Permanent Consultative Committee II: Radiocommunications (PCC.II) – WRC-23 Proposal Preparation and Status

Inter-American
Telecommunication Commission
(CITEL)

February 2023

#### **Permanent Consultative Committee II: Radiocommunications (PCC.II)**

PCC.II RADIOCOMMUNICATIONS

WG relative to
CITEL's
Preparation for
World
Radiocommunic
ation
Conferences

WG on Terrestrial Services WG on Spectrum Management WG on Satellite
System and
Scientific
Services

WG on Broadcasting

WG to
Coordinate
Strategic
Initiatives of the
OAS related to
radiocommunic
ations

Ad Hoc Group on "Resolutions, Decisions and Recommendati ons of PCC.II"

# CITEL's Preparation for World Radiocommunication Conferences.

Working Group relative to CITEL's Preparation for World Radiocommunication Conferences.

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SGT-5	GENERAL REGULATORY, FUTURE WORK & OTHER	2, 4, 9.1B, 9.1D, 10	Ricardo MARTINEZ DUQUE (CLM) ricardo.martinez@ane.gov.co	Kenji Kuramochi (PRG) kenji@conatel.gov.py

#### CITEL WRC Working Instruments

- **Preliminary View (PVP or PV):** A document signaling an administrations early view on a WRC agenda item.
- **Preliminary Proposal (PP):** a proposal submission from one OAS/CITEL Member State that is not yet been supported by any other Member State. The submitting administration's objective is to progress to an INTER-AMERICAN PROPOSAL for submission to the WRC as a CITEL Regional Proposal.
- **Draft Inter-American Proposal (DIAP):** A Preliminary Proposal that is supported by at least one other Member State.
- Inter-American Proposal (IAP): A Draft Inter-American Proposal, for which the PCC.II has ended its consideration and discussion as early as the limit meeting but not later than the final meeting and has been supported by at least 6 (six) Administrations, and which is not opposed by more than 50% (fifty per cent) of the total number of supports obtained.

**AGENDA ITEM 1.6**: to consider, in accordance with Resolution 772 (WRC-19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;

#### **BACKGROUND**:

Sub-orbital vehicles must operate in the same airspace as conventional aircraft while transitioning to and from space. Stations on board sub-orbital vehicles have a need for voice/data communications, navigation, surveillance, and telemetry and tracking and command (TT&C) applications to safely and effectively complete various mission requirements. The current regulatory provisions and procedures for terrestrial and space services may or may not be adequate for international use of relevant frequency assignments by stations on board sub-orbital vehicles.

- **Draft Inter-American Proposal (Canada, Brazil):** a WRC Resolution to clarify that stations on-board sub-orbital vehicles may terrestrial stations (RR No. **1.62**) and earth stations (RR No. **1.63**) and can be used in all phases of flight, within their respective service allocations. Addition of a provision to Article 43 (addressing special rules relating to use of frequencies) would provide the necessary reference within the Radio Regulations to the proposed new Resolution.
- Preliminary Proposal (USA): Similar to above, except US has not endorsed Article 43 aspect.

**AGENDA ITEM 1.7**: to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution **428** (WRC-19) for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands;

**BACKGROUND**: The frequency band 117.975- 137 MHz is allocated on a primary basis to the AM(R)S service and used for air-ground, ground-air and air-air systems, providing critical voice and data communications for air traffic management and airline operational control on a global basis. Resolution 428 (WRC-19) invites WRC-23 to consider a new primary allocation to the AMS(R)S based on the results of sharing and compatibility studies. This new AMS(R)S service will support direct pilot-air traffic controller voice as well as data communications in oceanic and remote areas without modifying aircraft equipment.

- **Draft Inter-American Proposal (Canada, Brazil):** use of the frequency band 117.975-137 MHz by the aeronautical mobile-satellite (R) service is limited to internationally standardized aeronautical systems.
- **Preliminary Proposal (USA):** In the frequency band 117.975 136 MHz, the use of the aeronautical mobile-satellite (R) service is subject to agreement obtained under No. **9.11A** The use of this band by the aeronautical mobile-satellite (R) service shall be limited to systems that operate and are planned in accordance with recognized international aeronautical standards. Limited to voice.

