



INTERNATIONAL CIVIL AVIATION ORGANIZATION

ASIA AND PACIFIC OFFICE

**REPORT OF
THE REGIONAL PREPARATORY GROUP (RPG) MEETING FOR
ITU WORLD RADIOCOMMUNICATION CONFERENCE (WRC) – 2015**

(Pattaya, Thailand, 11-12 March 2014)

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1. Introduction

1.1 A Regional Preparatory Group Meeting for ITU World Radiocommunication Conference – 2015 (WRC – 2015) was held in D-Beach Hotel, 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). 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.

2. Attendance

2.1 The meeting was attended by 44 participants from 13 States, 2 International Organizations and 3 industry partners. The list of participants is at **Attachment 1**.

3. Opening of the Meeting

3.1 On behalf of ICAO Regional Director, Mr. Li Peng, Regional Officer CNS extended warm welcome to all participants. He highlighted the objective of the meeting and significance of protecting the spectrum for aviation and keeping it free from harmful interference in the interest of safety of operations. Mr. Mike Biggs, Rapporteur, ICAO Aeronautical Communication Panel Working Group F, was elected as chair for the meeting and emphasized the purpose of the workshop. Mr. Loftur Jonasson, Technical Officer, ANB ICAO Headquarters acted as Secretary who was assisted by Messrs. Li Peng and Frederic Lacat, Regional Officers CNS of the ICAO APAC Office.

4. Agenda of the Meeting

4.1 The Agenda of the meeting was as follows:

1. Introduction to Aviation Spectrum and ITU/WRC Process
2. Preparation of the WRC2015- Review relevant agenda items
3. Spectrum management current practice and challenges in the APAC Region
4. Any other business

5. Organization, Working arrangement, Language and Documentation

5.1 The Group met as a single body. The working language was English inclusive of all documentation and this report. A list of papers and presentations is at **Attachment 2**.

Agenda Item 1: Introduction to Aviation Spectrum and ITU/WRC Process

1.1 Under this agenda item, 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).

1.2 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).

1.3 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.

Agenda Item 2: Preparation of WRC2015 - Review relevant agenda items

2.1 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).

2.2 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

2.2.1 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;

2.3 Mr. Eddy D'Amico, Airservices Australia presented the outcome of the APT APG2015-2 to the meeting (SP/01).

2.4 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).

2.4.1 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.

2.5 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.

Agenda Item 3: The spectrum management current practice and challenges in the APAC Region**Frequencies Interference issue**

3.1 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.

3.2 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.

3.3 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.

3.4 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

3.5 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.

3.5.1 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.

3.5.2 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.

3.5.3 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

3.6 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 WRC2015 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.

Agenda Item: 4: Any other business

4.1 The meeting ended with thanks to the experts for their contribution to the meeting/workshop.

4.2 The meeting noted that the next regional preparatory meeting for WRC2015 i.e. the APT APG2015-3 meeting is scheduled from 9 to 13 June 2014 in Brisbane, Australia. Registration is expected to be completed by 1 April 2014. It was also advised that in conjunction with meeting, a workshop on the conference and preparation procedure will be conducted from 6 to 7 June 2014. The letter of invitation for the meeting is provided at www.aptsec.org/2014-APG15-3 . The next two regional preparatory meetings will be held early 2015 in China and in July in Republic of Korea.

**ICAO REGIONAL PREPARATORY GROUP (RPG) MEETING FOR ITU
WORLD RADIOCOMMUNICATION CONFERENCE 2015 (WRC-2015)
PATTAYA, THAILAND, 11 - 12 MARCH 2014**

