Document WRC-15-IRWSP-14/7-E
3 November 2014
English only

2nd ITU INTER-REGIONAL WORKSHOP ON WRC-15 PREPARATION (Geneva, 12 – 13 November 2014)

APT PREPARATORY PROCESS FOR WRC-15

ASIA PACIFIC TELECOMMUNITY

ASIA PACIFIC TELECOMMUNITY

APT PREPARATORY PROCESS FOR WRC-15

ASIA PACIFIC TELECOMMUNITY

Contents

- **Part 1:**
  - **APT Conference Preparatory Group for WRC-15**
  - **Process of Developing APT Common Proposals**
- **Part 2:**
  - **APT's Preliminary Views on WRC-15 Agenda Items**

Part 1:

- APT Conference Preparatory Group for WRC-15
- Process of Developing APT Common Proposals

APT Conference Preparatory Group for WRC-15

Agenda: draft in WRC Res & final in Council Res

Informal Group
(Structure & Chairmanship)

Proposals

Proposals

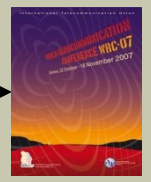
Coordinated common proposals

CPM Report

Director's Report

WRC

Conference Secretariat (BR & GS)



Final Acts

Radio Regulations (CS89)

Member States

The WRC Process

Source: ITU-BR

APT CONFERENCE PREPARATORY GROUP WRC-15 (APG-15)

- APT's preparatory activities for WRC-15 was started in September 2012 by the 1st Meeting of APT Conference Preparatory Group for WRC-15 (APG15-1) in Da Nang, Socialist Republic of Vietnam

- Chairman: Dr. Alan Jamieson (New Zealand)
- Vice Chairs:
  - Mr. Kavouss Arasteh (Islamic Republic of Iran)
  - Dr. Kyu-Jin Wee (Republic of Korea)
- Editorial Chair: Mr. John Lewis

APT Conference Preparatory Group for WRC-15 (APG-15)

- APG Structure is same as CPM Chapter Structure

WP1:	• Mobile and Amateur Issues: 1.1, 1.2, 1.3 & 1.4 • Chair: Dr. Kyung-Mee Kim (Republic of Korea)
WP2:	• Science Issues: 1.11, 1.12, 1.13 & 1.14 • Chair: Ms. Zhu Keer (People's Republic of China)
WP3:	• Aeronautical, Maritime and Radiolocation Issues: 1.5, 1.15, 1.16, 1.17 & 1.18 • Chair: Mr. Neil Meaney (Australia)
WP4:	• Satellite Services: 1.6, 1.7, 1.8, 1.9.1, 1.9.2 and 1.10 • Chair: Mr. Gao Xiaoyang (People's Republic of China)
WP5:	• Satellite Regulatory Issues: 7, 9.1.1, 9.1.2, 9.1.3; 9.1.5; 9.1.8 & 9.3 • Chair: Mr. Muneo Abe (Japan)
WP6:	• General Issues: 2, 4, 8, 9.1.4, 9.1.6, 9.1.7 & 10 • Mr. Taghi Shafiee (Islamic Republic of Iran)

APT Conference Preparatory Group for WRC-15 (APG-15)

- APG-15 Meeting Schedule and Workplan

Meeting	When & Where	Outputs
APG15-1	10-11 September 2012 Da Nang, Socialist Republic of Vietnam	• Elected APG-15 Chairman and Vice-Chairmen • Formed the APG-15 Working Parties based on CPM-15 Structure • Appoints of Chairmen for Working Parties • Adoption of Document Approval Procedure • Adoption of the Workplan
APG15-2	01-05 July 2013 Bangkok, Thailand	• Review the progress of studies in ITU-R Study Groups on WRC-15 Agenda items • Formation of Drafting Groups on WRC-15 Agenda Items • Develop APT's Preliminary Views on WRC-15 Agenda Items based on Member's contribution and study result available at ITU-R Study Groups

APT Conference Preparatory Group for WRC-15 (APG-15)

