



ASSEMBLY — 38TH SESSION

TECHNICAL COMMISSION

Agenda Item 34: Air Navigation — Monitoring and Analysis

ICAO POLICY ON RADIO FREQUENCY SPECTRUM MATTERS

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This paper presents a proposal for updating the policies in Assembly Resolution A36-25, *Support of the ICAO Policy on Radio Frequency Spectrum Matters*, originally developed in 1998 and updated in 2007. The proposed new resolution takes into account current and foreseen future activities to support aviation radio frequency (RF) spectrum requirements within the scope of the International Telecommunication Union (ITU) World Radiocommunication Conferences (WRCs).

Action: The Assembly is invited to adopt the draft resolution contained in the Appendix to this paper, to supersede Resolution A36-25.

<i>Strategic Objectives:</i>	This working paper relates to the Safety and the Environmental Protection and Sustainable Development of Air Transport Strategic Objectives.
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the 2014-2016 Regular Programme Budget and/or from extra budgetary contributions.
<i>References:</i>	Doc 10007, <i>Report of the Twelfth Air Navigation Conference</i> (2012) Doc 9958, <i>Assembly Resolutions in Force</i> (as of 8 October 2010) Doc 9828, <i>Report of the Eleventh Air Navigation Conference</i> (2003) Doc 9718, <i>Handbook on radio frequency spectrum requirements for civil aviation including statement of approved ICAO policies</i> Doc 9650, <i>Report of the Special Communications/Operations Divisional Meeting</i> (1995) (SP COM/OPS/95)

1. INTRODUCTION

1.1 The ICAO policies and practices related to the radio frequency spectrum matters are laid out in Assembly Resolution A36-25, *Support of the ICAO policy on radio frequency spectrum matters*, originally developed in 1998 and updated in 2007.

1.2 This paper addresses updates to these policies and proposes a new Resolution A38-xx to supersede Resolution A36-25. The emphasis of the new draft Resolution is unchanged, i.e. urging Contracting States to support the ICAO position on aviation requirements for spectrum, and instructing ICAO to make sufficient resources available to enable increased participation in spectrum management activities. Additionally, in line with Recommendation 1/12 of the Twelfth Air Navigation Conference (Doc 10007, AN-Conf/12) entitled “development of the aeronautical frequency spectrum resource”, the inclusion of instructions to develop and implement a comprehensive Frequency Spectrum Strategy is being proposed.

2. THE WORLD RADIOCOMMUNICATION CONFERENCE (WRC) AND THE INTERNATIONAL TELECOMMUNICATION UNION (ITU)

2.1 International agreements on the allocation and use of the radio frequency spectrum are made at World Radiocommunication Conferences (WRCs) which are held within the framework of ITU, every three to four years approximately. These agreements are laid out in the ITU Radio Regulations, which specify the allocation of radio frequency spectrum to user services. The ITU is the specialized agency of the United Nations for telecommunications matters.

2.2 ICAO is recognized by States and the ITU as being the international body with the competence to coordinate the aeronautical input to ITU discussions on radio frequency spectrum matters. ICAO retains a privileged position at the WRCs as an observer in a special advisory capacity. While it is not accorded the right of vote, or of making direct technical proposals for the solution of individual agenda items, ICAO’s privileged position enables it to fully participate in the WRC deliberations as well as in the preparatory processes leading up to the WRC conferences. The ICAO position is approved by Council and reflects the coordinated requirements of the international civil aviation community.

3. REQUIRED SUPPORT TO THE ICAO POSITION AT WRCs

3.1 Availability of appropriate radio frequency spectrum continues to be a prerequisite for the safety of civil aviation and effective implementation of communications, navigation and surveillance/air traffic management (CNS/ATM) systems. As demand for radio spectrum from non-aviation users keeps growing, aviation faces an ever-increasing competition and is in danger of losing some of its allocations within the limited available spectrum. It is essential that aviation’s radio frequency spectrum requirements be strongly supported by all Contracting States in all international fora where spectrum allocations are addressed, to ensure that requirements for these critical (safety of life) services are duly presented and considered.

