



WORKING PAPER

ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other Issues to be considered by the Technical Commission

FUTURE FREQUENCY SPECTRUM NEEDS IN AVIATION

(Presented by the International Coordinating Council of Aerospace Industries Associations (ICCAIA), Airports Council International (ACI), the Civil Air Navigation Services Organisation (CANSO) and the International Federation of Air Traffic Controllers' Associations (IFATCA))

EXECUTIVE SUMMARY

The radio spectrum is a scarce natural resource with finite capacity for which demand is constantly increasing. Aeronautical radio services are recognized internationally to be prime users of radio frequencies, without which aircraft operation would not be capable of meeting the global demand for safe, efficient and cost-effective transport.² ICAO, through its Frequency Spectrum Management Panel (FSMP), is actively promoting the requirements of civil aviation for frequency spectrum. For ICAO actions to be effective, continuous support by all Members States is needed within the International Telecommunication Union (ITU).

This paper recalls the increasing needs of civil aviation for frequency spectrum and highlights the role of member States in actively supporting ICAO positions within ITU.

Action: The Assembly is invited to:

- a) acknowledge the increasing requirements for secure, reliable, interoperable and ubiquitous high-speed data connectivity to support safe, efficient and cost-effective transport;
- b) acknowledge the need to protect the current spectrum allocated for aeronautical systems, and increase it to allow support for medium- and long-term operations; and
- c) recommend that the Council urge States to actively support ICAO positions, in particular during the ITU World Radiocommunication Conference 2019 (WRC-19).

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives safety, air navigation capacity and efficiency, Environmental Protection and Economic Development of Air transport.
<i>Financial implications:</i>	The activities referred to in this paper will be subject to the resources available in the 2020-2022 Regular Programme Budget and/or from extra budgetary contributions.
<i>References:</i>	Doc 10115, <i>Report of the Thirteenth Air Navigation Conference (AN-Conf/13)</i> , Corrigenda Nos. 1 and 2, and Supplement No. 1. Doc 10075, <i>Assembly Resolutions in Force (as of 6 October 2016)</i>

¹ Arabic, Chinese, English, French, Russian and Spanish versions provided by ICCAIA.

² This paragraph is extracted from the introduction of the *ICAO Position for ITU World Radiocommunication Conference in 2019*.

1. INTRODUCTION

1.1 Civil aviation has witnessed significant growth in recent decades (civil air traffic has doubled every 15 years since 1971) and this trend is expected to amplify in the coming years. This implies increased use of aeronautical radio services while maintaining the current level of safety. Additionally, the safe and efficient development of civil aviation engenders new systems, based on data-communication technologies. As a result, the frequency spectrum needs of civil aviation are rapidly increasing.

1.2 Internationally, the allocation of frequency spectrum to the different services is performed by the International Telecommunication Union (ITU). Within ICAO, the Frequency Spectrum Management Panel (FSMP) is directed to ensure sufficient access to the resource for the provision of aeronautical communication, navigation and surveillance services (CNS). Civil aviation, as a major user of frequency spectrum, often seeks access to new frequency bands during the World Radiocommunication Conference (WRC), noting that aeronautical sector was able to optimize the use of the frequency spectrum already available, even when introducing new aeronautical applications (e.g. wireless avionic intra-aircraft communications (WAIC), space automatic dependent surveillance — broadcast (ADS-B)). The FSMP develops the ICAO Position for ITU WRCs.

2. DISCUSSION

2.1 Future frequency spectrum needs in aviation

2.1.1 As a result of the growing demand for air transport, and the development of new systems, there is an increasing requirement for frequency spectrum in civil aviation. The availability of secure and reliable data communication means is critical for the safe operation of aircraft, especially when the traffic density is increasing. Beyond safety, efficiency from an environmental and economical point of view is also at stake, with reliable CNS services fundamental to support efficient traffic management.

2.1.2 In a context of fierce competition for radio frequency resources, States and International Telecommunications bodies should ensure that the development of new technologies does not degrade aviation safety.

2.1.3 The development of new technologies for civil aviation will likely require radio frequency spectrum currently not being used by aviation. ICAO is using methods today to safely incorporate frequency bands not considered “aviation safety bands”. New technologies developed by industry can answer the public demand for safer and more reliable civil air transport and should therefore be considered as priorities for States and International bodies. Aeronautical systems take time to be developed, and frequency spectrum allocation for the supporting technologies should be anticipated.

2.2 Need for active support of the ICAO position

2.2.1 The FSMP is actively promoting the radio frequency spectrum needs of civil aviation. Frequency spectrum challenges are well identified by the FSMP, and this paper does not call for any change in this respect. Yet, for ICAO actions to be effective, the ICAO Position developed at the FSMP must be supported by Member States, within the ITU.

2.2.2 ITU WRCs are held every three to four years and address major frequency spectrum allocation issues. The next ITU WRC will take place in November 2019 (ITU WRC-19). Active support of the ICAO Position by all Member States at WRC-19 will be needed to benefit civil aviation. As the scope of ITU is not limited to aviation, it is crucial that States include representatives of their civil aviation administrations and experts from aviation in their national delegations.

3. CONCLUSION

3.1.1 As a result of the growing demand for air transport, and the development of new systems, there is an increasing requirement for frequency spectrum in civil aviation. The availability of secure and reliable data communication means is critical for the safe operation of aircraft, especially when the traffic density is increasing. The FSMP is actively promoting the radio frequency spectrum needs for civil aviation. However, for ICAO actions to be effective, the ICAO Position developed at the FSMP must be supported by Member States, within the ITU.

— END —