



International Civil Aviation Organization

ICAO

EIGHTH MEETING OF SPECTRUM REVIEW WORKING GROUP (SRWG/8)

Bangkok, Thailand, 05 – 07 March 2024

Agenda Item 4: Update on Frequency Finder

4.1 Outcome of Frequency Finder Workshop

OUTCOMES OF WORKSHOP ON FREQUENCY FINDER (FF)

(Presented by the Secretariat)

SUMMARY

This paper presents the outcomes of the Workshop on Frequency Finder (FF) held at the ICAO Asia and Pacific (APAC) Regional Office (Bangkok, Thailand, 9-13 October 2023).

1. INTRODUCTION

1.1 The Workshop on Frequency Finder (FF) was held at the ICAO Asia and Pacific (APAC) Regional Office *from 9 to 13 October 2023* in Bangkok, Thailand. The objective of the Workshop was to share experience gained in using Frequency Finder since its implementation, introduce the new functionality modules to the APAC region, support the use of the Frequency Finder as the new ICAO aeronautical radio frequency management tool for NAV frequency assignments (COM list 2) and Mode S Radar Interrogator Code management, as well as provide a chance to review the established procedures and emerging issues.

1.2 The Workshop was attended by Thirty-two (32) participants from Ten (10) States/Administrations, namely Bhutan, Hong Kong China, India, Indonesia, Lao PDR, Malaysia, Nepal, Republic of Korea, Singapore, and Thailand. The Workshop report, presentations, and other resources can be accessed by following link:

<https://www.icao.int/APAC/Meetings/Pages/2023-FFWS.aspx>

1.3 This paper summarized the key outcomes of the Workshop.

2. DISCUSSION

2.1 The Workshop alternated between presentations of the frequency assignment planning theory and provisions contained in Annex 10 Vol V, Doc 9718 Vol I and II; presentations of practical examples based on that theory, using the FF tool; and exercises by the participants, using practical examples based on frequencies contained in the APAC Com list 3.

2.2 The participating States/Administrations were provided a detailed introduction to the Handbook on Radio Frequency Spectrum Requirements for Civil Aviation Volume II Frequency assignment planning criteria for aeronautical radio communication and navigation systems (ICAO Doc

9718, Volume II) from the following aspects:

- ICAO Doc 9718, Radio Frequency (RF) Handbook: *Volume I - Spectrum Management* and *Volume II - Frequency Management* on ICAO Frequency Assignment Planning;
- Frequency assignment planning for VHF COM systems: Interference model (co-frequency separation), Interference model (adj frequency separation), and Frequency assignment planning for VHF air/ground communication systems;
- Use of Frequencies: Allotment of frequencies, Special frequencies, Regional Frequency Allotment Plans, Uniform values for DOC, Frequency coordination, Extended Range (ER) Facilities;
- Frequency assignment planning for ILS, VOR, DME and GBAS: Methodology and examples for calculation of separation distances for Instrument Landing System (ILS), VHF Omnidirectional Range (VOR), Distance Measuring Equipment (DME), Ground Based Augmentation System (GBAS);
- Radio Propagation, coverage areas vs. separation distances.

2.3 The lectures have been given on how to use the Frequency Finder tool with hands-on practice to cover the following functions:

- Installing the runtime version of Frequency Finder;
- Integrity check, COM list 3 and Query;
- Navigating through the COM List 3 - Test Frequency & Understand the result;
- Add, Modify, or Delete Frequency;
- Mapping, Export, Special Functions;
- Navigating through the COM List 2 – Test Frequency & Understand the result.

2.4 The Workshop also introduced the aviation frequency spectrum management at the national, regional, and international levels, briefed the main outcomes from ITU World Radiocommunication Conferences in 2019 (WRC-19) and agenda items related to aviation to be discussed in the ITU WRC-23, and highlighted potential safety concerns due to interference from 5G to Aeronautical Radio Altimeters.

2.5 The Workshop recognized the need to revisit the regional VHF COM Allotment Plan regularly, and the ICAO APAC Regional Office was reminded to inform CNSS of ANB once the regional VHF COM Allotment Plan is revised to ensure the Frequency Finder is incorporated with the latest revision.

2.6 Through the discussion, the participants of the workshop agreed that the regular publication (currently once a year at the end or beginning of the year) of the Frequency List 2 i.e. List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz will no longer be required as the global database of frequencies included in the FF would provide an up-to-date status of frequencies assigned or used by States/Administrations. However, the access procedure by the designated contact points by States/Administrations to the FF should be provided to States accordingly. With aforementioned, the meeting is invited to consider the following Draft Conclusion:

Draft Conclusion SRWG/8/2 – Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the Frequency Finder	
What: Transition from the regular publication of Frequency List 2 to the global database of frequencies included in the FF to be adopted	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental

		<input checked="" type="checkbox"/> Ops/Technical
Why: The regular publication (currently once a year at the end or beginning of the year) of the Frequency List 2 i.e. List of facilities in the band 108 - 117.975 MHz and 960 - 1215 MHz will no longer be required as the global database of frequencies included in the FF would provide an up-to-date status of frequencies assigned or used by States/Administrations.	Follow-up: <input type="checkbox"/> Required from States	
When: 07-03-2024	Status: To be adopted by SRWG	
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SRWG		

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss and consider to adopt the Draft Conclusion in 2.6; and
- c) discuss any relevant matter as appropriate.
