



ICAO

*International Civil Aviation Organization***Tenth Meeting of the Surveillance Implementation
Coordination Group (SURICG/10)***Bangkok, Thailand, 21 - 23 April 2025*

Agenda Item 13: Next meeting & any other business

UPDATE ON THE SURVEILLANCE MODULE IN FREQUENCY FINDER

(Presented by the Secretariat)

SUMMARY

This paper presents the latest work, enhancements and functionalities brought to the SSR module of the Frequency Finder tool to assist ICAO Regional Offices and States to manage and coordinate 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**2.1 New data protection mechanism brought to the SSR module (as well as the VHF-COM/NAV modules) of the Frequency Finder tool**

2.1.1 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.

2.1.2 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.

2.1.3 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.

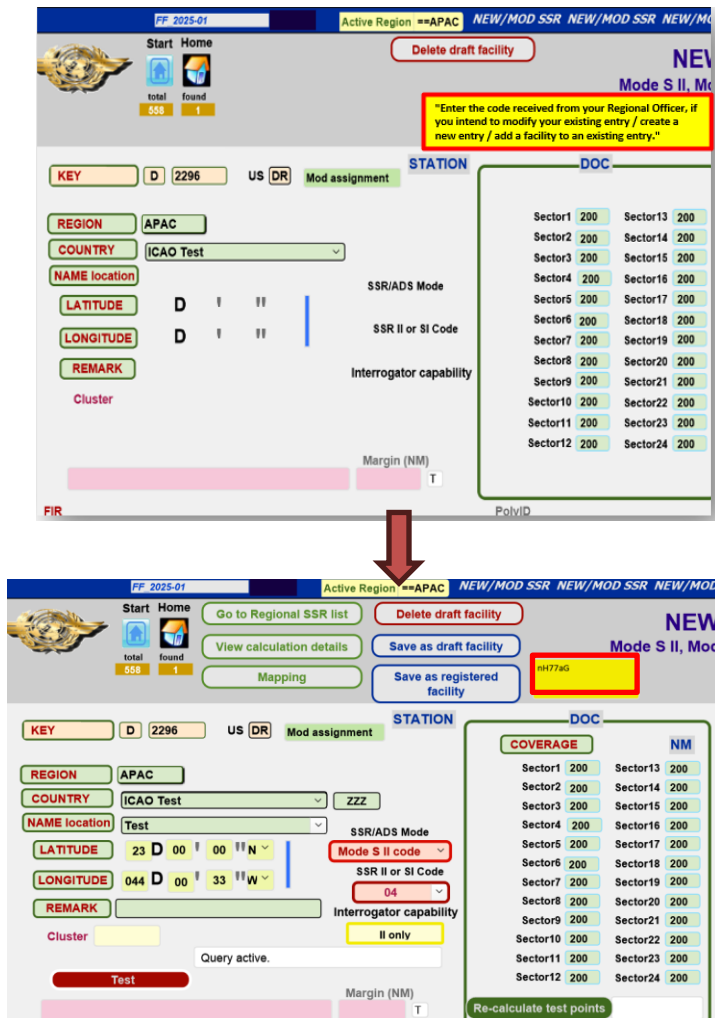


Figure 1– Difference in the display of entry details with and without the usage of the password

2.2 Secure the coordinates of each radar entry in SSR II/SI Module of Frequency Finder

2.2.1 As per the requirement in paragraph 2.3.3 of SRWG/8-WP/18, the function that hides the coordinates of each radar entry in the SSR module was implemented. As shown in Figure 2 below, the mapping display limits the detailed view of the coordinates in comparison to the full view granted to the owner of that entry (Figure 3 below).

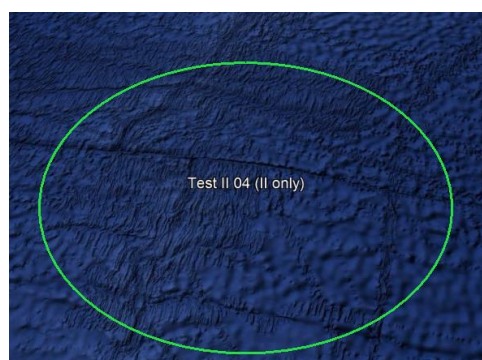


Figure 2 – Limited coordinates display (without password entry)

