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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/OUT-28**  **(Rev.1)** |
| 19 – 23 April 2021, Virtual/Online Meeting | 23 April 2021 |

Working Party 4

**PRELIMINARY VIEWs on WRC-23 agenda item 1.15**

**Agenda Item 1.15:**

*to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally, in accordance with Resolution* ***172 (WRC-​19);***

RESOLUTION **172 (WRC-​19*)*** – *Operation of earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service in the frequency band 12.75-13.25 GHz (Earth-to-space)*

**1. Background**

World Radiocommunication Conference 2019 (WRC-19) adopted agenda item 1.15 that calls for studies on the possible operation of earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service in the frequency band 12.75-13.25 GHz (Earth-to-space), in accordance with Resolution **172 (WRC-19)**.

The ITU has addressed aeronautical and maritime earth stations operating with GSO FSS satellites in Study Group 4 and at several WRCs that adopted technical and regulatory regimes to allow such operations. In the Radio Regulations Resolution **902 (WRC-03)** and Resolution **169 (WRC-19)** define technical and regulatory rules to allow GSO FSS networks to communicate with earth stations on aircraft or vessels to provide broadband communications.

WRC-15 adopted Resolution **156 (WRC-15)** allowing the use of ESIM communicating with GSO FSS networks in the 19.7-20.2 GHz and 29.5-30.0 GHz bands and WRC-19 adopted Resolution **169 (WRC-169)** allowing the use of ESIM communicating with GSO FSS networks in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz.

Resolution **172 (WRC-19)** calls for studies to ensure that AP30B allotments and assignments as well as other allocated services are protected.

Working Party (WP) 4A has been designated by CPM23-1 as the responsible group for the Agenda Item 1.15.

Sharing studies are needed in ITU-R to ensure protection of the other primary services in the band such as Fixed-Satellite Service, Fixed Service, and Mobile Service, as well as the protection of Earth exploration-satellite service EESS (active) and aeronautical radionavigation service operating in the adjacent band 13.25-13.4 GHz.

Working Party 4A, in preparation of WRC-19 Agenda item 1.15, has studied to consider the issues mentioned above and has developed working document on WRC-23 agenda item 1.15 and preliminary draft CPM text which were not discussed and not agreed yet at the latest WP 4A meeting (February/March, 2021).

**2. Documents**

* Input Documents: APG23-2/ INP-13(J), INP-27(AUS), INP-33 Rev1 (KOR), INP-37(SNG), INP-42(INS), INP-47 Rev1 (CHN), INP-52(VTN).
* Information Documents: APG23-2/INF-25 (ASMG), INF-26 (ATU), INF-34 (CITEL), INF-35 (CEPT), INF-36 (RCC).

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Japan** - **Document APG23-2/ INP-13**

* Japan is of the view that it is necessary to conduct appropriate adjustments at ITU-R for the use of the frequency bands while ensuring the protection of existing services.

**3.1.2 Australia** - **Document APG23-2/** **INP-27**

* Australia supports the establishment of a new regulatory framework (including technical and operational requirements) that improves the efficiency of use of the 12.75-13.25 GHz band by facilitating fixed-satellite service (FSS) earth stations in motion (ESIM) to use the frequency bands. Such ESIM use must ensure protection of services allocated in the bands and should not impact the usability of the allotments in the Plan and assignments in the List under Appendix 30B of the Radio Regulations.

**3.1.3 Korea (Rep. of)**- **Document APG23-2 /** **INP-33 Rev1**

The Republic of Korea has a preliminary view that it supports the on-going studies on considering the operational and regulatory conditions for the earth stations on aircraft and vessels to be operated ensuring the protection of incumbent services in the frequency band 12.75 – 13.25 GHz.

The Republic of Korea also has preliminary views as follows:

* use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels shall not limit the access of other administrations to their national resources in Appendix **30B** as well as implementation of Resolution **170 (WRC‑19)**;
* use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels shall not impose undue constraints on existing services and their future development.

**3.1.4 Singapore** - **Document APG23-2/INP-37**

* Singapore supports on-going studies for the use of the frequency band 12.75 – 13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO space stations in the FSS, while ensuring protection of existing services in those frequency bands, in accordance with Resolution **172 (WRC-19)** noting that operation of such earth stations on aircraft and vessels should not impact the usability of the allotments in the Plan and assignments in the List under Appendix 30B of the Radio Regulations.

**3.1.5 Indonesia** - **Document APG23-2/INP-42**

* Indonesia is of the view to support study the sharing and compatibility issues between earth stations on aircraft and vessels communicating with GSO space stations in the FSS and current and planned stations of existing services, as well as services in adjacent frequency bands, to ensure protection of, and not impose undue constraints on, those services and their future development, taking into account the provisions of Appendix 30B.