- APG-15 Meeting Schedule and Workplan

Meeting	When & Where	Outputs
APG15-3	09-13 June 2014 Brisbane, Australia	• Review the progress of studies in ITU-R Study Groups on WRC-15 Agenda items • Review and update APT's Preliminary Views on WRC-15 Agenda Items based on result of the outcomes of APG15-2, Member's contribution and study result available at ITU-R Study Groups • Develop APT's view on RA-15 related issues
APG15-4	09 – 14 February 2015 (Bangkok, Thailand)	• Develop APT's contribution to CPM15-2 • Review the progress of studies in ITU-R Study Groups on WRC-15 Agenda items • Review and update APT's Preliminary Views on WRC-15 Agenda Items based on result of the outcomes of APG15-2, Member's contribution and study result available at ITU-R Study Groups • Develop APT's view on RA-15 related issues

APT Conference Preparatory Group for WRC-15 (APG-15)

- APG-15 Meeting Schedule and Workplan

Meeting	When & Where	Outputs
APG15-5	Tentatively End July/Early August 2015 Republic of Korea	• Development of Preliminary APT Common Proposals for RA-15 and WRC-15 • Making the arrangements for coordination among APT member countries attending WRC-15

APT Conference Preparatory Group for WRC-15 (APG-15)

- **PROCESS OF DEVELOPING APT COMMON PROPOSALS**
  - In general, for a WRC Preparatory Cycle APT organizes five APG Meetings
  - The meetings developed and updated APT Preliminary Views on WRC Agenda items based on the ITU-R studies available and input contributions from Members
  - At the final preparatory meeting, Preliminary APT Common Proposals (PACP) are developed
  - Two Stage procedures are followed for developing APT Common Proposals

APT Conference Preparatory Group for WRC-15 (APG-15)

- **PROCESS OF DEVELOPING APT COMMON PROPOSALS**
  - Stage One:
    - Based on the APT Preliminary Views on Agenda Items Proposals are developed by the WPs at the 5th APG meeting
    - If there is consensus at the Plenary, a proposal becomes a PACP
  - Stage Two:
    - All APT Members will be asked to consider inclusion of their country name as a signatory to each PACP
    - A PACP becomes ACP if it is
      - Supported by at least 25% of the APT Members (Administrations)
      - And not opposed by the 50% of the number of Members who support it

Part 2: APT's Preliminary Views on WRC-15 Agenda Items

(Organized is the order of CPM Report Chapters)

APT's Preliminary Views on WRC-15 Agenda Items

Working Party 1

CPM Chapter 1: Mobile and Amateur Issues

Agenda Items: 1.1, 1.2, 1.3 & 1.4

Website: http://www.apt.int/APG-WP1

AGENDA ITEM 1.1

- *"to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with **Resolution 233 (WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members, in principle, support potential additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) in accordance with Resolution **233 (WRC-12)**.
  - While considering potential candidate bands for additional identification for IMT, APT Members support studies, currently being carried out by ITU-R.
  - APT Members are of the view that the ITU-R studies should also take into account;
    - efficient use of spectrum and resolves of Resolution **233 (WRC-12)**;
    - the need for harmonization of spectrum bands to facilitate global roaming and to achieve economies of scale for IMT equipment development;
    - the need for protection of services to which the frequency bands are currently allocated;
    - protection of radionavigation service in accordance with No. 4.10 of the Radio Regulations;
    - the needs of developing countries;
    - spectrum requirements to address evolving needs, evolving technologies and user demand for IMT and other terrestrial mobile broadband applications as well as other services; sharing and compatibility issues with other services already having allocations in the potential candidate bands and in adjacent bands considering the current and planned use of these bands by the existing services, as well as the applicable studies already performed in ITU-R for the purpose of identification of the spectrum for IMT with respect to corresponding frequency bands being proposed for study.

