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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-13** |
| 19 – 23 April 2021, Virtual/Online Meeting | 23 April 2021 |

Working Party 2

**PRELIMINARY VIEWs on WRC-23 agenda item 1.6**

**Agenda Item 1.6:**

*to consider, in accordance with Resolution 772 (WRC 19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;*

**1. Background**

Resolution 772 (WRC-19), in preparation for WRC-23 agenda item 1.6, invites the ITU-R to study the spectrum needs for stations on board sub-orbital vehicles, any appropriate modification to the Radio Regulations, excluding any new allocations or changes to the existing allocations in RR Article 5, and to identify whether there is a need for access to additional spectrum that should be addressed after WRC-23 by a future competent conference.

WP 5B as the responsible group has generated a Working Document towards a Preliminary Draft New Report ITU-R M.[SUBORBITAL STUDIES] to initiate study in preparation for this agenda item, which include a chapter on spectrum needs for communications between stations on-board sub‑orbital vehicles and terrestrial/space stations. A skeleton for the draft CPM text and a work plan have been generated as well. WP 5B has also exchanged information with the contributing groups, WP 3M, WP 4A, WP 4C, and WP 7B through liaison statements.

Relevant ITU-R Reports:

ITU-R [M.2477-0](https://www.itu.int/pub/R-REP-M.2477-2019) “*Radiocommunications for suborbital vehicles”*

**2. Documents**

The input documents and information documents received at APG23-2 are listed as follows:

* Input Documents: APG23-2/ [INP-11(JPN)](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-11.docx), [INP-25(AUS)](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-25_AUS_contribution_for_WP2_Preliminary_Views_on_WRC-23_Agenda_Items_1.6_1.7_1.8_1.9_1.10_1.11_and_Res.427WRC-19.docx), [INP-31(KOR)](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-31_WP2_kor.docx)
* Information Documents: APG23-2/ [INF-25](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-25_ASMG_Preparation_for_WRC-23.pdf)(ASMG), [INF-34](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-34_CITEL_Preparation_for_WRC-23.pdf)(CITEL), [INF-35](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-35_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf)(CEPT)，[INF-40](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-40_Briefing_on_AI1.6.docx)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Japan** - **Document APG23-2/INP-11**

* Japan supports ongoing studies on spectrum needs for communications between stations on board sub-orbital vehicles and terrestrial/space stations as indicated in Resolution **772 (WRC-19)** in order to facilitate radiocommunications that support aviation to safely integrate sub-orbital vehicles into airspace and ensure interoperability with international civil aviation. Japan is of the view that when studying appropriate modification to RR, existing services must be properly protected.

**3.1.2 Australia** - **Document APG23-2/INP-25**

* Australia supports ITU-R studies of spectrum needs for communications between stations on board sub-orbital vehicles and terrestrial/space stations and of appropriate modification, if any, to the Radio Regulations consistent with Resolution **772 (WRC-19)**.Australia notes that new allocations or changes to the existing allocations in Article **5** are excluded under this agenda item at WRC-23.

**3.1.3 Korea (Republic of)** - **Document APG23-2/INP-31**

* The Republic of Korea supports development of appropriate regulatory provisions to accommodate stations on board sub-orbital vehicles based on sharing and compatibility studies with incumbent services that are allocated on a primary basis in the same and adjacent frequency bands in order to avoid harmful interference to other services and other systems of the same service in which stations on board sub-orbital vehicles operate.

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

None.

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

* APT Members support ITU-R studies of spectrum needs for communications between stations on board sub-orbital vehicles and terrestrial/space stations and of appropriate modification, if any, to the Radio Regulations consistent with Resolution **772 (WRC-19)**.
* APT Members are of the view that when studying appropriate modification to the Radio Regulations, existing services must be properly protected.

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

None.

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

None.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG**

* There is no objection in developing regulatory provisions to facilitate the operation of sub-orbital vehicles, while ensuring that the current civil aviation and space launch systems are not affected.
* No change in Article 5 of the Radio Regulations.
* Follow related ITU-R studies.

**7.1.2 ATU**

* Under development.

**7.1.3 CEPT**

* CEPT is of the view that the definition of sub‐orbital flight in Report ITU‐R M.2477 “to be an intentional flight of a vehicle expected to reach the upper atmosphere with a portion of its flight path that may occur in space without completing a full orbit around the Earth before returning back to the surface of the Earth” is sufficient. CEPT supports the categorization of radiocommunication station for suborbital vehicle by the purpose of the mission:
  + Aeronautical flights of suborbital vehicles may use the same terrestrial stations or/and Earth stations as the ones for conventional aircraft independently of the maximum altitude reached;
  + Suborbital vehicles launching satellites or space vehicles for deep space may use space stations.
* The suborbital vehicles shall ensure the protection and not impose any constraint on other services or applications operated in the same service in particular conventional satellite launchers.

**7.1.4 CITEL**

* An Administration considers to pursue studies called for by Resolution 772 (WRC-19) as a basis for possible new regulatory provisions to support the growing radiocommunications needs of sub-orbital vehicles.

**7.1.5 RCC**

* Under development.

**7.2 International Organisations**

**7.2.1 ICAO**

* To support ITU-R studies and the definition of relevant technical characteristics as called for by Resolution 772 (WRC-19) to ensure aviation needs are satisfied.
* To support, if identified as required by the studies called for in Resolution 772 (WRC-19), modifications to the Radio Regulations that help enable the integration of sub-orbital vehicles into the airspace structure.
* To support, if studies show the need for access to additional spectrum, the establishment of a WRC agenda item at a future competent conference.

**7.2.2 SFCG**

* SFCG supports studies in the ITU-R on the development of regulatory provisions for radiocommunications for sub-orbital vehicles in order to facilitate the safe integration of sub-orbital vehicles into the existing air traffic management system.
* Any negative impact on EESS, SOS, SRS and MetSat operations must be avoided. It is also important that any regulatory changes associated with this agenda item will not adversely impact the operation of launch vehicles or sounding rockets.

**7.2.3 WMO**

* WMO supports studies on the development of regulatory provisions to meet the requirements of sub-orbital vehicle operations but would be opposed to provisions that have a negative impact to current and future MetSat and EESS operations.

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