



International Civil Aviation Organization

Sixth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand 15-19 July 2002

Agenda Item 8: Preparation for World Radiocommunication Conference 2003 (WRC-2003)

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

(Presented by the Secretariat)

SUMMARY

This paper presents ICAO position on the items of interest to aviation on the agenda of the next ITU WRC, which is planned to be held in 2003.

1. Introduction

1.1 The International Telecommunication Union (ITU) is expected to convene a World Radiocommunication Conference (WRC-2003) from 9 June to 4 July 2003 in Geneva, Switzerland. ICAO Position on the WRC 2003 Agenda Items of interest to aviation is provided in Attachment 1. The list of contact persons designated by Civil Aviation Administrations responsible for WRC-2003 preparation in each States is provided in Attachment 2.

2. Elements of the ICAO Position for the ITU WRC-2003

2.1 The agenda for the WRC-2003 includes a number of items of a technical nature with implications for aviation. The most critical WRC 2003 Agenda items are as follows:

- 2.2.1. 1.4 (allocation in the band 5091-5150 MHz),
- 2.2.2 . 1.14 (Harmful interference to maritime mobile and aeronautical mobile (R) services.
- 2.2.3 1.15 (studies concerning RNSS relating to protection of the existing services DME/RADAR in the bands 1164-1215 and 1215-1300 MHz, respectively by prescribing epfd limits),
- 2.2.4 1.17 (upgrading of allocation to the radio location services in the 2.9-3.1 GHz band) and;
- 2.2.5 1.28 (differential correction using the 108-117.975 MHz band).

3. Activities to be undertaken to maximize support for the ICAO position

3.1 It will be recalled that the following Conclusion formulated by the 12th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/12) held in Bangkok from 20 to 24 August 2001 was brought to the attention of States.

Conclusion 12/19 – Protection of Aeronautical Frequency Spectrum

That States,

- a) assign high priority to the aeronautical spectrum management;
- b) participate in the development of States' position for WRCs at the national level to ensure support to ICAO position;
- c) ensure, to the extent possible, aviation representatives are included in States delegation to the Asia-Pacific Telecommunity (APT) Conference Preparatory Group meetings and at WRCs; and
- d) ensure participation of designate a focal point or a contact person at the regional Preparatory Group meeting for WRC 2003 to be held from 15 to 16 November 2001 followed by AMCP WG-F meeting to be held from 19 to 27 November 2001 in Bangkok and attend the APT APG meetings and WRC 2003.

3.2 It should also be noted that the 38th Conference of the Directors General of Civil Aviation, Asia and Pacific Region in its Action Item 38/4 strongly urged States to provide support to the ICAO Position for WRC 2003 and take appropriate actions in:

- having the designated contact person closely involved in the preparatory work for WRC 2003 at the national level;
- arranging attendance of the designated contact at the Regional Preparatory Group meeting; and
- providing necessary support at the APT meetings and at WRC 2003 to protect aviation interests.

3.3 Follow up action was taken in accordance with the above action item. Australia, Hong Kong China, Malaysia, New Zealand, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Thailand have advised the Secretariat that appropriate actions has been taken to provide necessary support to ICAO Position at national, regional levels and at WRC-2003.

3.4 In order to facilitate better understanding of the ICAO Position for WRC 2003 and to provide opportunity to States in the ASIA/PAC region to be thoroughly familiar all aspects of Aeronautical Frequency Protection and Management a Regional Preparatory Group meeting for WRC 2003 and the AMCP WG-F meetings were held in Bangkok in November 2001 as planned.

3.5 To facilitate better coordination, list of contact points designated in each State by the CAA and the Telecommunication Regulators were provided to Administrations concerned. The APT meeting schedule was also provided.

3.6. ICAO Position for WRC 2003 was presented at the Third APT Conference Preparatory Group meeting for WRC 2003 (APG2003-3) held in Bangkok from 10 to 15 June 2002. The Fourth APT APG2003-4 meeting will be held in Busan, Republic of Korea from 26 to 31 August 2002. The Fifth and the last APT APG 2003-5 meeting will be held in Tokyo, Japan from 19 to 25 February, 2003.

3.7 It is expected that in accordance with the APANPIRG Conclusion 12/19 and the Action Item 38/4 of the 38th DGCA Conference, States should take action to provide required support

to ICAO Position in their national position paper to be submitted to APT APG 2003-4 and APG 2003-5 meetings. It is considered highly desirable to urge States to get closely involved in the preparation of State's position.