AGENDA ITEM 1.1

- **APT's Preliminary Views:**
  - APT Members are also of the view that regional harmonization on potential candidate frequency bands is important to satisfy WRC-15 agenda item 1.1
  - The following frequency bands are under consideration with a view to develop APT Preliminary views for WRC-15 agenda item 1.1, as appropriate:

    470-694/698, 698-790, 1 300-1 350, 1 350-1375, 1 375-1 400, 1 300-1 400, 1 350-1 400, 1 427-1 518, 1 427-1 452, 1 427.9-1 462.9/1 475.9-1 510.9, 1 452-1 492, 1 492-1 518, 1 427-1 525, 1 518-1 559, 1 559-1 610, 1 610-1 660.5*, 1 626.5-1 660.5, 1 668-1 675, 1 695-1 700, 1 695-1 710, 1 670-1 710, 2 025-2 110/2 200-2 290, 2 090-2 110, 2 200-2 215, 2 700-2 900, 2 900-3 300*, 3 300-3 400, 3 400-3 600, 3 400-3 700, 3 600-3 700, 3 600-4 200, 3 700-4 200, 4 400-4 500, 4 500-4 800, 4 800-4 900, 4 800-4 990, 4 800-5 000, 5 350-5 470, 5 725-5 850, 5 850-6 700, 5 850-6 725 MHz.

    (NOTE *: The band, or portion of the band, is not included in the studies for WRC-15 agenda item 1.1 by ITU-R JTG 4-5-6-7. It should be noted that some of these bands may not be aligned with the sub-band division in Article 5 of the Radio Regulations.)

AGENDA ITEM 1.2

- *"to examine the results of ITU-R studies, in accordance with Resolution 232 (WRC-12), on the use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service in Region 1 and take the appropriate measures;"*

- **APT's Preliminary Views:**
  - APT members support the studies being conducted in ITU-R in accordance with Resolution **232 (WRC-12)**
  - any possible regulatory actions under WRC-15 Agenda Item 1.2 based on these studies should be limited to Region 1 and the Islamic Republic of Iran (which is party to GE06 Agreement)
  - No additional constraint shall be placed on services allocated on a primary basis to administrations in Region 3.
  - Encourage necessary action to be taken to include the allocation of 694-790MHz to the Mobile, except aeronautical mobile, Service in Region 1(referred to in Resolution 232) in Article 5 of Radio Regulation, as appropriate, based on the result of compatibility and sharing studies together with appropriate regulatory procedures
  - In so doing, from a global harmonization point of view, the frequency arrangement(s) for IMT need to be adopted in the band below 790MHz taking into account, to the extent feasible, frequency arrangements in the band 698-806 MHz as currently contained in Recommendation ITU-R M.1036.
  - The appropriate OOBE value to be used for Region 1 and I.R of Iran adopted by JTG 4-5-6-7, should be based on the result of compatibility studies.

AGENDA ITEM 1.2

- **APT's Preliminary Views:**
  - For GE06 country in Region 3: In the decisions of WRC-15 on Agenda Item 1.2, the integrity of GE-06 Agreement in relation to I.R Iran needs to be ensured considering cumulative effect of interference from Mobile Service to Broadcasting Service.

AGENDA ITEM1.3

- *"to review and revise Resolution **646 (Rev.WRC-12)** for broadband public protection and disaster relief (PPDR), in accordance with Resolution **648 (WRC-12).**"*

- **APT's Preliminary Views:**
  - APT Members support revision of Resolution **646 (Rev.WRC-12)** for regional harmonisation of frequency bands/ranges for future deployment of broadband PPDR.
  - Different amounts of available spectrum may be used within bands included in revised Resolution 646 by APT Members depending on their national circumstances. This will provide flexibility to decide the amount of spectrum and the frequency arrangement that best meets their overall national broadband PPDR requirements.

AGENDA ITEM 1.4

- *to consider possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz in accordance with Resolution 649 (WRC-12);*

- **APT 's Preliminary Views**

  APT Members are of the view that:

  - the frequency band 5 250 – 5 275 kHz should be excluded from any method to satisfy the agenda item;
  - a secondary allocation to the amateur service could be made if compatibility and sharing studies show that there will be no interference to existing services in the frequency band 5 275 – 5 450 kHz
  - APT Members support relevant ITU-R studies on this issue.

