



ICAO

International Civil Aviation Organization

**NINTH MEETING OF SPECTRUM REVIEW
WORKING GROUP (SRWG/9)**

Bangkok, Thailand, 07 – 09 May 2025

Agenda Item 5: Update on Frequency Finder

UPDATE ON THE MODULES IN FREQUENCY FINDER

A toolkit for managing, assessing compatibility and presenting frequency assignments for aeronautical communication and navigation systems as well as for the coordination of SSR Mode S Interrogator Identifier (II)/ Surveillance Identifier (SI) codes

(Presented by the Secretariat)

SUMMARY

This paper presents the latest work, enhancements and functionalities brought to the Frequency Finder tool to assist ICAO Regional Offices and States to manage and coordinate aeronautical frequency assignment as well as SSR Mode S II/SI codes.

Action by the meeting is in paragraph 3.

1. INTRODUCTION

1.1 ICAO has developed the program Frequency Finder that offers a tool to assist ICAO Regional Offices and States to manage and coordinate aeronautical frequency assignments. Further Frequency Finder provides also for the calculation of interference areas and a geographical interface for plotting of the frequency assignments, including any interference area.

1.2 In addition, this program combines the data base management functions for updating the ICAO COM lists 2 and 3 as well as the SSR list for SSR Mode S II/SI codes.

2. UPDATE ON NEW FUNCTIONALITIES AND COMPLETED ENHANCEMENTS/REVISIONS

2.1 Amendment of the VHF COM Frequency Allotment Plan for APAC in the VHF-COM module

2.1.1 As per action item 8-2 of SRWG/8 Report, the latest revisions to the regional VHF COM Allotment Plan have been incorporated in the Frequency finder tool. This was the result of the Member States/Administrations of the APAC region, who were requested to review and update the frequencies uploaded in the Frequency Finder (FF) to ensure that the database remains current.

2.1.2 Further Volume II of Handbook on Radio Frequency Spectrum Requirements for Civil Aviation (*ICAO Doc 9718, Volume II*) is in the process of being updated with the revised APAC VHF COM allotment plan and will then be placed on the ICAO NET in due course.

2.2 New data protection mechanism brought to the VHF-COM/NAV modules as well as the SSR module of the Frequency Finder tool

2.2.1 Data protection is considered as the process of protecting sensitive information from damage, or loss, while ensuring it is accurate and up to date, is shared securely in a timely fashion.

2.2.2 With this objective being to continue securing in Frequency Finder sensitive data and maintaining the confidentiality, availability, and integrity of the database, a new functionality with password protection has been implemented. Every State's focal point will be assigned by the Regional Officer a password that will allow the user to manage his/her own data.

2.2.3 As shown in Figure 1 below the unique assigned password is necessary to manage own data such as modifying/creating/adding information to existing or new records owned by the user. The password is stored and would therefore not require users to remember them or re-enter them again.

The figure consists of two screenshots of the Frequency Finder interface, illustrating the difference in the display of entry details with and without the usage of the password.

Top Screenshot (Without Password):

- Header:** APAC State
- APAC COM List 3:** Enter the code received from your Regional Officer. If you intend to modify your existing entry / create a new facility / add a facility to an existing entry.
- Buttons:** Delete draft record (active)
- Form Fields:**
 - MOD DR:** Mod assignment
 - Region:** APAC
 - Key:** D 422548
 - Cat:** Channel spacing
 - Country:** CAOTEST APAC
 - Ctry:** ZZZ
 - Location:** 25 kHz, 8.33 kHz
 - Latitude:** D, N, S
 - Longitude:** D, E, W
 - Frequency:** ER family
 - Service:** Example: ER-BOT-01 or ER-BOT-119
 - DOC:** Set Area Service
 - Range (NM):** Range (NM)
 - Height (feet):** Height (feet)
 - SECTORNAME:** PolyID
 - Remarks:** Remarks
- Search range:** 118.000...136.975 MHz
- Set frequency range:** START 118.000 MHz, END 136.975 MHz
- Select from Regional Frequency Allotment Plan:** APAC Select from Pool
- Reset:** Reset
- Max. # of frequencies:** 10

Bottom Screenshot (With Password):

- Header:** FF-2025-01 APAC State
- APAC COM List 3:** Enter the code received from your Regional Officer. If you intend to modify your existing entry / create a new facility / add a facility to an existing entry.
- Buttons:** Delete draft record (disabled)
- Form Fields:**
 - MOD DR:** Mod assignment
 - Region:** APAC
 - Key:** D 422548
 - Cat:** Channel spacing
 - Country:** CAOTEST APAC
 - Ctry:** ZZZ
 - Location:** 25 kHz, 8.33 kHz
 - Latitude:** D, N, S
 - Longitude:** D, E, W
 - Frequency:** ER family
 - Service:** Example: ER-BOT-01 or ER-BOT-119
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 - SECTORNAME:** PolyID
 - Remarks:** Remarks
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- Select from Regional Frequency Allotment Plan:** APAC Select from Pool
- Reset:** Reset
- Max. # of frequencies:** 10

Figure 1– Difference in the display of entry details with and without the usage of the password

2.3 Further enhancements brought to the SSR II/SI Module

2.3.1 In addition to the enhancements brought to the 3 modules of the Frequency Finder tool, to secure the coordinates of each radar entry in SSR II/SI Module, the function that hides the coordinates of each radar entry in the SSR module was implemented (SRWG/8-WP/18 para. 2.3.3).