**AGENDA ITEM 1.8**: to consider, on the basis of ITU R studies in accordance with Resolution 171 (WRC 19), appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution 155 (Rev.WRC-19) and No. 5.484B to accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems;

**BACKGROUND**: Agenda item 1.8 is to to consider Resolution **155** (**Rev.WRC-19**). In accordance with Resolution **171** (**WRC-19**), Agenda Item 1.8 considers appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution **155** (**Rev.WRC-19**) and No. **5.484B** to accommodate the use of FSS networks by control and non-payload communications of unmanned aircraft systems.

• **Preliminary Proposal (USA):** the US proposes to modify No. 5.484B to clarify the services and systems for which it applies.

**AGENDA ITEM 1.9**: to review and identify necessary modifications in Appendix **27** of the RR as well as conduct sharing studies towards accommodating modernized digital wideband HF systems without making changes to Article **5** of the RR.

**BACKGROUND**: Aviation is considering new technologies to significantly improve capacity, connectivity, and quality of service for aviation HF data and voice, including increased channel bandwidths for greater data throughput and digital voice. The provisions in Appendix 27 of the Radio Regulations (RR) govern the use of frequencies by these systems in the frequency bands between 2 850 and 22 000 kHz allocated to the aeronautical mobile (R) service (AM(R)S). Appendix 27 of the Radio Regulations may need modification to accommodate new digital technologies.

- Preliminary Proposal (USA, Colombia): To support studies called for by Resolution 429 (WRC-19) to accommodate new digital HF technologies.
- **Preliminary Proposal (Canada):** to review and identify necessary modifications to Appendix 27 of the RR as well as conduct sharing studies towards accommodating modernized digital wideband HF systems without making changes to Article 5 of the RR.

**AGENDA ITEM 1.10**: to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution 430 (WRC-19).

**BACKGROUND**: Sharing studies between aeronautical radionavigation systems and the radiolocation systems in the 15.4 -15.7 GHz frequency band show that sharing between non-safety AMS and radiolocation systems is not feasible due to a high transmitted EIRP limit from the non-safety AMS resulting in a large separation distance.

Compatibility studies between non-safety AMS systems in the 22-22.21 GHz band and EESS (passive) systems in the 22.21-22.5 GHz band show that various AMS scenarios (e.g., wildfire observation and network-above-the-clouds) are not compatible with EESS (passive) operations based on the anticipated out-of-band emission levels from the non-safety AMS links.

The frequency band 22.21-22.5 GHz is also allocated to the RAS on a primary basis, and is subject to footnote **No 5.149**, which urges administrations to take all practicable steps to protect the RAS from harmful interference.

• Preliminary Proposal (USA): NOC due to aforementioned compatibility issues.

**AGENDA ITEM 1.11**: to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System (GMDSS) and the implementation of e-navigation, in accordance with Resolution **361** (Rev.WRC-19);

**BACKGROUND**: the IMO's MSC considered an additional GSO MSS system (Compass/Beidou) with coverage only over part of ITU Region 3 of ITU to provide GMDSS via its satellite communication system over parts of Region 3. The GSO satellite system uses primary MSS allocations within the frequency bands 1 610-1 626.5 MHz (Earth-to-space) and 2 483.5-2 500 MHz (space-to-Earth). These MSS allocations are in use by non-GSO MSS satellite constellations, providing safety services of GMDSS and *AMS(R)S* as well as regular MSS services globally.

The required frequency coordination of the GSO MSS system in accordance with Article 9 of the Radio Regulations have not been completed with the operating non-GSO MSS systems that have date priority, nor with terrestrial services identified in some countries. Satellite systems attempting to provide safety services without having completed coordination risk causing harmful interference to other systems and receiving harmful interference into their safety services. This poses a potential risk to AMS(R)S operations within the band 1610-1626.5 MHz.

• **Draft Inter-American Proposal (Canada, USA):** variations of <u>NOC</u> if the additional satellite GMDSS operator has not met all of the following conditions: (1) obtained IMO recognition, (2) justified the need for additional GMDSS spectrum, and (3) successfully completed ITU coordination.

# QUESTIONS?