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|  | ASIA-PACIFIC TELECOMMUNITY | Document No: |
| **The 2nd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-2)** | **APG23-2/INF-08** |
| 19 – 23 April 2021, Virtual/Online Meeting | 23 March 2021 |

Chairman, DG on AI 1.1

**brief on wrc-23 agenda item 1.1**

(Note: *This brief was developed for information purpose only. It does not necessarily express the view of APG-23*)

**Agenda Item 1.1:**

*to consider, based on the results of the ITU R studies, possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No.* ***5.441B*** *in accordance with Resolution* ***223 (Rev.WRC 19)****;*

**Relevant Resolutions and Responsible/Contributing ITU-R Groups**

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| Resolution **223  (Rev.WRC‑19)**  Additional frequency bands identified for International Mobile Telecommunications | *resolves*  1 [not applicable]  2 [not applicable]  3 that in the frequency bands 4 800-4 825 MHz and 4 835-4 950 MHz, in order to identify potentially affected administrations when applying the procedure for seeking agreement under No. **9.21** by IMT stations in relation to aircraft stations, a coordination distance from an IMT station to the border of another country equal to 300 km (for land path)/450 km (for sea path) applies;  4 that in the frequency band 4 800-4 990 MHz, in order to identify potentially affected administrations when applying the procedure for seeking agreement under No. **9.21** by IMT stations in relation to fixed-service stations or other ground-based stations of the mobile service, a coordination distance from an IMT station to the border of another country equal to 70 km applies;  5 that the power flux-density (pfd) limits in No. **5.441B**, which is subject to review at WRC-23, shall not apply to the following countries: Armenia, Brazil, Cambodia, China, Russian Federation, Kazakhstan, Lao P.D.R., Uzbekistan, South Africa, Viet Nam and Zimbabwe,  *invites the ITU Radiocommunication Sector*  1 [not applicable]  2 to study the technical and regulatory conditions for the protection of stations of the aeronautical and maritime mobile services located in international airspace or waters (i.e. outside national territories) and operated in the frequency band 4 800-4 990 MHz;  3 [not applicable];  4 to include the results of the studies mentioned in *invites the ITU Radiocommunication Sector* above in one or more ITU‑R Recommendations and Reports, as appropriate,  *invites the 2023 World Radiocommunication Conference*  to consider, based on the results of the studies referred to in *invites the ITU Radiocommunication Sector* above, possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories and to review the pfd criteria in No. **5.441B**. |

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| **Responsible group** | **Contributing group** |
| **WP 5B** and **WP 5D**  Note: WP 5B and WP 5D to work jointly as provided below.[[1]](#footnote-1)1 | **WP 1B, WP 3K, WP 3M, WP 5C, WP 7D** |

**1. Background Information**

1.1 Which regional organization initiated this Agenda Item

During WRC-19, Committee 4 Ad-Hoc Group 1 has considered the proposals submitted by the Member States to WRC-19 relating to No. **5.441B** in response to Resolution **223 (Rev.WRC-15)** (parts related to frequency band 4 800-4 990 MHz and footnote No. **5.441B** of the Radio Regulations) and reached to an agreement to includes an agenda item for WRC-23 to consider possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of aeronautical and maritime mobile service located in the international airspace and water from other stations located within national territories and to review the pfd criteria in No. **5.441B** in accordance with Resolution **223 (Rev.WRC-19)**.

* 1. Other relevant information for understanding of the Agenda Item
* Working Party 5B Next Meeting : May 10th – 21st, 2021
* Working Party 5D Next Meeting : June 7th – 18th, 2021

1.3 List of relevant ITU-R Reports/Recommendations, APT Reports/Recommendations and  
ongoing studies, e.g. working documents from ITU-R and/or AWG

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| [Recommendation ITU-R М.2116](https://www.itu.int/rec/R-REC-M.2116/en)-0 | *Technical characteristics and protection criteria for the aeronautical mobile service systems operating within the 4 400-4 990 MHz frequency range* |
| [Report ITU-R M.2286](https://www.itu.int/pub/R-REP-M.2286)-0 | *Operational characteristics of aeronautical mobile telemetry systems* |
| [APT/AWG/REP-103](https://www.apt.int/sites/default/files/Upload-files/AWG/AWG-26%20Circulars/APT-AWG-REP-103_-_APT_Report_on_Frequency_Arrangements_of_4.8-4.99GHz.docx) | *APT Report on Frequency Arrangements for IMT in the Band 4 800 – 4 990 MHz* |

**2. Information on on-going ITU-R Study**

* 1. Documents that are being developed by the responsible group: Revising the existing   
      ITU-R Report(s), ITU-R Recommendation(s) or developing a PDNR or a working   
      document
* Documents being developed by the co-responsible groups, WP 5B and 5D are listed as below. Both Working Parties have not started development of the draft CPM text for this agenda item yet.

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| Doc. Link | Title |
| Attachment 4.xx to 5D/545 (= 5D/TEMP/[339](https://www.itu.int/md/R19-WP5D-210301-TD-0339/en))\* | WORKING DOCUMENT TOWARDS A PRELIMINARY DRAFT NEW REPORT ITU-R M.[CONDITIONS 1.1]  Technical and regulatory conditions for the protection of stations of  the Aeronautical Mobile Service (AMS) and Maritime Mobile  Service (MMS) located in international airspace or waters (i.e.  outside national territories) and operating in the frequency band 4 800-4 990 MHz |
| Doc. 5B/225 Annex 36 | WORKING DOCUMENT TOWARDS AN ANNEX TO LIAISON STATEMENT TO WORKING PARTY 5D ON WRC-23 AI 1.1  Technical characteristics and protection criteria for aeronautical  mobile systems and maritime mobile service operating within  the 4 800-4 990 MHz frequency range |

\* Will be replaced by the corresponding Attachment in Chapter 4 of Chairman’s Report of WP 5D #37.