4. Action by the meeting

4.1 The meeting is invited to:

- a) review the material contained in Attachment ; and
- b) make appropriate recommendation to get aviation representatives closely involved in the preparatory work at the national level and attend APT meetings to protect aviation interests.



***Highlights of the ICAO Position
for
ITU WRC-2003***

K.P.Rimal



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 proposed 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.*

List of Contact Person for WRC-2003

State/ Organization	Name/Address	Fax /Telephone	E-mail Address
Australia	Mr. Jim Weller Communications and Navigation Team Engineering Services Airservices Australia GPO Box 367 Canberra ACT 2601	Tel: +61 (2) 6268-5075 Fax: +61 (2) 6274-7463	
Bangladesh		Tel: Fax:	
Bhutan	Mr. Pema Tashi Senior Technical Officer Division of Civil Aviation Ministry of Communications Royal Government of Bhutan Bhutan	Tel: Fax: +975 232-2987	
Brunei Darussalam	Mr. Poh Eng Hong Chief Aeronautical Telecommunications Officer Department of Civil Aviation Ministry of Communications Brunei International Airport Bandar Seri Begawan BB2513 Negara Brunei Darussalam	Tel: +673 (2) 330-518 +673 (2) 330-142 Ext. 1234 Fax: +673 (2) 333-666	cato@brunet.bn
Cambodia		Tel: Fax:	
China	Mr. Lu Shu Ping Deputy Director of Office of Radio Management Committee Air Traffic Management Bureau CAAC, P.O. 2272, Shilihe Chao Yang District China	Tel: +86 (10) 6733-7201 Fax: +86 (10) 6731-8478	
Hong Kong, China	Mr. Leung Woon-yin Assistant Director-General of Civil Aviation (Engineering and Systems) Civil Aviation Department 46 th Floor, Queensway Government Offices, 66 Queensway Hong Kong, China	Tel: +852 2591-5000 Fax: +852 2845-7160	wyleung@cad.gov.hk
Cook Islands		Tel: Fax:	

State/ Organization	Name/Address	Fax /Telephone	E-mail Address
DPR Korea	Mr. Choi Hyon Gyu Deputy Director External Relation Department General Administration of Civil Aviation Sunan District, Pyongyang Democratic People's Republic of Korea	Tel: +850 (2) 381-8108 Fax: +850 (2) 381-4625	
Fiji		Tel: Fax:	
India	General Manager COM Airports Authority of India Rajiv Gandhi Bhavan Safdarjung Airport New Delhi 110003	Tel: +91 (11) 463-2950 Ext. 845 Fax: +91 (11) 469-363	aaichqdelz.vsnl.netin
	Mr. Soran Singh Assistant General Manager (COM-E) Rajiv Gandhi Bhavan Safdarjung Airport New Delhi 110003	Tel: +91 (11) 463-2950 Ext. 845 Fax: (91 11) 469-363	aaichqdelz.vsnl.netin
Indonesia		Tel: Fax:	
Japan	Mr. Shigeki Masuda Special Assistant to Director Radio Engineering Division Air Traffic Department Civil Aviation Bureau Ministry of Land, Infrastructure and Transport, 2-1-3 Kasumigaseki Chiyoda-ku, Tokyo 100-8989 Japan	Tel: +81 (3) 5253-8111 Fax: +81 (3) 52531663	masuda_s2sa@mlit.go.jp
Kiribati		Tel: Fax:	
Lao PDR	Mr. Bouathong Southammavong Director Aeronautical Telecommunication Division Department of Civil Aviation Aeronautical Telecommunication Division Wattay International Airport P.O. Box 119 Vientiane LAP PDR	Tel: +856 (21) 512-245 Fax: +856 (21) 512-163	