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
1	Australia	Mr. Eddy D'Amico	RF Spectrum Engineer/Projects & Engineering	Airservices Australia GPO Box 367, Canberra ACT 2601 Australia	Tel: +61 (2) 6268 5443 Fax: +61 (2) 6268 5191 E-mail: eddy.damico@airservicesaustralia.com
2	Australia	Mr. Samir Raghubanshi	RF Networks Engineer/Projects & Engineering	Airservices Australia Building 330, Tower Road Melbourne Airport, Tullamarine, VIC 3043 Australia	Tel: +61 (2) 9339 2538 Fax: +61 (2) 8340 8314 E-mail: sam.raghubanshi@airservicesaustralia.com
3	Bangladesh	Mr. A.K.M. Manzur Ahmed	Deputy Director (Planning)	Planning & Training Division Civil Aviation Authority of Bangladesh Headquarters, Kurmitola, Dhaka 1229 Bangladesh	Tel: +880 172 629 0536 Fax: +880 (2) 890 1411 E-mail: ahmed_manzur@yahoo.com
4	Bangladesh	Mr. Muhammad Abdul Moen	Assistant Director	Communications Engineering Civil Aviation Authority of Bangladesh Headquarters, Kurmitola, Dhaka 1229 Bangladesh	Tel: +880 173 151 3152 Fax: +880 (2) 890 1411 E-mail: monem@live.com
5	Brazil	Mr. Waldir Nunes	CNS Expert	DELEA Av Gen Justo 160, Rio De Janeiro, Brazil	Tel: Fax: E-mail: waldir.nunes@hotmail.com
6	Canada	Mr. John Taylor	Aeronautical Spectrum Regulation Specialist	Transport Canada 330 Sparks Street, Ottawa Ontario, K1A0N8, Canada	Tel: +1 (613) 993 4061 Fax: E-mail: john.taylor@tc.gc.ca
7	China	Mr. Kanlin Wang	Engineer	Civil Aviation Administration of China 155 Donsi Street West, Dongcheng Beijing People's Republic of China	Tel: +86 (10) 6409 2363 Fax: E-mail: loplod@gmail.com
8	Ghana	Ing Frank Kofi Apeagyei	Senior Electronics Engineer	Ghana Civil Aviation Authority Private Mail Bag, Kotaka International Airport ACCRA, Ghana	Tel: +233 2358 16782 Fax: +233 302 773293 E-mail: fapeagyei@gcaa.com.gh

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
9	India	Mr. Nikhil Ranjan Das	General Manager (CNS)	Airports Authority of India Rajiv Gandhi Bhavan, Safdarjung Airport New Delhi - 110003, India	Tel: +91 (11) 2462 0287 Fax: E-mail: gmcomchq@aai.aero
10	Japan	Mr. Toshiyuki Obata	Technical Official	Ministry of Internal Affairs and Communications, Kasumigaseki 2-1-2 Chiyodaku, Tokyo, Japan	Tel: +81 (3) 5253 5902 Fax: E-mail: t2.obata@soumu.go.jp
11	Japan	Dr. Naruto Yonemoto	Chief Researcher	Electronic Navigation Research Institute (ENRI) 7-42-23, Jindaiji-Higashi Chofu, Tokyo 182-0012, Japan	Tel: +81 422 41 3174 Fax: +81 422 41 3176 E-mail: yonemoto@enri.go.jp
12	Japan	Mr. Horoyuki Tsuji	Senior Researcher of Wireless Communication	Wireless Communication Company NICT, 4-2-1, Nukui-Kitamachi Koganei Tokyo, Japan	Tel: Fax: E-mail: tsuji@nict.go.jp
13	Japan	Mr. Taichi Takayama	Researcher	Mitsubishi Research Institute, Inc. 10-3, Nagatacho, 2-chome, Chiyoda-ku Tokyo, Japan	Tel: +81 (3) 6705 6039 Fax: +81 (3) 5157 2145 E-mail: takayama@mri.co.jp
14	Japan	Dr. Fumie Ono	Senior Researcher	Dependent Wireless Laboratory Japan	Tel: +81 4684 75094 Fax: E-mail: fumie@nict.go.jp
15	Japan	Mr. Hiroshi Okochi	Project Manager, Satellite Engineering Department	JRANSA, Kaiji Center Building 4-5 Kojimachi, Chiyoda-Ku Tokyo, 102-0083, Japan	Tel: +81 (3) 5214 1353 Fax: +81 (3) 5214 1359 E-mail: ookouchi@iransa.or.jp
16	Japan	Mr. Sanshiro Shirahashi	Project Manager	JRANSA, Kaiji Center Building 4-5 Kojimachi, Chiyoda-Ku Tokyo, 102-0083, Japan	Tel: +81 3 5214 1353 Fax: +81 3 5214 1359 E-mail: shirahashi@iransa.or.jp
17	Malaysia	Mr. Sahrol Nizal Ab Rashid	Assistant Director	Department of Civil Aviation Air Traffic Management Sector No. 27, Persiaran Perdana, Level 4 Block Podium B, Precint 4, 62618 Putrajaya, Malaysia	Tel: +603 8871 4278 Fax: +603 8881 0530 E-mail: sahrol@dca.gov.my