3.2 Since the ICAO Assembly first adopted a resolution on the topic, the WRC process has almost doubled in terms of industry participation, while civil aviation representation has not been able to keep up with this trend. For the ICAO position to be duly considered by future WRCs when deliberating on matters of interest to the aviation community, an increased level of support by ITU Member Administrations is essential.

3.3 Currently, the telecommunication industry has identified a requirement for vastly increasing its available frequency spectrum allocation in support of new mobile and broadband applications. In many ITU Member States, the telecommunications authorities largely control the process leading to the development of proposals for presentation to the ITU WRCs. Input from aviation authorities often fails to adequately influence the national position. Additionally, the dominant role in ITU activities gained by regional organizations has substantially increased the resource requirements to support the associated intensive schedule of WRC preparation meetings at various levels.

3.4 Inadequate support of the international civil aviation position will contribute to WRC decisions that do not address the aeronautical radio frequency (RF) spectrum bandwidth requirements. In the long run, aeronautical services may be jeopardized, with potentially serious consequences.

3.5 Such consequences could include harmful interference from non-aeronautical services operating co-band or adjacent band to existing aeronautical services, requiring expensive re-equipping of aircraft to preserve the current level of safety; failure of certain systems to satisfy operational requirements (such as in the case of interference to global navigation satellite system (GNSS)); and inability to satisfy the growing need for aeronautical spectrum to support new CNS/ATM systems and enhance safety and regularity of flight.

3.6 To improve the current situation, Contracting States should commit to support the ICAO position at WRCs, as well as in regional and international WRC preparatory activities. State proposals to WRCs should include, to the extent possible, material consistent with the ICAO position. States should also undertake to provide for aviation interests to be fully integrated into their State positions at WRCs.

3.7 AN-Conf/12 Recommendations 1/8, 1/12, 1/13 and 1/14 are relevant to aeronautical frequency spectrum use, planning and strategy. Recommendation 1/12 in particular reaffirms Assembly Resolution A36-25 and also recommends the development and implementation of a comprehensive spectrum strategy to ensure the timely availability and appropriate protection of adequate spectrum, to create a sustainable environment for growth and technology development, to support safety and operational effectiveness for current and future aviation systems, and to allow for the transition between present and next generation technologies.

4. PROPOSED UPDATES TO THE POLICIES IN RESOLUTION A36-25

4.1 The proposed updates to policies in Resolution A36-25, presented in the Appendix, reflect AN-Conf/12 Recommendation 1/12. The main thrust of these updates is to include a requirement for the development and support of a comprehensive aviation frequency spectrum strategy. Updates also emphasize the requirement for efficient frequency management and clarify the requirement that safety critical aeronautical radio communication, navigation and surveillance systems operate in spectrum allocated to an appropriate aeronautical safety service.

5. CONCLUSION

5.1 Since the development and adoption of an ICAO Assembly Resolution on the topic, in 1998, the pressure on the frequency spectrum, a scarce and finite resource, has continued to mount. Consequently the WRC process has almost doubled in terms of industry participation, while the aviation industry has not kept up with this trend. For the ICAO position to be duly considered by future WRCs, increased support to the WRC process by ICAO, States and the civil aviation industry as a whole is essential. Moreover, as called for in AN-Conf/12 Recommendation 1/12, ICAO needs to develop and implement a comprehensive frequency spectrum strategy with a long term vision and the aviation industry as a whole needs to demonstrate efficient frequency management. In reflection of the above, the inclusion of instructions to develop and implement a comprehensive frequency strategy is being proposed in the new draft Resolution to supersede A36-25.

