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#ITUWRC

1300 – 1445 hours, Session 1 - Terrestrial issues

WRC-23 agenda items 1.3, 9.1 topic b), and 9.1 topic c)

José Costa, Chairman, WP5A

Overview

WP5A has responsibility for one WRC-23 agenda item and two topics under agenda item 9.1, as summarized in the following table:

Agenda item / Topic	Topic	Resolution	Draft CPM text	Workplan/ Report of activities
1.3	Primary allocation of the band 3 600 - 3 800 MHz to the mobile service within Region 1	**246** (WRC-19)	Annex 4 to Doc. 5A/491	Annex 5 to Doc. 5A/491
/9.1 b)	Amateur service and amateur-satellite service allocations in 1 240 - 1 300 MHz	**774** (WRC-19)	Annex 6 to Doc. 5A/491	Annex 7 to Doc. 5A/491
/9.1 c)	IMT for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis	**175** (WRC-19)	Annex 8 to Doc. 5A/491	Annex 9 to Doc. 5A/491

The numbers of these annexes to the WP5A chairman's report are maintained from meeting to meeting until the work is completed.

Agenda item 1.3 - Outline

- WRC-19 agenda item 1.3
- Resolution **246 (WRC-19)**
- Background and motivation
- Status of work in WP5A

WRC-23 agenda item 1.3

- to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution **246 (WRC-19)**;
  - Resolution **246 (WRC-19)** – Studies to consider possible allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1.
- Responsible Group: **WP5A**
- Contributing Groups: **WP3K, WP3M, WP4A, WP5B, WP5C, WP5D**

Resolution 246 (WRC-19)

Studies to consider possible allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1

resolves to invite the ITU Radiocommunication Sector

to conduct sharing and compatibility studies in time for WRC-23 between the mobile service and other services allocated on a primary basis within the frequency band 3 600-3 800 MHz and adjacent frequency bands in Region 1, as appropriate, to ensure protection of those services to which the frequency band is allocated on a primary basis and not impose undue constraints on the existing services and their future development,

invites the 2023 World Radiocommunication Conference

based on the results of studies in resolves to invite the ITU Radiocommunication Sector, to consider possible upgrade of the allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1, and to take appropriate regulatory actions,

Background and Motivation

- In the Radio Regulations, the frequency band 3 600-3 800 MHz is allocated to the fixed and fixed-satellite services on a primary basis in all three Regions and is already allocated to the mobile, except aeronautical mobile, service on a primary basis within Regions 2 and 3; while the frequency band 3 600-3 800 MHz is allocated to the mobile service on a secondary basis within Region 1.
- Resolution **246 (WRC-19)** recognizes that there is a need in many countries to identify additional harmonized spectrum resources for cost-effective implementation of mobile systems.
- Efficient implementation of broadband connectivity, inter alia, could play an important role in development of telecommunications services in many countries as referred to in Resolution **246 (WRC-19**).

Status of work in WP5A

- Work being conducted in WG5A-4 chaired by Mr. Michael Kraemer, Germany, and a SWG chaired by Mr. César Gutiérrez, Huawei.
- Development of draft CPM text for agenda item 1.3:
  - Draft CPM text: Annex 4 to Doc. 5A/491
  - Work plan: Annex 5 to Doc. 5A/491
- Applicable ITU-R Recommendations and Reports:
  - ITU-R Recommendations: P.452, P.1238, P.2040, P.2001, M.2150, …
  - ITU-R Reports: S.2368, M.2109, S.2199, M.2111, M.2116-2, F.2328, ...
- Sharing and compatibility studies being conducted with FSS systems.
- Working document towards a draft report for sharing and compatibility studies in compliance with Resolution **246 (WRC-19)** in relation with WRC-23 agenda item 1.3 (Annex 20 to Doc. 5A/491).

