



International Civil Aviation Organization

MIDANPIRG Communication, Navigation and Surveillance Sub-Group

Thirteenth Meeting (CNS SG/13)
(Jeddah, Saudi Arabia, 20 – 23 October 2024)

Agenda Item 4: Frequency Management Working Group (FM WG/3) Main Matters

**ENHANCING FF TOOL FUNCTIONALITY
WITH MID REGION AREA SERVICE POLYGONS DATA**

(Presented by Iraq/GCAAN)

SUMMARY

This paper proposes updating the Frequency Finder (FF) tool to incorporate polygon sectors for the MID Region. This enhancement will significantly improve frequency assignment efficiency in the region by allowing for more precise and flexible coverage area definitions.

Action by the meeting is at paragraph 3.

REFERENCES

- ICAO Annex 10.
- ICAO Doc 9718.
- FF Manual.

1. INTRODUCTION

1.1 The meeting may recall the MIDANPIRG 18/45 conclusion regarding the frequency coordination process in the MID Region, which encouraged States to use the latest version of the FF tool and provide feedback.

1.2 The meeting may also recall that one of the tasks of the FMWG is to develop recommendations for the CNS SG on how to address future operational needs and limitations in VHF voice communications, aiming to avoid the introduction of 8.33 kHz spacing in the MID Region for as long as practicable.

2. DISCUSSION

2.1 The Frequency Finder (FF) is an ICAO tool used to facilitate frequency assignment planning by States and Regional Offices.

2.2 FF is designed in a modular manner, with one of its main modules supporting frequency planning for VHF air/ground voice and data link systems (VHF COM list).

2.3 The VHF COM list 3 frequency assignment planning criteria incorporated in the FF tool depend on the Free-space propagation model and line-of-sight method.

2.4 The geographical separation between facilities operating on the same frequency based on the line-of-sight method shall be not less than the sum of the distances to the associated radio horizon of each service volume.

2.5 The Protected Service Volume can be either a standard DOC with circular coverage (normally around a ground station) or an area described as a polygon, such as an ACC or an FIR sector.

2.6 Using polygon service volumes instead of standard circular DOCs can improve efficient frequency assignment planning and allow for the implementation of extended range stations without the need for additional frequency coordination.

2.7 The current Polygons database for FF contains global FIR coordinates, while ACC polygons are currently limited to Europe only.

2.8 For Flight Information Services (FIS) and ACC services within relatively small FIRs, it is more efficient to define the FIR sector in FF instead of using normal circular DOCs.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) agree on adding ACC and APP polygons for the MID Region to the FF polygons database;
- c) inviting ICAO to coordinate with the FF tool developer to integrate the MID Region polygon sectors into the FF polygons database;
- d) request that States provide the coordinates for their ACC and APP sectors, and consider adding FIR Sector information to all current and new assignments where appropriate; and
- e) discuss any relevant matter as appropriate.