International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

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Thirty Sixth MEVA Technical Management Group Meeting
(MEVA/TMG/36)
On-line, from 1 to 3 June 2021

Agenda Item 3: **Use of Current Aeronautical Frequencies and Their Future**
3.1 ICAO position for the International Telecommunication Union World Radio communication Conference 2023 (ITU WRC-23)

UPDATED ICAO POSITION FOR THE INTERNATIONAL TELECOMMUNICATION UNION (ITU) WORLD RADIOCOMMUNICATION CONFERENCE (2023) (WRC-23)

(Presented by Haiti)

EXECUTIVE SUMMARY	
This working paper is to inform the MEVA members about the progress in the process of validation for the ICAO Position document for ITU-R WRC-23	
Action:	Suggested actions are presented in Section 4.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• New ICAO Position for WRC-23 draft • FSMP Working Group • ITU Report on the Outcomes of WRC-2019

1. Introduction

1.1. Since the last MEVA Technical Management Group Meeting (TMG 35), a draft of the new ICAO Position for ITU WRC-23 was submitted to the Air Navigation Commission at the seventh meeting of its 215th Session, held on 27 October 2020. The Commission undertook a preliminary review of the proposed ICAO Position, which had been developed by the Frequency Spectrum Management Panel (FSMP).

1.2. The draft ICAO Position for WRC-23 was sent to all ICAO Member States and relevant international organizations for comments and use in preparation for the conference. All comments should have been sent to the Commission no later than 26 February 2021.

2. Discussion

2.1 By 26 February 2021, twenty-nine replies had been received by the Secretariat of ICAO, from twenty-eight States, including nine Council Member States and one international organizations. By 24 April 2021, 32 replies had been received from 31 States, including 9 Council Member States and 1 international organization.

2.2 The majority of replies indicated broad support for the proposal, although some detailed comments were received on particular aspects of the proposal such as the potential interference on Radio-Altimeter.

2.3 All the replies were submitted to the FSMP meeting held in the beginning of March 2021. The meeting spent considerable time reviewing the material and providing suggestions for response. Some changes were made to the draft Position. This new draft ICAO Position will be reviewed and approved by the Commission in the end of the second quarter of 2021.

2.4 From the ICAO NACC region, comments were only received from the following States: Cuba, Cayman Islands, Guatemala, Haiti, Mexico, and the United States.

2.5 The table below contains the WRC-23 Agenda Items addressing issues where aviation is seeking action by the WRC. After each agenda item review, ICAO set its position and recommendations.

Agenda Item	Description
1.6	To consider, in accordance with **Resolution 772 (WRC 19)**, regulatory provisions to facilitate radiocommunications for sub-orbital vehicles.
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.
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.
1.9	To review Appendix 27 of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service **(AMS(R)S)** and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with **Resolution 429 (WRC 19)**.
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)**.
9.2	To consider and approve the report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention: on any difficulties or inconsistencies encountered in the application of the Radio Regulations.

2.6 WRC-23 next Agenda Items could potentially affect aviation use of spectrum and hence aviation should participate in studies to ensure there is no undue impact. As a result, they are included in this position.

Agenda Item	Description
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)**.
1.2	To consider identification of the frequency bands 3 300-3 400 MHz, 3 600 3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with **Resolution 245 (WRC 19).**
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)**.
1.4	To consider, in accordance with **Resolution 247 (WRC 19)**, the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level.
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)**.
1.13	To consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with **Resolution 661 (WRC 19)**.
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)**.
1.16	To study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-geostationary fixed-satellite service earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with **Resolution 173 (WRC 19)**.
1.17	To determine and carry out, on the basis of ITU R studies in accordance with **Resolution 773 (WRC 19)**, the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate.
4	In accordance with **Resolution 95 (Rev.WRC 19)**, to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation.
8	To consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account **Resolution 26 (Rev.WRC 19).**
9.1	To consider and approve the report of the Director of the Radiocommunication Bureau on the activities of the Radiocommunication Sector since WRC-19.
9.1(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)**.

3. Outcomes for Aviation from WRC-19

3.1 The ITU-R WRC-19 conference held in Egypt from 28 October to 22 November 2019 was a success for Civil Aviation. Below are listed the great achievements for Aviation during that conference:

3.1.1 **VDL Mode 2:** Obtaining proper regulatory and technical spectrum protections for VHF Data Link (VDL) Mode 2 from potential interference caused by non-geostationary short duration satellites.

3.1.2 **Aeronautical Systems:** Preserving spectrum protections and suitable radio interference environment for the following aviation systems:

- Avionics Enhanced Flight Vision System, Aircraft Weather Radar, Aircraft Radio Altimeter and Emergency Locator Transmitter
- Aircraft Communication HF and Aeronautical VSAT networks
- Aircraft Navigation Instrument Landing System (Marker Beacon and Guided path), Distance Measuring Equipment and Non-Directional Beacon/Automatic Direction Finder
- Aircraft Testing Aeronautical Mobile Telemetry.

3.1.3 **ESIM:** Obtaining suitable operational conditions for aeronautical Earth-Station-in-Motion (ESIM) which can enhance on-board broadband connectivity for passengers.

3.1.4 **GADSS:** Successfully opposing State proposals to include identification of specific Global Aeronautical Distress and Safety System (GADSS) elements or operating frequency bands in the Radio Regulation, thus maintaining the preferred performance-based requirements on GADSS.

3.1.5 **Radio Altimeter:** Successfully avoiding the frequency bands being used by and adjacent to aircraft radio altimeter to be considered for international IMT 5G during WRC-2023.

4. Suggested actions

4.1 Support for the ICAO Position within States, when developing their proposals and delegation briefs in preparation to the WRC-23, is required to ensure that decisions taken by the conference are in favour of the aeronautical requirements. Therefore, it is necessary that States:

a) in preparing their proposals to the ITU WRC-23, include, to the maximum extent possible, the material contained in the upper tables;

b) undertake to provide for aviation authorities to fully participate in the development of States' positions to ensure support for the ICAO Position at the WRC-23;

c) include representatives of their civil aviation administrations and experts from aviation in their national delegations to the extent possible, when participating in the ITU-R and regional preparatory activities for WRC-23; and

d) ensure, to the extent possible, that their delegations to the WRC-23 include representatives of their civil aviation administrations.

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