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
18	Malaysia	Mr. Zulkefli Harun	Senior Deputy Director	Department of Civil Aviation Air Traffic Management Sector No. 27, Persiaran Perdana, Level 4 Block Podium B, Precint 4, 62618 Putrajaya, Malaysia	Tel: +603 8871 4225 Fax: +603 8881 0530 E-mail: zulkefliharun@dca.gov.my
19	Malaysia	Mr. Yushida Mohd Yunus	Deputy Director	Malaysian Communications & Multimedia Commission Off Persiaran Multimedia, Malaysia	Tel: +60 (3) 8688 8177 Fax: E-mail: yushida.yunus@cmc.gov.my
20	Mongolia	Mr. Purevsuren Gantugs	Director of Communication Navigation Surveillance services	Civil Aviation Authority of Mongolia Buyant-Ukhaa 10th Khoroo Khan-uul District 17120 Ulaanbaatar, Mongolia	Tel: +976 (11) 285-050, 9911 9230 Fax: E-mail:
21	Netherlands	Mr. Gerlof E. Osinga	Senior Manager Aviation & Maritime	The Netherlands P.O. Box 450 9700 AL Groningen, The Netherlands	Tel: +31 (6) 535 484 95 Fax: E-mail: gerlof.osinga@agentschaptetelecom.nl
22	New Zealand	Mr. Dave Kershaw		Dave Kershaw Consulting Ltd. 53 Ngarara Rd., Waikanae, 5036 New Zealand	Tel: +64 (4) 905 6164 Fax: E-mail: dave.kershaw@dkconsulting.co.nz
23	Philippines	Mr. Charlemagne P. Gilo	Acting Division Chief Aeronautical Telecommunications Division (AICD)	Civil Aviation Authority of the Philippines Air Traffic Service, MIA Road Pasay City, The Philippines	Tel: +63 (2) 879 9282 Fax: +63 (2) 879 9259 E-mail: charlemagne.gilo@gmail.com
24	Philippines	Mr. Henry T. Bartolome	Air Traffic Management Officer	Civil Aviation Authority of the Philippines Air Traffic Service, MIA Road Pasay City, The Philippines	Tel: +63 (2) 879 9159 Fax: +63 (2) 879 9259 E-mail: htbartolome@yahoo.com
25	Republic of Korea	Mr. Kim Ki Hyoun	Assistant Director	Air Navigation Facilities Division Office of Aviation Policy Ministry of Land, Infrastructure and Transport #11, Doum-Ro 6, Sejong Special Self-governing City, 339-012, Republic of Korea	Tel: +82 44 201 4362 Fax: E-mail: kimhwalove@daum.net