* 1. Contentious issues in ITU-R meeting (list all issues up in the beginning and then update (removal or addition) later stage)
* At the Twenty-Fifth Meeting of Working Party 5B (WP 5B) in November 2020, preparatory studies for WRC-23 agenda item 1.1 had little or no progress, where opinion seemed diametrically opposite. Some administrations proposed to send the characteristics of aeronautical and maritime systems operating in the frequency band4 800-4 990 MHz as requested by WP 5D whilst some other administrations argued that further consideration was required before liaising such characteristics. Agreement could not be reached at this meeting and hence the relevant documents were carried forward to the next meeting.
* The 37th Meeting of Working Party 5D in March 2021 updated the Working Document for the Preliminary Draft New Report on *technical and regulatory conditions for the protection of stations of the Aeronautical Mobile Service (AMS) and Maritime Mobile Service (MMS) located in international airspace or waters (i.e. outside national territories) and operating in the 4 800-4 990 MHz frequency band*. The WP 5D noted that discussions at WP 5B, on the Working Document, were still at initial stages and most of the comments considered by WP 5B were still under discussion within that Working Party. Accordingly, the WP 5D proceeded to use the initial version of the Working Document (Attachment 4.12 to the WP 5D Chairman’s Report for the 36th meeting) as the baseline for discussions.
* The WP 5D drafted a liaison statement to WP 5B advising them that WP 5D had updated Working Document 5D/TD[/339](https://www.itu.int/md/R19-WP5D-210301-TD-0339/en), and inviting them to comment on the same.
  1. Hyperlink to the relevant part of the webpage of [ITU-R Preparatory Studies for   
      WRC-23](https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-23-studies.aspx)
* WRC Resolution[Res.223 (Rev.WRC-19)](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0001PDFE.pdf)
* WP 5B: [Doc. 5B/225 Sec. 2.3, 10.2.1.1 and Annexes 35 & 36](https://www.itu.int/md/R19-WP5B-C-0225/en)
* WP 5D: - [Doc. 5D/360 Chapter 1](https://www.itu.int/md/R19-WP5D-C-0360/en) (a), [Chapter 2 Attachment 2.9](https://www.itu.int/md/R19-WP5D-C-0360/en) (a) (b),

[Chapter 4](https://www.itu.int/md/R19-WP5D-C-0360/en) (a)[Attachments 4.11, 4.12, 4.13](https://www.itu.int/md/R19-WP5D-C-0360/en) (c) & [4.14](https://www.itu.int/md/R19-WP5D-C-0360/en) (b)

- [Doc. 5​D/389 Chapter 1 Sec. 7.2](https://www.itu.int/md/R19-WP5D-C-0389/en)

Note: The document numbers for WP 5D above will be updated when the Chairman’s Report for the 37th meeting of WP 5D in March 2021 is available.

**3. Position of the Regional Group (if available)**

* ATU
* ASMG (July 2020)

Inviting ASMG administrations to Study the Frequency band and consider the current uses. A position will be specified at the next meeting.

* CEPT (December 2020)

TBD

* CITEL (December 2020)

Preliminary views:

An Administration is of the view that protection of aeronautical mobile and maritime mobile service and/or applications of the primary Mobile Service in the frequency band 4 800-4 990 MHz cannot be fulfilled solely through application of No. 9.21. The United States supports the study of the technical and regulatory conditions for the protection of aeronautical mobile and maritime mobile service and/or applications located in international airspace or waters (i.e. outside national territories) and operated in the frequency band 4 800-4 990 MHz. With respect to the review of the pfd criteria contained in No. 5.441B, the continued protection of aeronautical mobile and maritime mobile service and/or applications of the Mobile Service must be ensured.

An Administration supports appropriate sharing studies under Agenda Item 1.1 in the band 4 800-4 990 MHz. We believe this band will be important to satisfy the needs of IMT in mid-band spectrum and plans to use it for IMT services.

* RCC (December 2020)

The RCC Administrations consider that there is no need to apply the pfd limits to protect stations of the aeronautical and maritime mobile services located in international airspace and waters (i.e., outside national territories), and operating in the frequency band 4 800−4 990 MHz.

**4. Position of International Organizations (if available)**

* ICAO (October 2020)

Measure to address protection of aeronautical and maritime mobile services in 4800-4900 MHz.

* IMO
* WMO
* IARU R3
* Etc…

1. 1 WP 5B to provide characteristics and protection criteria for the aeronautical and maritime mobile services. WP 5D initiates studies with characteristics of IMT. Studies must take into account comments from both Working Parties (*invites the ITU-R* 2). WP 5D in consultation with WP 5B develops reports/recommendations, as appropriate, which are approved by SG 5 in accordance with Resolution ITU-R 1-8 (*invites the ITU-R* 4). WP 5B and WP 5D develop relevant parts, as appropriate, of the draft CPM text. WP 5D finalizes draft CPM text taking into consideration comments by WP 5B (for *invites WRC-23*). [↑](#footnote-ref-1)