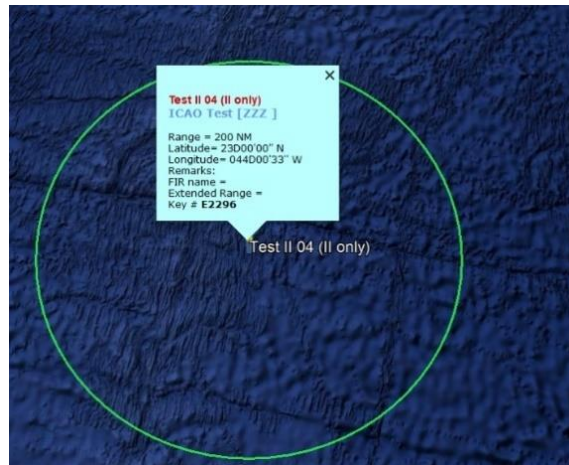


Figure 3 – Full description of coordinates (with password entry)

2.2.2 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 2.1 can unhide the coordinates to manage his/her own data. This applies as well to the display in google earth.

2.2.3 As shown in Figure 4 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.

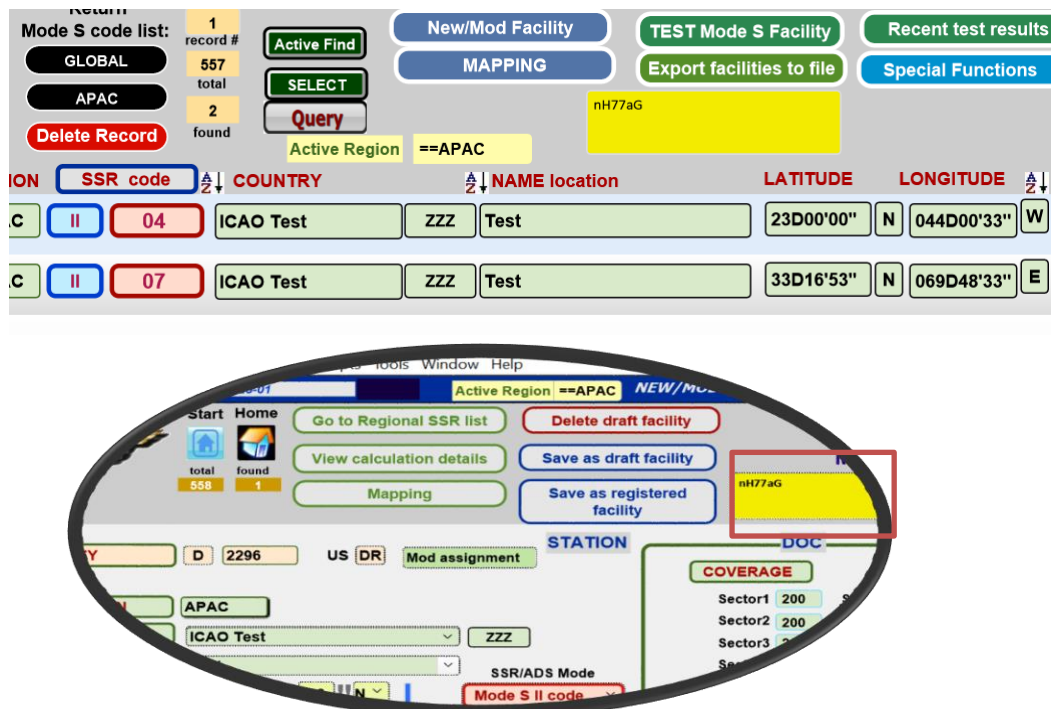


Figure 4– Password entry on main page saved for later usage (one time entry)

2.3 Required planning criteria for assigning SSR Mode S II or SSR Mode S SI codes (Report SURICG/9, Appendix F-3 to F-5)

2.3.1 The planning criteria for assigning SSR Mode S II or SSR Mode S SI codes agreed by the Surveillance Panel (Tables 1 - 5 of Appendix F to the SURICG/9 report refer) have been implemented in the SSR module of the Frequency Finder tool. This can be visualized in the calculation

results showing whether there is “Overlap OK” or “No Overlap” conditions resulting of these different cases where:

- Mode S II-only interrogator operating on II code;
- Mode S II/SI interrogator that does not support the use of II/SI code operation operating on II code;
- Mode S II/SI interrogator that does not support the use of II/SI code operation operating on SI code or
- Mode S II/SI+ ¹interrogator operating on II code; and
- Mode S II/SI+ interrogator that supports the use of II/SI code operation operating on SI code.

Note. - For more details of the compatibility test result of those cases described above managed by the SSR module of the Frequency Finder tool, refer to tables (from Table 1 to Table 5) in Appendix F to the report DURING/9 Report.

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 WP;
- 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.

¹ Mode S II/SI+ means Mode S II/SI capable interrogator which does support the II/SI code operation