Agenda item 9.1 topic b) - Outline

- WRC-19 agenda item 9.1 topic b)
- Resolution **774 (WRC-19)**
- Background and motivation
- Status of work in WP5A

WRC-23 agenda item 9.1 topic b)

- Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240-1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service operating in the same band in accordance with Resolution **774 (WRC-19)**;
  - Resolution **774 (WRC-19)** – Studies on technical and operational measures to be applied in the frequency band 1 240-1 300 MHz to ensure the protection of the radionavigation-satellite service (space-to-Earth).
- Responsible Group: **WP5A**
- Contributing Groups: **WP3M, WP4C*, WP7C**

* WP4C is responsible for developing studies on *resolves to invite ITU-R 2* of Resolution **774 (WRC-19)** and sending this to WP5A.

Resolution 774 (WRC-19)

Studies on technical and operational measures to be applied in the frequency band 1 240-1 300 MHz to ensure the protection of the radionavigation-satellite service (space-to-Earth)

resolves to invite the ITU Radiocommunication Sector

1 to perform a detailed review of the different systems and applications used in the amateur service and amateur-satellite service allocations in the frequency band 1 240-1 300 MHz;

2 taking into account the results of the above review, to study possible technical and operational measures to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz, without considering the removal of these amateur and amateur-satellite service allocations,

instructs the Director of the Radiocommunication Bureau

to include the results of these studies in his Report to WRC-23 for the purpose of considering appropriate actions in response to *resolves to invite the ITU Radiocommunication Sector* above,

Background and Motivation

- The radionavigation satellite service in this frequency band is used by various global RNSS systems (GALILEO, GLONASS, COMPASS, GPS, QZSS) in different portions of the band 1 240-1 300 MHz, for various applications, including high-accuracy localization services with ubiquitous deployment of RNSS receivers.
- Some cases of harmful interference caused by emissions in the amateur service into RNSS (space-to-Earth) receivers have occurred, as recognized in Resolution **774 (WRC-19)**.

Status of work in WP5A

- Work being conducted in WG5A-1 chaired by Mr. Dale Hughes, Australia.
- Development of draft CPM text for agenda item 9.1 topic b):
  - Draft CPM text: Annex 6 to Doc. 5A/491
  - Work plan: Annex 7 to Doc. 5A/491
- Work in progress in WP5A:
  - Preliminary draft new Report ITU-R M.[AMATEUR.CHARACTERISTICS] –
    [Existing proposal] "Amateur and amateur-satellite services characteristics and usage in the 1 240-1 300 MHz frequency band";
    [New proposal] "Service characteristics, studies [and guidelines] regarding the protection of the primary radionavigation-satellite service (space to-earth) by the secondary Amateur and Amateur-satellite services in the frequency band 1 240-1 300 MHz" (Annex 10 to Doc. 5A/491).
  - Working document towards a preliminary draft new Recommendation ITU-R M.[AS GUIDANCE] – Guidance on the implementation of technical and operational measures for the use of the frequency band 1 240-1 300 MHz by the Amateur and Amateur-satellite services in order to protect the RNSS (Annex 11 to Doc. 5A/491).

Agenda Item 9.1 topic c) - Outline

- WRC-19 agenda item 9.1 topic c)
- Resolution **175 (WRC-19)**
- Background and motivation
- Status of work in WPs 5A and 5C

WRC-23 agenda item 9.1 topic c)

- Study the use of International Mobile Telecommunication systems for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution **175 (WRC-19)**;
  - Resolution **175 (WRC-19)** – Use of International Mobile Telecommunications systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis.
- Responsible Group: **WP5A and WP5C***
- Contributing Groups: **WP1B, WP4A, WP4C, WP5D, WP6A, WP7B, WP7C, WP7D**

* This is a joint activity and a joint plenary may be held if required. WP5A will provide the draft text on the results of studies to the CPM Chapter co-Rapporteurs.