APPENDIX

DRAFT RESOLUTION TO SUPERSEDE RESOLUTION A36-25

Resolution ~~A36-25~~A38-xx: Support of the ICAO Policy on radio frequency spectrum matters

Whereas ICAO is the specialized agency of the United Nations responsible for the safety, regularity and efficiency of international civil aviation;

Whereas ICAO adopts international Standards and Recommended Practices (SARPs) for aeronautical communications systems and radio navigation aids;

Whereas the International Telecommunication Union (ITU) is the specialized agency of the United Nations regulating the use of the radio frequency spectrum;

Whereas the ICAO position, as approved by the Council, for ITU World Radiocommunication Conferences (WRCs) is the result of the coordination of international aviation requirements for radio frequency spectrum;

Whereas a comprehensive frequency spectrum strategy is required by aviation to support timely availability and appropriate protection of adequate spectrum;

Whereas a sustainable environment for growth and technology development is required to support safety and operational effectiveness for current and future operational systems and allow for the transition between present and future technologies;

Recognizing that the development and the implementation of the communications, navigation, and surveillance/air traffic management (CNS/ATM) systems and the safety of international civil aviation could be seriously jeopardized unless ~~aviation~~ requirements for ~~appropriate aviation safety spectrum allocations of radio frequency spectrum~~ are satisfied and protection of those allocations is achieved;

Recognizing that to ensure optimal use of the frequency spectrum allocated to aviation, efficient frequency management and use of best practices are required;

Recognizing that support from ITU member administrations is required to ensure that the ICAO position is supported by the WRC and that aviation requirements are met;

Considering the urgent need to increase such support due to the growing demand for spectrum and aggressive competition from commercial telecommunications services;

Considering the increased level of ITU WRC preparation activities associated with the growing demand for bandwidth from all users of the radio frequency (RF) spectrum, as well as the increased importance of the development of regional positions by regional telecommunication bodies such as APT, ASMG, ATU, CEPT, CITEL and RCC*;

* APT: Asia-Pacific Telecommunity; ASMG: Arab Spectrum Management Group; ATU: African Telecommunications Union; CEPT: the European Conference of Postal and Telecommunications Administrations; CITEL: Comisión Interamericana de Telecomunicaciones; RCC: Regional Commonwealth in the field of Communications.

Considering Recommendations 7/3 and 7/6 of the Special Communications/Operations Divisional Meeting (1995) (SP COM/OPS/95), ~~as well as~~ Recommendation 5/2 of the 11th Air Navigation Conference (2003) and Recommendation 1/12 of the 12th Air Navigation Conference (2012);

The Assembly:

1. *Urges* Contracting States, International Organizations and other civil aviation stakeholders to support firmly the ICAO frequency spectrum strategy and the ICAO position at WRCs and in regional and other international activities conducted in preparation for WRCs, including by the following means:
 - a) working together to deliver efficient aeronautical frequency management and “best practices” to demonstrate the effectiveness and relevance of the aviation industry in spectrum management;
 - b) supporting ICAO activities relating to the aviation frequency spectrum strategy and policy through relevant expert group meetings and regional planning groups;
 - ac) undertaking to provide for aviation interests to be fully integrated in the development of their positions presented to regional telecommunications fora involved in the preparation of joint proposals to the WRC;
 - bd) including in their proposals to the WRC, to the extent possible, material consistent with the ICAO position;
 - ee) supporting the ICAO position and the ICAO policy statements at ITU WRCs as approved by Council and incorporated in the *Handbook on Radio Frequency Spectrum Requirements for Civil Aviation* (Doc 9718);
 - ef) undertaking to provide civil aviation experts ~~from their civil aviation authorities~~ to fully participate in the development of States’ and regional positions and development of aviation interests at the ITU; and
 - eg) ensuring, to the maximum extent possible, that their delegations to regional conferences, ITU study groups and WRCs include experts from their civil aviation authorities ~~and other civil aviation officials~~ ~~stakeholders~~ who are fully prepared to represent aviation interests;
2. *Requests* the Secretary General to bring to the attention of ITU the importance of adequate radio frequency spectrum allocation and protection for the safety of aviation;
3. *Instructs* the Council and the Secretary General, as a matter of high priority within the budget adopted by the Assembly, to ensure that the resources necessary to support the development and implementation of a comprehensive aviation frequency spectrum strategy as well as increased participation by ICAO in international and regional spectrum management activities are made available; and
4. *Declares* that this resolution supersedes Resolution ~~A32-13~~ ~~A36-25~~.