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
26	South Africa	Ms. Cokisa Lisa Tele	Engineer CNS	ATNS, Block C, Eastgate office park, Southern Boulevard, Bruma Johannesburg, South Africa	Tel: +27 11 607 1000 Fax: E-mail: LisaT@atns.co.za
27	South Africa	Mr. Takalani R. Tshikalaha	Senior Engineer R & D	ATNS, Block C, Eastgate office park, Southern Boulevard, Bruma Johannesburg, South Africa	Tel: +27 11 607 1000 Fax: E-mail: takalanit@atns.co.za
28	South Africa	Mr. Bonny Mokoena	Senior Engineer	ATNS, Block C, Eastgate office park, Southern Boulevard, Bruma Johannesburg, South Africa	Tel: +27 11 607 1375 Fax: +27 11 607 1000 E-mail: bonnym@atns.co.za
29	Thailand	Mr. Pichai Thongsom	Electrical Engineer	Department of Civil Aviation 71 Soi Ngamduplee, Rama IV Road Sathorn, Bangkok 10120, Thailand	Tel: +66 (2) 287 3194 Fax: E-mail:
30	Thailand	Mr. Chainan Chaisompong	Engineering Manager	Aeronautical Radio of Thailand (Ltd.) 102 Ngamduplee, Tungmahamek Sathon, Bangkok 10120, Thailand	Tel: +66 (2) 287 8391 Fax: E-mail: chainanchaisompong@gmail.com
31	United Kingdom	Mr. John Mettrop	Spectrum Expert	Civil Aviation Authority K6, CAA House 45-49 Kingsway London WC2B 6TE, United Kingdom	Tel: +44 (207) 453 6531 Fax: E-mail: John.Mettrop@caa.co.uk
32	United Kingdom	Mr. Stephen Parry	Spectrum Manager	NATS, Corporate and Technical Centre 4000 Parkway, Whiteley Fareham, Hampshire, PO 15 7 Floor United Kingdom	Tel: +44 1489 616 454 Fax: E-mail: stephen.parry@nats.co.uk
33	USA	Mr. Michael Biggs	Senior Electronics Engineer Spectrum Planning & International Team	Air Traffic Organization, Technical Operations Federal Aviation Administration 800 Independence Avenue SW Washington DC 20591, USA	Tel: +1 (202) 267 8241 Fax: E-mail: michael.biggs@faa.gov

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
34	USA	Mr. Robert Kerczewski	Project Manager	National Aeronautics and Space Administration NASA Glenn Research Center 21000 Brookpark Road, USA MS 54-1 Cleveland, Ohio 44135, USA	Tel: +1 (216) 433 3434 Fax: E-mail: rkerzewski@nasa.gov
35	USA	Mr. Michael Mullinix	Electrical Engineer	Federal Communications Commission 445 12th Street SW Washington, DC 20554, USA	Tel: +1 (202) 418 0491 Fax: E-mail: Michael.Mullinix@fcc.gov
36	USA	Mr. Brandon J. Mitchell		NTIA, 1401 Constitution Avenue N.W. Washington D.C. 20230, USA	Tel: +1 (202) 482 4487 Fax: E-mail: bmitchell@ntia.doc.gov
37	USA	Mr. Joseph Cramer	Regional Director	The Boeing Company 1200 Wilson Blvd., Arlington VA 22269, USA	Tel: +1 (703) 465 3486 Fax: E-mail: Joseph.Cramer@boeing.com
38	AIRBUS	Mr. Claude Pichavant	Senior Expert Communications & Surveillance	Communications & Surveillance Department ICCAIA - Member for ACP Airbus, 316 Route de Bayonne 31060, Toulouse Cedex 9, France	Tel: +33 (6) 2245 2389 Fax: E-mail: claude.pichavant@airbus.com
39	AIRBUS	Mr. Uwe Schwark	System Engineer	Airbus Operations GmbH Kreetslag 10, 21129, Hamburg, Germany	Tel: +49 4074 372908 Fax: E-mail: uwe.schwark@airbus.com
40	ASRI	Mr. Andrew Roy	Director, Engineering Services	Aviation Spectrum Resources, Inc. 2551 Riva Road, Annapolis Maryland 20871, USA	Tel: +1 (410) 573 3366 Fax: E-mail: acr@asri.aero
41	ASRI	Mr. Kris Hutchison	President	Aviation Spectrum Resources, Inc. 2551 Riva Road, Annapolis Maryland 20871, USA	Tel: +1 (410) 266 4386 Fax: E-mail: keh@asri.aero
42	BOEING	Mr. Mohamed El Amin	Director, Regulatory Affairs	Boeing UK Ltd. Heathrow House, Bath Road Hounslow TW5 9QQ, United Kingdom	Tel: +44 208 2355 600 Fax: +44 208 235 5608 E-mail: mohamed.elamin@boeing.com

