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| **Doc. ECC SG(13)029****TEMP 22 Rev1** **FM(13)XY Annex XY** |  |
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**Report to ECC related to the EC Mandate on 5 GHz WAS/RLAN**

*(Editor´s note to the WG FM Plenary: The text was originally agreed in the drafting group in the format of a letter to the ECC Chairman with copies to be sent to the Chairmen of WG SE, CPG and CPG PTD)*

**Introduction**

At its 78th meeting WG FM considered the EC Mandate to CEPT to study and identify harmonised compatibility and sharing conditions for Wireless Access Systems including Radio Local Area Networks in the bands 5350-5470 MHz and 5725-5925 MHz ('WAS/RLAN extension bands') for the provision of wireless broadband services.

WG FM noted that the development of the response to the EC Mandate (CEPT Report) goes beyond the WRC-15 preparations (CEPT Briefs and ECPs).

The response to the EC Mandate requires cooperation amongst different ECC bodies and various groups under WG FM, WG SE and CPG will need to contribute to the studies.

**Current situation for the studied frequency bands**

An excerpt of the ERC Report 25 (European Common Allocation Table) is attached to provide the overview on the existing ECC harmonisation measures for the frequency bands 5350-5470 MHz, 5725-5850 MHz and 5850-5925 MHz.

**On-going work in WG FM**

The following items are covered by on-going work and considerations in WG FM:

1. WG FM triggered studies in WG SE (SE PT24) on the definition of the operating conditions for Road Tolling Systems (TTT/DSRC) in the frequency band 5805-5815 MHz (work following considerations in CEPT Report 44).
2. WG FM (SRD/MG) is currently discussing the regulatory approach in the band 5725-5875 MHz for SRD equipment for wireless industrial automation applications (WIA) (the work was triggered by an ETSI SRdoc).
3. WG FM (FM PT48) considers for broadband Direct-Air-to-Ground Communications (DA2GC) the frequency band 5855-5875 MHz.
4. Triggered by the ETSI SRdoc on broadband communication links for ships and fixed installations engaged in off-shore activities in preparation, WG FM is requesting studies in WG SE for this application in the frequency band 5850-5900 MHz.
5. WG FM has started to review ECC Decision (08)01 and ECC Recommendation (08)01 in relation to ITS. An ETSI SRdoc is under preparation in support of this review. It has also been noted that the current harmonised standard for ITS, ETSI EN 302 571 includes a mandatory requirement for Listen Before Talk (such as IEEE 802.11 CSMA) in 5855-5875 MHz for the protection of Broadband Fixed Wireless Access (BFWA) in the frequency range 5855-5875 MHz as was recommended in ECC Report 101.

In addition Draft ECC Report 192 addresses the current status of Dynamic Frequency Selection (DFS) in the 5 GHz bands currently designated for WAS/RLAN.

Further, WG FM agreed in relation to the EC Mandate on 5 GHz WAS/RLAN that for WIA and DA2GC there would be additional studies required in WG SE with regard to the potential use by WAS/RLANs in relation to possible use of WIA and DA2GC.

**Further organisational matters**

Taking into account the need for cooperation amongst different ECC bodies that will contribute to the technical studies and the development of the expected CEPT Report, the work should be organised to address the EC mandate in the most efficient way to avoid duplication of work. WG FM therefore is of the view that the responsibility to develop the response to the EC mandate (CEPT Report) should be assigned to a new task group or correspondence group directly under ECC. It was also proposed that the responsibility to develop the response to the EC mandate (CEPT Report) could be assigned to WGFM correspondence group with a right to directly communicate with other ECC working groups and project teams.

**Regulatory approach**

Taking into account the results of WRC-15, WG FM may consider proposing the development of a new ECC Decision for WAS/RLAN applications in line with the final results of the compatibility and sharing investigations. It is important to note that the final regulatory approach must ensure compliance with existing regulatory approaches for the services and applications included in the European Common Allocation Table, including enforcement considerations.

