



International Civil Aviation Organization

**EIGHTEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION
AND SURVEILLANCE SUG-GROUP (CNS SG/18) OF APANPIRG**

Asia and Pacific Regional Sub-Office, Beijing, China
(21 – 25 July 2014)

Agenda Item 8: Aeronautical electromagnetic spectrum utilization

8.2) Review report of Regional Preparatory Group Meeting for WRC-2015

OUTCOME OF REGIONAL PREPARATORY GROUP FOR WRC-2015

(Presented by Secretariat)

SUMMARY

This paper presents the outcome of the Regional Preparatory Group Meeting for ITU World Radiocommunication Conference – 2015 (WRC – 2015) held on 11 and 12 March 2014.

1. INTRODUCTION

1.1 A Regional Preparatory Group Meeting for ITU World Radiocommunication Conference – 2015 (WRC – 2015) was held in Pattaya, Thailand on 11 and 12 March 2014. The meeting was organized in conjunction with the Thirtieth Meeting of the Aeronautical Communication Panel, Working Group – F (ACP WG-F/30).

1.2 The objective of the meeting was to provide a forum for the focal points designated by the States in the APAC Region and other representatives, responsible for the preparation of World Radiocommunication Conference 2015 to be thoroughly briefed about ICAO Position and help them in effectively participating at the national and regional level forums in support of ICAO position.

1.3 The meeting was attended by 44 participants from 13 States, 2 International Organizations and 3 industry partners.

1.4 The report of the meeting and other relevant documents are provided on the following ICAO APAC webpage: <http://www.icao.int/APAC/Meetings/Pages/2014RPG-WRC15.aspx>

2. DISCUSSION

2.1 A total of 4 recommendations were issued for consideration by the SRWG and this meeting. The RPG meeting considered 3 Information Papers, 4 Working Papers and 12 presentations.

Introduction to Aviation Spectrum and ITU/WRC Process

2.2 The meeting reviewed the requirement of aeronautical spectrum, Assembly 38' resolutions, AN-Conf/12 recommendations. The meeting was also informed about the role of ITU in the management of radio frequency spectrum and the process of World Radio Conferences (SP/09).

2.3 The meeting also reviewed the directives of APANPIRG with respect to protection of aeronautical spectrum and support of ICAO position for WRC2015 at national level and in regional forums (WP/03).

2.4 Presentation detailed the process of the development of ICAO Position on ITU WRC Agenda Items which was approved by ICAO Council on 28th May 2013. It was explained that ICAO Policy statements included in the 'Handbook on Radio Frequency Spectrum Requirements for Civil Aviation' (Doc 9718) are enduring in nature while ICAO Position is developed for each agenda item of relevance to civil aviation for each WRC cycle.

Preparation of WRC2015 - Review relevant agenda items

2.5 Chair of the meeting presented an overview of all aviation relevant agenda items of significance for civil aviation (SP/07) to be addressed by the next WRC (WRC-2015).

The meeting also received a number of presentations on the relevant WRC-15 agenda items:

- Agenda Item 1.1 – Spectrum for mobile and broadband;
- Agenda Item 1.5 – FSS allocations for Unmanned Aircraft System (UAS);
- Agenda Item 1.7 – Review the use of the band 5091 – 5051 MHz
- Agenda Item 1.17 – Wireless Avionics Intra-communication WAIC
- Agenda Item 9.1.5 – VSAT for aviation use

The list of presentations are as follows:

- SP02 – Spectrum for mobile and broadband by John Mettrop/UK
- SP/03 – Allocations for Unmanned Aircraft Systems (UAS) by Gerlof Osinga/Netherlands;
- SP/04 – Review the use of the band 5091 – 5150 MHz for FSS by John Taylor/Canada;
- SP/05 – Frequencies for Wireless Avionics Intra Comm. (WAIC) by Joseph Cramer/Boeing;
- SP/06 – VSAT used for safety service in Africa by Lisa Tele/South Africa;
- SP/10 – Introduction on Spaced based ADS-B by John Taylor/Canada;

2.6 Airservices Australia presented the outcome of the APT APG2015-2 to the meeting (SP/01).

2.7 As result of discussion, the meeting identified the need to conduct a survey by ICAO Regional Office regarding use of spectrum bands 1 300 – 1 350 MHz and 2 700 2 900 MHz for Primary en-route and approach/airport radar by States/Administrations in APAC Region. Such information to be collected from States would provide supporting data to protect ICAO position at the national level and regional forum. Accordingly the meeting developed the following recommendation.

Recommendation/1 - Regional Survey for Primary Radar used for Civil Aviation

That, ICAO Regional Office conduct a survey on existing and planned use of spectrum bands 1 215 – 1 350 MHz and 2.7 – 3.1 GHz for radars by States/Administrations serving for air traffic management service in the Asia and Pacific Regions (Frequencies used, generic location, ATC being served, dates of commissioning, coverage in nautical miles, approximate cost of the radar, etc.)

(The result or feedback from the survey conducted by APT for AWF should also be taken into account).

