International Civil Aviation Organization

THIRTEENTH MEETING OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG/13)

Bangkok, Thailand, 9-13 September 2002

Agenda Item 2: ASIA/PAC Air Navigation System and Related Activities

2.2 CNS/MET Matters

ICAO POSITION FOR THE ITU WORLD RADIOCOMMUNICATION CONFERENCE -2003 (WRC-2003)

(Presented by the Secretariat)

SUMMARY

This paper presents the ICAO position for the ITU World Radiocommunication Conference 2003 (WRC-2003) on issues of interest to aviation

1. INTRODUCTION

1.1 The ICAO position is developed on the basis of current and future aviation requirements for radio frequency spectrum, taking into account the expected growth in air traffic and the development of new technologies. The ICAO Council adopted ICAO position for WRC-2003 on 22 June 2001. Subsequently, a State Letter was issued under reference E3/5-01/79 dated 10 August 2001 urging States to consider incorporation of ICAO position in the State's position paper to be submitted to ITU WRC-2003. Civil Aviation Administrations were also urged to actively participate in the preparation of State's position at the national level to provide necessary support to ICAO position and to participate at the regional preparatory group meetings.

1.2 The ICAO position for a WRC-2003 was established as early as possible and presents the ICAO views on all agenda items of interest to international civil aviation on the agenda of the WRC-2003, with particular regard to the impact on safety, regularity and efficiency of flight.

1.3 Any subsequent developments arising from ICAO and ITU activities in preparation for the WRC will be considered by the Council with a view to updating the ICAO position, as required.

1.4 The main highlights of ICAO position on various agenda items of ITU WRC-2003 are provided in the Attachment.

2. DISCUSSION

Support to the ICAO Position

2.1 In addition to issuance of State Letter, the ICAO position was also presented, as early as possible, to the Regional Preparatory Group Meetings organized by the Asia-Pacific Telecommunity (APT) which is the regional telecommunication organization involved in the development of regional positions for the ITU Conference.

2.2 A Regional ICAO Preparatory Group Meeting for WRC-2003 was organized in conjunction with the meetings of AMCP Working Group F in November 2001 in Bangkok. The objective of the Preparatory Group Meeting was to provide a forum for the contact person designated by each Administration for preparation of WRC-2003 to be thoroughly familiar with ICAO position.

Preparation for WRC-2003

2.3 The APT is preparing Regional Position on various agenda items of WRC-2003. In this regard the APT has conducted three Preparatory Group Meetings. The fourth meeting is planned to be held in Busan, Republic of Korea from 26 to 31 August 2002. The last meeting will be conducted in Tokyo from 19-25 February 2003 to finalize the ASIA/PAC position for consideration by WRC-2003 to be held in Geneva **from 9 June to 4 July 2003.**

2.4 The most critical aviation related issues to be discussed at WRC-2003 under specific agenda items are as follows:

2.4.1 **Agenda Item 1.4 – (5 GHz band issue ARNS, MLS)**

ICAO position is: No change to footnotes S5.444 and S5.444A.

A meeting of ITU-R Working Party 8B held in May 2002 resulted in three different Methods. ICAO's preference would be for Method C contained in the ITU Conference Preparatory Meeting (CPM) draft text as it addresses Resolution 114, ARNS requirement and also takes into account present requirement of FSS in the band of 5 091-5 250 MHz.

The current APT preliminary view developed at its third meeting supports the above proposal. States who have not yet submitted their position on this agenda item are expected to support the APT preliminary view.

2.4.2 **Agenda Item 1.14 - (HF interference issue)**

ICAO supports regulatory provisions, actions by administrations, and the implementation of recommended measures and cost effective techniques, aimed at reducing the harmful interference "the threat to the safety of air operations". Any proposal requiring replacement or modification of equipment needs careful study.

States are expected to support the above proposal.