APT's Preliminary Views on WRC-15 Agenda Items

Working Party 2

CPM Chapter 2: Science Issues

Agenda Items: 1.11, 1.12, 1.13, 1.14

Website: http://www.apt.int/APG-WP2

AGENDA ITEM 1.11

- *"to consider a primary allocation for the Earth exploration-satellite service (Earth-to-space) in the 7-8 GHz range, in accordance with **Resolution 650 (WRC-12)**;*

- **APT's Preliminary Views:**

  - APT Members support the current sharing studies in the ITU-R in accordance with Resolution **650** (WRC-12)

  - APT Members support a global primary allocation to the EESS (Earth-to-space) in the band 7 190-7 250 MHz in the Table of Frequency Allocations in RR Article **5**

  - APT Members are also of the view that the existing services in this band should be adequately protected from potential interference due to the possible new allocation to the Earth exploration-satellite service (Earth-to-space), in accordance with Resolution **650 (WRC-12)**, and no constraints are placed on these services

  - APT Members noted that as a result of recent Working Party 7B meeting on May 2014, three methods with related options have been provided, which needs to be carefully reviewed by administrations

AGENDA ITEM 1.12

- *"to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz, in accordance with Resolution **651 (WRC-12)**;"*

- **APT's Preliminary Views:**

  - It supports ITU-R studies concerning the sharing and compatibility issues for the extension of EESS (active) spectrum.

  - Some APT Members supports an extension of EESS (active) by up to 600 MHz within the frequency ranges 9 200-9 300 MHz/9 900-10 400 MHz or 9 900-10 500 MHz on a primary and/or secondary basis.

  - Extension bands may only be used for those EESS (active) systems requiring more than 600 MHz for their operation that cannot be accommodated in the existing frequency band 9 300-9 900 MHz.

  - Appropriate protection of the existing services currently allocated in the same frequency bands, especially the radiodetermination service, should be ensured according to the Radio Regulations.

  - No harmful interference should be caused to the SRS in the adjacent frequency band 8 400-8 500 MHz and the RAS and EESS (passive) in the frequency band 10.6-10.7 GHz.

  - Development of existing services should not be constrained by the EESS (active) allocation.

AGENDA ITEM 1.13

- *"to review No. **5.268** with a view to examining the possibility for increasing the 5 km distance limitation and allowing space research service (space-to-space) use for proximity operations by space vehicles communicating with an orbiting manned space vehicle, in accordance with Resolution **652 (WRC-12)**;"*

- **APT's Preliminary Views:**
  - APT Members support removal of the 5 km distance limitation and not solely limit the use of the band for extra-vehicular activities from RR No. **5.268** which would allow space research service (space-to-space) enhanced flexibility and safety for proximity operations by space vehicles communicating with an orbiting manned space vehicle, on condition that by removal of the distance limitation, the current pfd limits included in RR No. **5.268** be maintained to assure continued protection of the fixed and mobile (except aeronautical) services in the band 410-420 MHz.

AGENDA ITEM 1.14

- *"to consider the feasibility of achieving a continuous reference time-scale, whether by the modification of coordinated universal time (UTC) or some other method, and take appropriate action, in accordance with Resolution **653 (WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members are generally supportive of the studies undertaken by ITU-R WP 7A on the feasibility of achieving a continuous reference time-scale.
  - A continuous international reference time-scale is beneficial for most users, and an appropriate implementation of continuous international time-scale should be developed and agreed by relevant international organizations.
  - A continuous international reference time-scale can be achieved by stopping the insertion of leap seconds in UTC.
  - Suppression of leap seconds reduces the risk of operator error and increases the reliability of systems that depend upon time.
  - The dissemination of two "standard" time-scales might bring significant risks of confusion.
  - Considering its wide applications, the redefinition of UTC must be treated with caution.