2.8 The meeting noted that if sharing of 2.7 – 2.9 GHz bands was considered, a number of issues may have to be addressed including but not limited to: introduction of a guard band (approximately 60 MHz); modification of radar equipment; reduced spurious emissions; tighter mobile standards (filtering & spurious); reduced mobile transmitter power; mobile sector blanking and frequency/distance separation, etc.

2.9 With respect to WRC2015 agenda 9.1.5, the meeting recommended that a similar survey regarding use of VSAT for civil aviation by air navigation service providers or administrations in the APAC Region should be conducted. Such data would provide support to protection of the relevant bands in the FSS used for flight safety service.

Recommendation/2 – Survey on use of VSAT for civil Aviation in the APAC Region

That, ICAO Regional Office conduct a survey on existing and planned use of VSAT and their associated frequency bands for the air traffic service including aeronautical fixed service (AFS), ATS direct speech circuits and relay link for communication and/or for surveillance service.

The spectrum management current practice and challenges in the APAC Region

Frequencies Interference issue

2.10 Monitoring reports for various types of radio interference were presented to the meeting by the Chair (SP/12). The participants observed the sample interference findings recorded by USA. The means of identification and inspection were also introduced.

2.11 ITU introduced the provisions and procedure of the radio frequency management and radio interference mitigation procedure specified in the Radio Regulation (RR SP/11) and highlighted the need to follow the restriction of facilities and services as specified in the RR.

2.12 Current aeronautical frequency management provision and procedure adopted by Regional Air Navigation Meeting (RAN APAC/1993) was introduced and reviewed by the meeting (WP/04). The need to transit to the new coordination criteria (Vol. II of Doc 9718) through regional air navigation agreement and planning process was noted.

2.13 Handbook on Radio Frequency Spectrum requirements for civil aviation (Doc 9718) Vol. I and new Vol. II were introduced (SP/08) and new ICAO frequency manager – tool (Frequency Finder) was also briefly introduced (IP/02).

Discussion on 8.33 kHz Channel Spacing

2.14 The meeting discussed the approach proposed for taking care of new VHF communications needs and potential introduction of 8.33 kHz spacing channel in the APAC Region (WP/02). The meeting considered 25 kHz spacing could be maintained for a period of time by relying on a more efficient coordination of the VHF bands (assignment and release) and by removing restriction of frequency pools for associated functions. It was informed that in Europe definite frequencies group associated with communication service function had been removed. Some lessons learnt from the introduction of 8.33 kHz in the European Region were introduced.

2.15 The meeting identified the need to investigate the capability of ground VHF equipment employed by the States/Administration in the APAC Region whether capable to support 8.33 kHz spacing and requirement for retrofit of avionics including leading time for transition to 8.33 kHz spacing. It was observed that new aircraft from production line had already been equipped for such capability. However, as 8.33 KHz capability may come as an option on some new aircraft, early advance notice to minimize retrofit cost would be beneficial to the airspace users of APAC Region. Significant cost for older generation aircraft retrofit would be required in particular for those GA aircraft.

2.16 The meeting was also reminded that in the foreseeable future there appears to be no requirement in USA for transitioning to 8.33 kHz, although traffic density is similar to that in Europe. Therefore, it would be a surprise if this would be required in APAC region in the near future. Considering that the new frequency separation criteria and ICAO global database being introduced would result in more efficiency in management of VHF bands and that the approach proposed was appropriate, the meeting developed the following recommendation for consideration by the Spectrum Management Review Task Force (8.33 kHz) established by CNS SG of APANPIRG.

Recommendation/3 – Spectrum Management Review Task Force to adopt the proposed approach and streamline the current assignment process, aiming at avoiding introduction of 8.33 kHz spacing in the APAC Region

That, the Spectrum Management Review Task Force follow the proposed 3 stages approach relying on new criteria being introduced at ICAO global level, since it is likely to bring enough possibilities of VHF frequencies assignments. The 8.33 kHz Spacing Study group is invited to consider the experience gained in the other regions and to review and propose improvements to the existing regional VHF frequency coordination process based on the new tool, aiming at avoiding introduction of 8.33 kHz spacing in the APAC Region in the near future.

2.17 The meeting was informed that some Civil Aviation Administrations had requested airlines to be equipped with 8.33 kHz channel spacing capable avionics. However, general concern remains for retrofit to General Aviation and ageing aircraft.

Need for strengthening support of ICAO Position

2.18 The entire civil aviation community has, no doubt, assured support to ICAO Position however, further efforts are yet to be made by the member States/the civil aviation administrations to secure the national support from the Frequency Regulatory Authorities and reflect such support in their States position paper to be presented to the APT APG (spelling out) meetings and to the WRC-2015. It is of critical importance that ICAO member States coordinates with their respective Frequency Regulatory Authorities and attend regional preparatory forum i.e. APT APG meetings and WRC-2015 to ensure that the approved ICAO Position is supported. In view of the foregoing, the meeting formulated the following recommendation.

Recommendation/4 – Support of ICAO position for WRC-2015 by Member States

That, States:

- a) make arrangement for the designated focal points closely involved in the preparatory work for WRC-2015 at the national level; and
- b) make necessary arrangement for the focal points to attend at the Asia-Pacific Telecommunity WRC-15 preparatory group meetings and at WRC-2015 to protect aviation interests.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper and discuss associated recommendations.