2.4.3 **Agenda Item 1.15 - (Protection of DME while accommodation of new RNSS issue)**

ICAO supports an appropriate value of power flux density (pfd) limit for the aggregation of all RNSS systems in the band **1 164 – 1 215 MHz**, as a necessary protection for aeronautical **DME** systems currently in operation. The equivalent pfd limit -121.5 dBW as proposed by ICAO has been accepted by ITU-R Working Party 8D.

States are expected to support the above position.

ICAO also supports the need for a pfd limit for RNSS in the band **1 215 – 1300 MHz** as a necessary protection for important **radionavigation (surveillance radars) systems.**

States are expected to support the above position.

2.4.4 **Agenda Item 1.28 -(Introduction of GBAS and VDL in VHF ARNS band issue)**

ICAO supports an allocation permitting the use of the band 108-117.975 MHz by ICAO standard systems in supporting navigation and surveillance functions i.e. GNSS Ground-based Augmentation System (GBAS) to support navigation function and VHF Digital Link VDL Mode – 4 to support surveillance function.

States are expected to support the above position to permit the use of the band 108-117.975 MHz for both navigation and surveillance functions.

3 ACTION BY THE MEETING

3.1 The meeting is expected to:

i) take note of the ICAO position on the critical issues described above; and

ii) endorse the draft conclusion 6/11 formulated by the CNS/MET/SG/6 meeting contained in the Report of the Sub-Group provided in attachment to WP/5.

ICAO Position for ITU WRC-2003

ICAO
Asia and Pacific Office

Introduction

- *The ICAO position aims at securing availability of radio frequency spectrum to meet civil aviation requirements for current and future safety-of-flight applications. In particular, it stresses that safety considerations dictate that exclusive frequency bands must be allocated to highly critical aeronautical systems and that adequate protection against harmful interference must be ensured.*

ICAO Position for WRC-2003
Agenda Item 1.1

- *Support deletion of footnotes S5.181, S5.197, S5.259, as access to these bands by the mobile service is not feasible and could create the potential for interference to important radionavigation systems used by aircraft at final approach and landing.*
- *Support deletion of S5.203 at WRC 2003 and no change to S.5.203A to enable full use of the band 136-137 MHz for AM (R) S communications.*

ICAO Position for WRC- 2003
Agenda Item 1.1

- *Support the cessation of all fixed services in the band 1 559 - 1 610 MHz as of 2005 in order to remove the interference caused by the fixed service to essential aeronautical radionavigation functions and to permit the full utilization of GNSS services to aircraft on a global basis.*

- *Support deletion of footnote S5.439 as a measure to protect safety-critical operation of radio altimeters in the band 4 200 – 4 400 MHz.*

WRC – 2003 Agenda Item 1.3

✈ *Assist in the identification of aeronautical frequencies and bands for use in the situations envisaged, provided that the use is in accordance with the provisions in the Radio Regulations, and does not cause interference to operational aeronautical radio services. In particular, current ICAO Search and Rescue (SAR) procedures should not be affected.*

WRC - 2003 Agenda Item 1.4

- ***No change to footnotes S5.444 and S5.444A.***

WRC - 2003 Agenda Item 1.5

- *Accept the upgrading of the radiolocation service to primary status in the band 5 350 – 5 470 MHz only on the expressed condition that no interference be caused to the ARNS service operating in accordance with S5.449, and that no protection be required from the ARNS to the radiolocation service, as agreed between administrations taking account of relevant ITU-R Recommendations.*

WRC - 2003 Agenda Item 1.5

- *No further changes to the allocations to the bands 5 350 - 5 470 MHz.*
- *Monitor developments of future aeronautical systems that could be deployed in the band.*

WRC - 2003 Agenda Item 1.6

- *The current aeronautical allocation should be maintained until such time as appropriate alternative aeronautical allocations for ICAO standardized systems are introduced.*

- *Monitor developments of future aeronautical systems that could be deployed in the band, with a view to supporting appropriate proposals to WRC-2003.*