State/ Organization	Name/Address	Fax /Telephone	E-mail Address
Malaysia	Mr. Abdul Malik bin Midu Alli Assistant Director (ATS) Department Civil Aviation Malaysia Aras 3, Blok D5, Pusat Pentadbiran Kerajaan Persekutuan 62502 PUTRAJAYA Malaysia	Tel: +603 888-66069 Fax: +603 888-91541	malik@dca.gov.my
	Mr. Manjit Singh Assistant Director (Inspectorate) Department Civil Aviation Malaysia Aras 3, Blok D5, Pusat Pentadbiran Kerajaan Persekutuan 62502 PUTRAJAYA Malaysia	Tel: +603 888-66073 Fax: +603 888-91541	mjits@hotmail.com
Maldives		Tel: Fax:	
Marshall Islands	Mr. Anthony M. Muller Director of Communications P.O. Box 329 Majuro, MH 96960	Tel: +692 625-8869 Fax: +692 625-3486	rmimotc@ntamar.com
Micronesia		Tel: Fax:	
Mongolia	Mr. Davaa Gombosuren Civil Aviation Authority of Mongolia Buyant-Ukhaa Airport P.O. Box 05, Ulaanbaatar –34 Mongolia	Tel: +976 (1) 379-640 Fax: +976 (1) 982-102	
Myanmar	Mr. U. Kyaw Zaw Deputy Director (COMM) Department of Civil Aviation Headquarters Building Yangon International Airport Mingaladon 11021 Myanmar	Tel: +95 (1) 665-144 Fax: +95 (1) 665-124	dca.myanmar@mpt.mail.net.mm
Nepal		Tel: Fax:	
New Zealand	Mr. Steven Blair Senior Co-ordinator ICAO Liaison Civil Aviation Authority of New Zealand P.O. Box 31-441 Lower Hutt New Zealand	Tel: +64 (4) 560-9529 Fax: +64 (4) 560-9481	blairs@caa.govt.nz

State/ Organization	Name/Address	Fax /Telephone	E-mail Address
Pakistan	Air Commodore Javed Iqbal Director Technical Services Civil Aviation Authority Karachi, Pakistan	Tel: +92 (21) 924-8713 Fax: +92 (21) 924-8781 +92 (21) 924-8778 Ext. 7775	
Palau		Tel: Fax:	
Papua New Guinea	Mr. John Cholai Chief Engineer Civil Aviation Authority P.O. Box 684, Boroko NCD Papua New Guinea	Tel: +675 324-4607 Fax: +675 325-4841	
Philippines	Mr. Ernesto T. Oreal Aviation Representative Air Traffic Service Air Transportation Office Old MIA Road Pasay City 1301 Philippines	Tel: +63 (2) 832-0906 Fax: +63 (2) 759-7138	
Republic of Korea	Mr. Hyeong-Taek Park Senior Deputy Director CNS/ATM Division Civil Aviation Bureau Ministry of Construction and Transportation Republic of Korea	Tel: +82 (2) 500-4173 Fax: +82 (2) 503-7330	htkpark@moct.go.kr
Samoa	Mr. Sapau Ruperake Petaia Director of Post and Telecom Ministry of Post and Telecom Private Bag, Apia, Samoa	Tel: +685 26117 Fax: +685 24671	
Singapore	Mr. Tay Tong Leng Leslie Engineer (Communications) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 Singapore 918141	Tel: +65 541-2409 Fax: +65 542-2447	Tong_Leng_Tay@caas.gov.sg
Solomon Islands	Mr. George B. Alu Acting Director Civil Aviation Ministry of Culture, Tourism & Aviation Civil Aviation Division Honiara, Solomon Islands	Tel: +677 36720-21 Fax: +677 36775	
Sri Lanka	Mr. C.N. Biyanvilage Senior Electrical Engineer Radar & Navigation Aids Engineering Section Airport & Aviation Services NSC Building, Bandaranaike,	Tel: +94 (1) 252-441, 252-861 Ext. 6001 Fax: +94 (1) 252-400	champaka@airport.lk

State/ Organization	Name/Address	Fax /Telephone	E-mail Address
	International Airport, Katunayake Sri Lanka		
Thailand	Mr. Somnuk Rongthong Vice President, Air Traffic Service Engineering Bureau Aeronautical Radio of Thailand Ltd. 102 Ngamduplee, Tungmahamek Bangkok 10120, Thailand	Tel: +66 (2) 285-9904 Fax: +66 (2) 287-8166	somnuk@aerothai.or.th
Tonga	Mr. Ahovaleamoemapa Faletau Secretary for Civil Aviation Ministry of Civil Aviation P.O. Box 845 Queen Salote Road Nuku'alofa Kingdom of Tonga	Tel: +676 24144, 24045 Fax: +676 24145	
Vanuatu		Tel: Fax:	
Vietnam	Mr. Hoang Huu Lich Officer in charge of CNS Civil Aviation Administration of Vietnam Gialam Airport, Hanoi Vietnam	Tel: +84 (4) 8 274-194 Fax: +84 (4) 827-4191	