2.3.2 While with this capability, users cannot get the exact coordinates of the radar sites in the other States, the user (States’ focal point) using the same password provided by the RO described in section 2.2 can unhide the coordinates to manage his/her own data. This applies as well to the display in google earth.

2.3.3 As shown in Figure 2 below, once the password is entered on the main page of the SSR module, if the user decides to add, or modify, or delete a new/existing entry, the user will not be prompted to enter the password again.

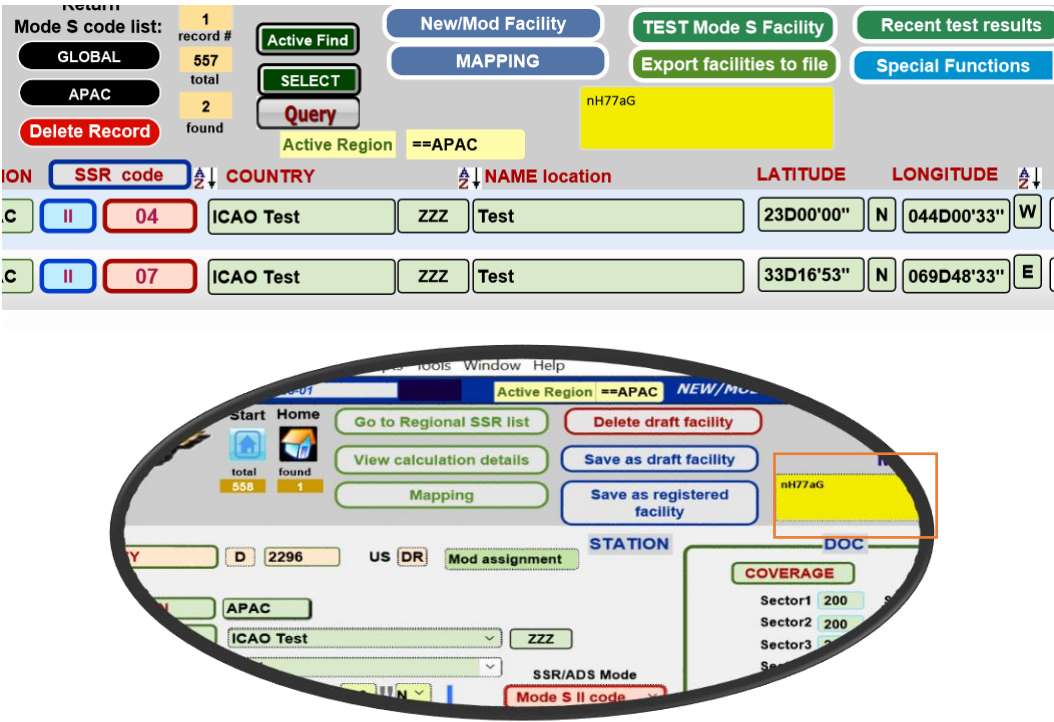


Figure 2– Password entry on main page saved for later usage (one time entry)

2.3.4 As shown in Figure 3 below, the mapping display also limits the detailed view of the coordinates in comparison to the full view granted to the owner of that entry (Figure 4 below).

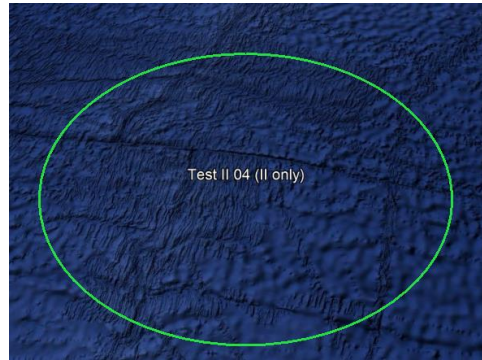


Figure 3 – Limited coordinates display (without password entry)

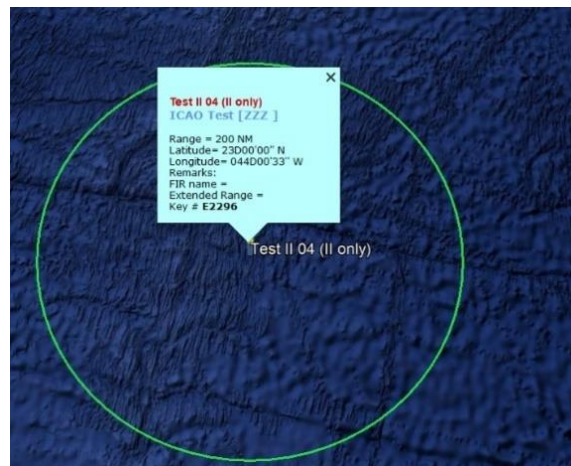


Figure 4 – Full description of coordinates (with password entry)

3. ACTION BY THE MEETING

3.1 It is expected that the modified version of Frequency Finder will be distributed to the Regional Offices as soon as the current testing phase is completed. The meeting is therefore invited to:

- a) note the information contained in this paper;
- b) make extensive usage of the Frequency finder tool;
- c) discuss any relevant matter as appropriate; and
- d) provide feedback on FF tool usage, suggestions, bugs and recommendations.