WRC - 2003 Agenda Item 1.8

✈ *Any revisions to the values contained in Appendix S3 to the Radio Regulations, or other regulatory provisions on unwanted emissions, should not invalidate the values for aeronautical radio systems, as expressed in ICAO Annex 10, and other relevant aeronautical documents.*

WRC - 2003 Agenda Item 1.9

✈ *Any proposed changes to Appendix S13 and related changes to Chapter SVII must be considered carefully against the requirements of the aeronautical mobile (R) service and of the aeronautical mobile-satellite (R) service, and applicable ICAO Annexes.*

WRC - 2003 Agenda Item 1.11

- *Provide support where applicable to the extension of the band in 14-14.5 GHz allocations to include the aeronautical mobile satellite service.*

WRC - 2003 Agenda Item 1.14

✈ *Support regulatory provisions, actions by administrations, and the implementation of recommended measures and cost effective techniques, aimed at reducing the harmful interference - the threat to the safety of air operations.*

WRC - 2003 Agenda Item 1.15

✈ *Support an appropriate value of pfd limit for the aggregation of all RNSS systems in the band 1 164 – 1 215 MHz, as a necessary protection for aeronautical DME systems currently in operation, and support the incorporation of the agreed pfd limit within an adequate regulatory framework having full mandatory force.*

WRC - 2003 Agenda Item 1.15

✈ *Support the need for a pfd limit for RNSS in the band 1 215 - 1 300 MHz as a necessary protection for important radionavigation systems providing safe separation to aircraft in flight, and support the incorporation of the agreed pfd limit within an adequate regulatory framework having full mandatory force.*

WRC - 2003 Agenda Item 1.16

✈ *Any suggestions for the sharing of aeronautical bands with NGSO feeder links under this Agenda Item can only be considered on the basis of agreed studies, which take into account the present and expected future use of the band by aviation, and the constraints applied to this use.*

WRC - 2003 Agenda Item 1.17

✈ *Any upgrading of the radiolocation service to primary status in bands allocated to aeronautical services must ensure the provision of adequate measures to continued protection of aeronautical services, present and future.*

✈ *In particular, the allocation should be made on the conditions of non interference to, and no protection from, the radionavigation service.*

WRC - 2003 Agenda Item 1.20

✈ *Maintain all aeronautical allocations below 1 GHz without change and taking account of the ICAO position on Agenda Item 1.1 in regard to S5.181, S5.197 and S5.259.*

WRC - 2003 Agenda Item 1.22

✈ *Oppose any proposal for a new allocation to the mobile service or other services, in bands between 2 700 and 3 400 MHz which are allocated or used by aeronautical services, as no rigorous and comprehensive compatibility studies have yet been accepted by international civil aviation. The case for sharing on any basis must also be supported by a safety analysis agreed with the responsible civil aviation authorities.*

WRC - 2003 Agenda Item 1.28

- *Support an allocation permitting the use of the band 108-117.975 MHz by ICAO standard systems in the aeronautical mobile (R) service supporting navigation and surveillance functions, on the condition that priority and protection be given to the aeronautical radionavigation service.*

- *Ensure conformity with ITU-R Recommendation IS.1009 regarding compatibility with the FM broadcast services in the band 87.5-108 MHz.*

WRC - 2003 Agenda Item 1.31

- *Oppose proposals for an allocation to the mobile satellite service in any of the ARNS bands between 1 and 3 GHz until a full consideration of the aviation use, and sharing studies, where appropriate, have been completed and satisfy ICAO requirements.*

- *Support the protection of aeronautical telemetry applications and their continued use in the band 1 425 – 1535 MHz.*

WRC - 2003 Agenda Item 2

✈ *ICAO supports the policy of linked reference in respect of RR S34.1 for Emergency Locator Transmitters ELT).*

SUMMARY

- *ICAO retains the firm opinion that availability of radio frequency spectrum to meet civil aviation requirements for current and future safety-of-flight applications shall be secured.*

- *Adequate protection to Aeronautical Services against harmful interference must be ensured through regulatory provisions.*