No.	State/Org.	Name/Last name	Designation	Address	Tel/Fax/E-mail
43	EUROCONTROL	Mr. Sven Fraenkel	Frequency Spectrum Manager	EUROCONTROL Rue De La Fusee 96 1130 Brussels, Belgium	Tel: +32 475 307 105 Fax: E-mail: sven.fraenkel@eurocontrol.int
44	IRIDIUM	Ms. Barbara Ramsay		Iridium Australia C/-Bramex Pty Ltd 147 Hawkesbury Crescent Farrer ACT 2607, Australia	Tel: +61 (2) 6286 2023 MB: +61 412 523 519 E-mail: ramsay@bramex.com.au
45	IRIDIUM	Mr. Ross Ramsay		Iridium Australia C/-Bramex Pty Ltd 147 Hawkesbury Crescent Farrer ACT 2607, Australia	Tel: +61 (2) 6268 2023 MB: +61 412 623 519 E-mail: ramsay@bramex.com.au
46	ITU	Mr. Nikolai Vassiliev	Head, Fixed and Mobile Service Division	International Telecommunication Union Place des Nations CH-1211 Geneva, Switzerland	Tel: +41 22 730 530 Fax: E-mail: nikolai.vassiliev@itu.int
47	ICAO	Mr. Loftur Jonasson	Technical Officer CNS	ICAO Headquarters Montreal, Quebec H3C 5H7 Canada	Tel: +1 514 954 8219 ext 7130 Fax: E-mail: ljonasson@icao.int
48	ICAO	Mr. Li Peng	Regional Officer CNS	ICAO Asia and Pacific Office 251/1, Vibhavadi Rangsit Road Ladyao, Chatuchak Bangkok 10900, Thailand	Tel: +66 (2) 537 8189 Ex.158 Fax: E-mail: pli@icao.int
49	ICAO	Mr. Frederic Lecat	Regional Officer CNS	ICAO Asia and Pacific Office 251/1, Vibhavadi Rangsit Road Ladyao, Chatuchak Bangkok 10900, Thailand	Tel: +66 (2) 537 8189 Ex. 155 Fax: E-mail: flecat@icao.int



International Civil Aviation Organization

**REGIONAL PREPARATORY GROUP (RPG) MEETING FOR ITU
WORLD RADIOCOMMUNICATION CONFERENCE 2015
(WRC-2015)**

Pattaya, Thailand, 11 – 12 March 2014

LIST OF WORKING/INFORMATION AND PRESENTATIONS

WP/IP/ SP No.	Agenda Item	Subject	Presented by
WORKING PAPERS			
WP/1	-	Provisional Agenda	Secretariat
WP/2	3	Approach to Address the New Operational Needs for Frequencies such as 8.33 kHz Spacing in the VHF Bands	Secretariat
WP/3	1	Outcome of ANC/12, Regional Follow-up and Preparation for ITU WRC-2015	Secretariat
WP/4	3	Aeronautical Frequency Spectrum Coordination and Management in the APAC Region	Secretariat
INFORMATION PAPERS			
IP/1	-	Meeting Bulletin	Secretariat
IP/2	3	Frequency Finder	Secretariat
IP/3	3	Website for the ICAO Global Database of Frequency Assignment	Secretariat
PRESENTATIONS			
SP/1	2	APT Preliminary View on the Various WRC-15 Agenda Items	Australia
SP/2	2	Spectrum for Mobile and Broadband	United Kingdom
SP/3	2	Fixed Satellite Service Spectrum to Support the Safe Operation of Unmanned Aircraft Systems	The Netherlands
SP/4	2	Review the Use of the Band 5 091 – 5 150 MHz by FSS	Canada
SP/5	2	Wireless Avionics Intra-communications (WAIC)	Boeing

WP/IP/ SP No.	Agenda Item	Subject	Presented by
SP/6	2	FSS Earth Station Registration	USA
SP/7	2	An Overview of all Aviation Relevant Agenda Items to be Addressed by the next WRC-15	USA
SP/8	3	ICAO Handbook on Radio Frequency Spectrum Requirements for Civil Aviation Vol. 1 – ICAO Spectrum Strategy Vol. II – Frequency Planning	Secretariat
SP/9	1	Aviation Frequency Spectrum and the ITU World Radiocommunication Conference WRC)	Secretariat
SP/10	2	Global ATC Surveillance via LEO Satellite	Canada
SP/11	3	International Spectrum Management and Interference Mitigation	ITU
SP/12	2	Agenda Item 9.1.5 ITU WRC-15	South Africa
