



ICAO

*International Civil Aviation Organization***Twenty Eighth Meeting of the Communications/
Navigation and Surveillance Sub-group (CNS SG/28)
of APANPIRG**

Bangkok, Thailand, 01-05 July 2024

Agenda Item 5: Aeronautical Mobile Communications Service and Aeronautical electromagnetic spectrum utilization**SPACE-BASED VHF UPDATE**

Presented by Airservices Australia

SUMMARY

At WRC-23 a new allocation to the AMS(R)S was approved to support Space-Based VHF. Within ICAO, the work to standardize Space-Based VHF within Annex 10 has begun in groups reporting to the CP-DCIWG and the FSMP.

1 INTRODUCTION

- 1.1 Space-based VHF will provide communications for aircraft operating in remote regions and oceanic areas to air traffic control (ATC) via low earth orbit satellites using VHF frequencies within the frequency range 117.975-137 MHz. Space-Based VHF is expected to enhance air traffic management and flight operations in oceanic and remote airspace and will complement current aviation use of satellite-based navigation and surveillance technologies.
- 1.2 At the World Radiocommunication Conference 2023 (WRC-23), a new allocation to the aeronautical mobile-satellite (R) service, AMS(R)S, in the frequency band 117.975 - 137 MHz was approved. The new allocation is required to be operated in accordance with international aeronautical standards. Resolution 406 (WRC-23) was also approved inviting the International Civil Aviation Organization to take into account this Resolution in the course of developing SARPs for the AMS(R)S and planning the AM(R)S and AMS(R)S in the frequency band 117.975-137 MHz.
- 1.3 The Asia Pacific was a strong supporter of Space-Based VHF at WRC-23. Twelve administrations from the Asia Pacific region co-signed a submission to the conference ([C-0083](#)), supporting a new allocation and proposing the threshold for coordination with other services in the band. The administrations continued to support and work proactively towards the allocation that is included in the [Final Act of the WRC-23](#).

- 1.4 Two panels within ICAO have the development of SARPS, Manuals and other documents to support Space-Based VHF in their Job Card.

2 DISCUSSION

Standards Development

Frequency Spectrum Management Panel

- 2.1 The Frequency Spectrum Management Panel (FSMP) job card FSMP.005.03 requires that Annex 10 Volume V is updated with new provisions to support future aeronautical radiocommunications, including any provisions necessitated by the outcome of WRCs. It also requires that the Panel create new and update existing frequency assignment planning criteria for aeronautical frequency bands.
- 2.2 The 18th meeting of the FSMP Working Group (FSMP-WG17) established the Space-Based VHF Correspondence Group (CG) to develop the required deliverables.
- 2.3 At FSMP-WG18, the initial [Terms of Reference](#) for the CG was approved. The Terms of Reference lists the deliverables as Annex 10 Vol. V and Doc 9718, Vol. II.
- 2.4 [FSMP-WG19](#) is scheduled from the 15 – 16 July 2026 at the ICAO Headquarters in Montreal, Canada. At this meeting, it is expected that the CG will deliver a works plan that will have the drafting of the deliverables completed by September 2025 and an update to the Works Plan to include Doc 9718, Vol I.

Communications Panel – Data Communication Infrastructure Working Group

- 2.5 The Data Communication Infrastructure Working Group (DCIWG) established the Future VHF Subgroup (FVSG), reporting to Project Team-Terrestrial (PT-T), and assigned it work to develop the updates to the SARPS and other documents to standardise Space-Based VHF.
- 2.6 At DCIWG/7, the FVSG was elevated so it is reporting directly to DCIWG and was renamed to Project Team - Space Based VHF (PT-SB).
- 2.7 PT-SB is currently developing updates to Annex to Vol. III, and aims to have them endorsed at DCIWG/8 in 2025.
- 2.8 PT-SB will also address any changes required to Doc 9776 (Manual on VHF Digital Link (VDL) Mode 2), Doc 9925 (Manual on the AMS(R)S) as well as support any updates required to RTCA, Eurocae or other standards.

Timeline

- 2.9 The most optimistic estimates for development and review of the SAPRS to support Space-Based VHF has the applicability date of the new SARPS as November 2028.
- 2.10 The timeline to achieve this is shown in Figure 1. This timeline has very little time to undertake rework as a result of the various consultation phases.

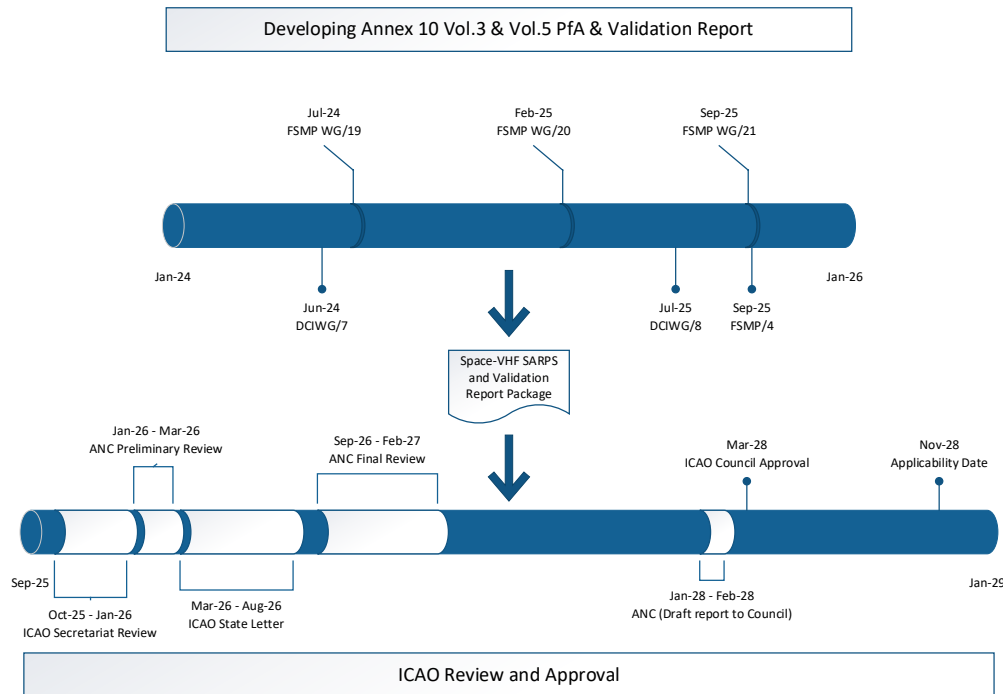


Figure 1 Development of Space-Based VHF SARPS Timeline

- 2.11 To achieve this ambitious timeline, all states who are interested in development of these documents should encourage their members on the CP-DCIWG and FSMP to actively engage in the groups conducting the work.

3 ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) Review the update provided in this paper; and
 - b) Engage with the FSMP and CP-DCIWG to contribute, review and support the development of the documents in support of Space-Based VHF