**Excerpt from ERC Report 25 (European Common Allocation Table)**

**5350-5470 MHz:**

 5350 - 5450 MHz

* 1. AERONAUTICAL RADIONAVIGATION AERONAUTICAL RADIONAVIGATION Active sensors (satellite)

 5.449 5.449

 EARTH EXPLORATION-SATELLITE EARTH EXPLORATION-SATELLITE Defence systems Tactical and weapon system

 radars

 (active) 5.448B (active) 5.448B

 RADIOLOCATION 5.448D RADIOLOCATION 5.448D - Position fixing

 SPACE RESEARCH (active) 5.448C SPACE RESEARCH (active) 5.448C ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz

 Fixed for TLPR application

 EU2 Maritime radar Shipborne and VTS radar

 EU22

 Weather radar Ground based and airborne

 5450 - 5460 MHz

* 1. AERONAUTICAL RADIONAVIGATION AERONAUTICAL RADIONAVIGATION Active sensors (satellite)

 5.449 5.449

 EARTH EXPLORATION-SATELLITE EARTH EXPLORATION-SATELLITE Defence systems Tactical and weapon system

 radars

 (active) 5.448B (active) 5.448B

 RADIOLOCATION 5.448D RADIOLOCATION 5.448D - Position fixing

 SPACE RESEARCH (active) 5.448C SPACE RESEARCH (active) 5.448C ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz

 For TLPR application

 EU2

 EU22 Maritime radar Shipborne and VTS radar

 Weather radar Ground based and airborne

 5460 - 5470 MHz

 EARTH EXPLORATION-SATELLITE EARTH EXPLORATION-SATELLITE Active sensors (satellite)

 (active) (active)

 RADIOLOCATION 5.448D RADIOLOCATION 5.448D Defence systems Tactical and weapon system

 radars

 RADIONAVIGATION 5.449 RADIONAVIGATION 5.449 - Position fixing

 SPACE RESEARCH (active) SPACE RESEARCH (active)

 5.448B 5.448B EU2 ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz for TLPR application

 EU22 Maritime radar Shipborne and VTS radar

 Weather radar Ground based and airborne

**5725-5850 MHz:**

 5725 - 5830 MHz

 FIXED-SATELLITE (E/S) FIXED-SATELLITE (E/S) Amateur EN 301 783

 RADIOLOCATION RADIOLOCATION

 Fixed ECC/REC/(06)04 BFWA EN 302 502 Within the band 5725-5875 MHz

 Amateur Amateur

 Mobile Defence systems Tactical and weapon system radars

 5.150 5.150 EU2 ISM Within the band 5725-5875 MHz

 5.451 EU22

 5.453 ERC/REC 70-03 Non-Specific SRDs EN 300 440 Within the band 5725-5875 MHz

 5.455

 5.456 ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz

 for TLPR application

 ERC/REC 70-03 TTT EN 300 674 Within the band 5795-5805 MHz.

 TTT in the band 5805-5815 MHz

 On a ational basis

 Weather radars Ground based and airborne

 5830 - 5850 MHz

 FIXED-SATELLITE (E/S) FIXED-SATELLITE (E/S) Amateur-Satellite EU23 Within the band 5830-5850 MHz

 RADIOLOCATION RADIOLOCATION

 Fixed ECC/REC/(06)04 BFWA EN 302 502 Within the band 5725-5875 MHz

 Amateur Amateur

 Amateur-satellite (S/E) Amateur-satellite (S/E) Defence systems Tactical and weapon system

 radars

 Mobile ISM Within the band 5725-5875 MHz

 5.150 5.150 EU2

 5.451 EU22 ERC/REC 70-03 Non-Specific SRDs EN 300 440 Within the band 5725-5875 MHz

 5.453 ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz for

 5.455 TLPR application

 5.456

 Weather radars Ground based and airborne

**5850-5925 MHz:**

 5850 - 5925 MHz

 FIXED FIXED ECC/REC/(06)04 BFWA EN 302 502 Within the band 5725-5875 MHz

 FIXED-SATELLITE (E/S) FIXED-SATELLITE (E/S)

 FSS Earth stations EN 301 443 Priority for civil networks

 MOBILE MOBILE

 5.150 5.150 ISM Within the band 5725-5875 MHz

 ECC/DEC/(08)01 ITS EN 302 571 Within the band s 5875-5925

 ECC/REC/(08)01 MHz and 5855-5875 MHz

 ERC/REC 70-03 Non-Specific SRDs EN 300 440 Within the band 5725-5875 MHz

 ERC/REC 70-03 Radiodetermination applications EN 302 372 Within the band 4500-7000 MHz

 For TLPR application