Resolution 175 (WRC-19)

Use of International Mobile Telecommunications systems for fixed wireless broadband in the frequency bands allocated to the fixed service on a primary basis

resolves to invite the ITU Radiocommunication Sector

to conduct any necessary studies on the use of IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on primary basis, taking into account the relevant ITU-R studies, Handbooks, Recommendations and Reports,

instructs the Director of the Radiocommunication Bureau

to report to WRC-23 on the results of these studies,

Background and Motivation

- The use of IMT systems for fixed broadband can assist in meeting global demands to bridge the digital divide, support the broadband agenda in developing countries and provide cost effective broadband services to rural and underserved areas.
- IMT systems have been used to provide fixed wireless access applications since they started service around the year 2000 (cf. the Handbook on Land Mobile (including Wireless Access) - Volume 1: Fixed Wireless Access, available at https://www.itu.int/pub/R-HDB-25).
- The Chairmen of Working Parties 5A and 5C provided guidance on the organization of the work on topic 9.1 c) in Doc. 5A/19 = Doc. 5C/13.
- F-Series Recommendations regarding Fixed Wireless Access potentially relevant to topic 9.1 c) (from Annex 1 of Doc. 5A/19 and Doc. 5A/58):

Vocabulary of terms	Spectrum related	Technical related
Rec. ITU-R F.592	Rec. ITU-R F.748	Rec. ITU-R F.757
Rec. ITU-R F.1399	Rec. ITU-R F.749	Rec. ITU-R F.1400
	Rec. ITU-R F.1402	Rec. ITU-R F.1401
	Rec. ITU-R F.1488	Rec. ITU-R F.1490
	Rec. ITU-R F.1489	Rec. ITU-R F.1499
	Rec. ITU-R F.1518	Rec. ITU-R F.1763
	Rec. ITU-R F.1519	
	Rec. ITU-R F.1613	

Status of work in WPs 5A and 5C

- Work being conducted in Ad Hoc WG5A/5C chaired by Ms. Christine Di Lapi, USA.
- Development of draft CPM text for agenda item 9.1 topic c):
  - Draft CPM text: Annex 8 to Doc. 5A/491 (placeholder only)
  - Work plan: Annex 9 to Doc. 5A/491 (includes meeting-by-meeting brief reports)
- Work in progress in the Ad Hoc WG5A/5C (Docs. 5A/…):

Draft CPM text	418 (UK/CEPT PTA); 472 (Russian Federation)
Work plan	431 Appendix III (USA); 273 (IAFI); 321 Att.4 (UK/CEPT PT A)
Scope of FWB term	418 (UK/CEPT PTA); 422 (CG Chairman); 431 (USA); 445 (IAFI); 458 (South Africa); 469 (Egypt); 472 (Russian Federation); 478 (Saudi Arabia, UAE)
"IMT Systems" from Res. 175 (WRC-19)	418 (UK/CEPT PTA); 445 (IAFI); 458 (South Africa); 472 (Russian Federation)
Rec. ITU-R F.1401-1	321 Att.2 (UK/CEPT PT A); 431 Appendix II, Att. 2 (USA)
Rec. ITU-R F.1490-1	431 Appendix II, Att. 1 (USA)
Rec. ITU-R F.1763-1	307 (China); 431 Appendix II, Att. 3 (USA)
Q. ITU-R 215-4/5	431 Appendix I (USA)
New Report / Rec.	221 (Annex 18) (WP5A); 271 (USA); 321 Att.3 (UK/CEPT PTA); 329 (Egypt); 336 (UAE)
Working document/ Miscellaneous	418 (UK/CEPT PT A); 422 (CG Chairman); 431 (USA); 445 (IAFI); 458 (South Africa); 469 (Egypt); 472 (Russian Federation); 478 (Saudi Arabia, UAE); 221 (Annex 18) (WP5A); 271 (USA); 321 Att.3 (UK/CEPT PTA); 329 (Egypt); 336 (UAE)