**3.1.6 China** - **Document APG23-2/INP-47 Rev1**

* China supports ITU-R to conduct sharing and compatibility studies between earth stations on aircraft and vessels communicating with GSO space stations in the FSS and current and planned stations of existing services, as well as services in adjacent frequency bands, to ensure protection of, and not impose undue constraints on services their future development, taking into account the provisions of Appendix **30B**.
* China also supports ITU-R to develop technical conditions and regulatory provisions for operation of earth stations on aircraft and vessels communicating with GSO space stations in the FSS operating in the frequency band 12.75-13.25 GHz (Earth-to-space), while ensuring protection to the existing services and those in the adjacent bands, in accordance with Resolution **172 (WRC-19).**

**3.1.7 Viet Nam** - **Document APG23-2/INP-52**

* Considering the possibility of using earth stations on aircraft and vessels communicating with geostationary space station in the fixed-satellite service in the frequency band 12.75-13.25 GHz (Earth-to-space), Viet Nam is in favour of the need to ensure protection to allotments in the Plan and assignments in the List of RR Appendix 30B in accordance with criteria provided in Annex **4** to Appendix **30B.** Such use of earth stations shall not limit the access of other administrations to their national resources in Appendix **30B**.

**3.2 Summary of issues raised during the meeting**

* None.

**4. APT Preliminary View(s)**

APT Members support on-going studies being carried out by ITU-R Working party 4A for the use of the frequency band 12.75 – 13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO space stations in the FSS while ensuring protection of existing services in those frequency bands and in adjacent bands, in accordance with Resolution **172 (WRC-19).**

APT Members also support ITU-R studies to develop technical conditions and regulatory provisions for operation of earth stations on aircraft and vessels communicating with GSO space stations in the FSS operating in the frequency band 12.75-13.25 GHz (Earth-to-space), while ensuring protection to the existing services and those in the adjacent bands, in accordance with Resolution **172 (WRC-19)**.

APT Members also have preliminary views as follows:

* operation of such earth stations on aircraft and vessels should not impact the usability of the allotments in the Plan and assignments in the List under Appendix 30B of the Radio Regulations.
* use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels shall not limit the access of other administrations to their national resources in Appendix **30B** as well as implementation of Resolution **170 (WRC‑19)**.

**5. Other View(s) from APT Members**

* None.

**6. Issues for Consideration at Next APG Meeting**

APT Members are invited to follow the progress of ITU-R studies, and are encouraged to submit their contributions for further considerations at the next meeting.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG23-2/INF-25**

* Inviting ASMG administrations to study their requirements for this technology and the spectrum use in these bands, and provide their option in the next ASMG meeting

**7.1.2 ATU** - **Document APG23-2/INF-26**

* None.

**7.1.3 CEPT** - **Document APG23-2/INF-35**

* CEPT supports establishing a regulatory framework and technical requirements for operation of earth stations on aircraft in the frequency band 12.75‐13.25 GHz (Earth‐to‐space) with conditions that protect the services currently allocated in this frequency band and bands adjacent to it, , taking into account ECC Decision (19)04.
* CEPT supports establishing a regulatory framework and technical requirements for operation of earth stations on vessels in the frequency band 12.75‐13.25 GHz (Earth‐to‐space) pending on the results of the studies conducted on protection of services currently allocated in this frequency band and bands adjacent to it.

**7.1.4 CITEL** - **Document APG23-2/INF-34**

* Some administrations support studies on the operation of earth stations on aircraft and vessels communicating with GSO FSS space stations in the 12.75-13.25 GHz (Earth-to-space) frequency band with the objective of developing appropriate technical and regulatory provisions to protect allotments/assignments in the Appendix 30B Plan and other primary allocated services, as well as primary services in adjacent bands, as called for in Resolution 172 (WRC-19)

**7.1.5 RCC** - **Document APG23-2/INF-36**

* The RCC Administrations support the studies of methods for sharing and guarantee compatibility between earth stations on aircraft and vessels communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space) and incumbent and future stations of services in this frequency band as well as services in adjacent frequency bands (i.e. EESS (active) in the frequency band 13.25−13.75 GHz), to ensure protection of, and not impose undue constraints on those services and their future development, taking into account the provisions of Appendix **30B**.
* The RCC Administrations are in favour of the development of technical requirements and regulatory provisions for ESIMs on aircraft and vessels for the harmonized operation of such earth stations communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space), while ensuring in this and adjacent bands protection to the existing services, taking into account the provisions of Appendix **30B**.
* The RCC Administrations are in favour of the need to ensure protection to allotments in the Plan and assignments in the List of RR Appendix **30B** in accordance with criteria provided in Annex 4 to Appendix **30B,**when considering the possibility of using earth stations in motion on aircraft and vessels communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space), and such use of the frequency band 12.75-13.25 GHz (Earth-to-space) by the earth stations on aircraft and vessels shall not result in any constraints or changes in the existing allotments/ assignments in the Plan/List and shall not adversely affect the criteria in Annex 4, including cumulative effect of multiple earth stations on aircraft and vessels.
* The RCC Administrations consider that ESIMs on aircraft and vessels shall operate in the frequency band 12.75-13.25 GHz (Earth-to-space) within the envelope of the earth station’s characteristics of the satellite network and also within the agreements reached by administrations under §§6.5, 6.6 and 6.16 of Article 6, Appendix **30B**.

**7.2 International Organisations**

**7.2.1 IARU** - **Document APG23-2/INF-ZZ**

* None.

**7.2.2 ICAO** - **Document APG23-2/INF-ZZ**

* None.

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