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

FREQUENCY SPECTRUM MANAGEMENT OFFICE (FSMO)

(Presented by Saudi Arabia)

SUMMARY

This paper provides information on the establishment of the Frequency Spectrum Management Office (FSMO) within the General Authority of Civil Aviation (GACA) of the Kingdom of Saudi Arabia. The office plays a crucial role in managing the aeronautical frequency spectrum within the Kingdom, ensuring compliance with the relevant national and international regulations. The FSMO operates in close coordination with the Communication, Space, and Technology Commission (CST), designated as the National Telecommunication Authority to license and regulate the frequency spectrum used by the Civil aviation sector.

Action by the meeting is in paragraph 5 of this working paper.

REFERENCE(S)

- ICAO Annex 10, Volume V
- (ITU) Radio Regulations, Volume 1, Article 5 - Frequency Allocations
- Doc 9718, Handbook on Radio Frequency Spectrum Requirements for Civil Aviation, Volume 1 & Volume 2

1. INTRODUCTION

1.1 On August 2023 the **Frequency Spectrum Management Office (FSMO)** was established by the General Authority of Civil Aviation (GACA) of the Kingdom of Saudi Arabia, as part of the implementation of the national strategy for the efficient use and management of radio spectrum frequencies. The FSMO has the responsibility of managing and coordinating the use of the aeronautical frequency spectrum to ensure safe, efficient, and interference-free communications in the aviation sector.

1.2 The FSMO plays a crucial role in ensuring an efficient allocation and use of the aeronautical frequency spectrum, which is essential for safe and efficient aircraft operations.

2. OVERVIEW OF FSMO ESTABLISHED AT THE GLOBAL LEVEL

2.1 The FSMO or similar entities have been established by various civil aviation authorities around the world to ensure the efficient use and management of the aeronautical frequency spectrum. The organization of the main known specialized offices and entities dealing with the aeronautical frequency spectrum can be summarized as follows:

- **United States (FAA):** The Federal Aviation Administration (FAA) manages the aeronautical spectrum in the United States. The FAA's Spectrum Engineering Services is responsible for

ensuring that the spectrum is used efficiently and safely, coordinating with other federal agencies and international bodies.

- **United Kingdom (CAA):** The Civil Aviation Authority (CAA) in UK oversees spectrum management through its Spectrum Policy and Management team. This team works closely with Ofcom, the UK's communications services regulator, to manage and allocate spectrum for aviation purposes.
- **Australia:** Airservices Australia (The Air Navigation Services provider) manages the aeronautical spectrum in Australia. The organization works in collaboration with the Australian Communications and Media Authority (ACMA) to ensure the effective use of the spectrum for aviation safety and efficiency.
- **Canada**: Nav Canada (The Air Navigation Services provider) is responsible for managing the aeronautical spectrum in Canada. The organization coordinates with Innovation, Science and Economic Development Canada (ISED) to allocate and regulate spectrum usage for aviation.
- **European Union (EASA):** The European Union Aviation Safety Agency (EASA) works with national aviation authorities and the European Communications Office (ECO) to manage the aeronautical spectrum across EU member states. This collaborative approach ensures harmonized spectrum management practices across Europe.

3. SUMMARY OF THE MAIN DUTIES AND RESPONSIBILITIES O F THE FSMO

3.1 The ICAO Doc 9718 Handbook Volume 1 describes the ICAO spectrum strategy and policy statements relevant to the aviation requirements for radio frequency spectrum, as approved and amended by the ICAO Council.

3.2 FSMOs within civil aviation authorities play a crucial role in managing the aeronautical frequency spectrum to ensure safe and efficient aviation operations. Their responsibilities include coordinating spectrum usage with national and international specialized bodies, developing and implementing frequency spectrum policies and procedures, monitoring and enforcing compliance with regulations, addressing any interference issues, and monitoring and updating the allocation of aeronautical frequencies managed under ICAO frequency finder tool (FF). Regular checks on the FF database are highly recommended to ensure the accuracy of the information, and compatibility at the regional level. A copy of the last version of the frequency finder software can be downloaded using the following link: https://www.icao.int/safety/FSMP/Documents/FrequencyFinder/FF2023.03.RT.zip

3.3 As general rules, these offices work closely with their respective national telecommunications regulators to allocate and regulate frequency spectrum usage, ensuring that a reliable and interference-free spectrum environment supports aviation operations.

3.4 The FSMO in coordination with their respective national telecommunications regulators and relevant stakeholders supports the development and coordination of the ICAO Position for the World Radiocommunication Conference (WRC) to maintain and protect the aeronautical frequency spectrum. This collaboration is critical for the alignment of national spectrum management policies with international aviation requirements. The FSMO works with telecommunication regulatory bodies and industry partners to identify spectrum needs, address potential interference concerns, and ensure that aviation-related frequency bands are protected and properly allocated. Through this cooperative effort, the FSMO plays a key role in safeguarding the aviation sector's interests within the global frequency spectrum management framework.

3.5 The **Frequency Spectrum Management Panel (FSMP)** established by ICAO plays a leading role in providing guidance and recommendations on the global and regional management of the aviation frequency spectrum. The FSM Panel is responsible for developing standards, strategies, and policies for the allocation and protection of frequency bands used by civil aviation. The active involvement of FSMO members in the FSMP is essential as it ensures that civil aviation interests are

represented at the global level and that international spectrum management policies are informed by the practical challenges and needs of national civil aviation authorities.

4. CONCLUSION

4.1 The establishment of the Frequency Spectrum Management Office (FSMO) by the General Authority of Civil Aviation is a key step in ensuring the safe and efficient use of the aeronautical spectrum in the Kingdom of Saudi Arabia, vital for aviation operations.

4.1 Globally, FSMOs highlight the importance of collaboration between aviation authorities and national telecommunication regulators to ensure efficient use of the frequency spectrum while prioritizing the safety and operational needs of civil aviation.

4.2 FSMOs are essential in managing national and international frequency spectrum policies, addressing interference, monitoring and updating the allocation of aeronautical frequencies managed under ICAO frequency finder tool, and safeguarding aviation interests at the World Radiocommunication Conference (WRC),

4.3 Active participation of FSMO members in the ICAO Frequency Spectrum Management Panel (FSMP) ensures global coordination, helping protect essential aviation frequency bands and supporting the safety of civil aviation operations.

5. ACTION BY THE MEETING

5.1 The meeting is invited to:

a) note the information provided in this paper;

b) encourage MID States to adopt a harmonized approach to frequency spectrum management Office, ensuring consistency with international standards, while considering national needs and regional challenges;

c) invite the ICAO MID Office to conduct workshops, simulations, and technical discussions focusing on emerging technologies such as 5G/6G and satellite communications with the involvement of leading experts and FSMOs with the objectives to support capacity building in managing aeronautical frequency spectrum,

d) discuss the establishment of FSMO to manage the aeronautical frequency spectrum strategy for the region supporting innovation and emerging technologies and considering global best practices on spectrum efficiency, interference management, and future spectrum requirements; and

e) invite States to establish processes and procedures to ensure regular monitoring and updating of the allocation of aeronautical frequencies managed under the ICAO frequency finder tool. It is highly recommended that a quarterly review of the status of the information uploaded into FF is organized.

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