZ; **Ireland:** ICT IRELAND; **Italy:** ANITEC, **Lithuania**: INFOBALT; **Netherlands:** ICT OFFICE, FIAR; **Poland:** KIGEIT, PIIT; **Portugal:** AGEFE, APDC; **Romania:** APDETIC; **Slovakia:** ITAS; **Slovenia:** GZS; **Spain:** AETIC, ASIMELEC; **Sweden:** IT&TELEKOMFÖRETAGEN; **United Kingdom:** INTELLECT; **Belarus:** INFOPARK; **Norway:** ABELIA, IKT NORGE; **Switzerland:** SWICO; **Turkey:** ECID, TESID, TÜBISAD; **Ukraine:** IT UKRAINE