APT's Preliminary Views on WRC-15 Agenda Items

Working Party 3

CPM Chapter 3: Aeronautical, Maritime and Radiolocation Issues

Agenda Items: 1.5, 1.15, 1.16, 1.17 & 1.18

Website: http://www.apt.int/APG-WP3

AGENDA ITEM 1.5

- *"to consider the use of frequency bands allocated to the fixed-satellite service not subject to Appendices **30**, **30A** and **30B** for the control and non-payload communications of unmanned aircraft systems (UAS) in non-segregated airspaces, in accordance with Resolution **153 (WRC-12)**"*

- **APT's Preliminary Views:**
  - Support ITU-R studies on measures to enable use of frequency bands allocated to the fixed-satellite service not subject to Appendices **30**, **30A** and **30B** for the control and non-payload communications of unmanned aircraft systems (UAS) in non-segregated airspaces, in accordance with Resolution **153 (WRC 12)**
  - The compatibility between UAS CNPC links and incumbent systems in related bands should be ensured
  - Satellite command and control links should comply with accepted safety requirements, including ICAO Standards and Recommended Practices (SARPs) when developed
  - Any regulation relating to UAS operation in FSS bands should prevent an adverse impact on existing and future satellite networks of the FSS and other services in the same band without compromising relevant ICAO Standards and Recommended Practices (SARPs)

AGENDA ITEM 1.5

- **APT's Preliminary Views:**
  - Clear identification of globally harmonized spectrum for UAS CNPC links is preferred so that the current practice of licensing of manned aircraft following the ICAO standards can be extended to unmanned aircraft
  - All studies relating to the supporting Document towards preliminary draft new Report should be duly completed and adopted by ITU-R Study Groups before WRC-15
  - All technical, operational, regulatory issues referred to above should be properly addressed
  - Performance availability and service availability requirements to ensure safety aspects of the UAS CNPC and to conform to the very high degree of reliability required for such operation are yet to be established.

AGENDA ITEM 1.15

- *"to consider spectrum demands for on-board communication stations in the maritime mobile service in accordance with Resolution 358 (WRC-12)"*

- **APT's Preliminary Views:**
  - APT supports ITU-R studies on the spectrum demands for on-board communication stations in the maritime mobile service in accordance with Resolution **358 (WRC-12)**
  - APT supports the consensus which has been made in ITU-R Working Party 5B (WP 5B) meeting, and the single Method to address this Agenda item in draft CPM text
  - APT also supports the following:
    - The identification of new frequencies for on-board communications in UHF is not justified and therefore not necessary.
    - However the importance of on-board communications for ship safety operations is fully recognized, together with the congestion in some geographical areas.
    - A more efficient usage of the existing frequencies could be achieved with the systematic utilization of both 12.5 kHz and 6.25 kHz channel spacing for all the channels identified in the RR for on-board communications. The numbering of these channels should be clearly harmonized worldwide.

AGENDA ITEM 1.15

- **APT's Preliminary Views:**
  - APT also supports the following:
    - The implementation of digital technology will open the possibility for additional operational features and a number of different standards are available.
    - For analogue technology the use of CTCSS and DCS could be used as a way to mitigate the impression of congestion to the user.
    - For digital technology the use of DCS or an operational equivalent system could be used as a way to mitigate the impression of congestion to the user. The LBT technology should be used.
    - To achieve this, amendments to provision RR No. **5.287** and Recommendation ITU-R M.1174 are necessary. Provision is made for 25 kHz, 12.5 kHz and 6.25 kHz channel spacing.
    - To achieve a higher degree of flexibility for the use of systems, it is proposed to indicate two frequency bands in RR No.**5.287**.
    - No constraints should be placed on the existing 25 kHz analogue on-board communication systems with the least modification to existing equipment being preferable.

AGENDA ITEM 1.16

- *"to consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution **360 (WRC-12)**"*

- **APT's Preliminary Views:**
  - Supports ITU-R studies towards new applications using the AIS and enhanced maritime radiocommunication in the maritime mobile service in accordance with Resolution **360 (WRC-12)**.
  - No modifications are required to existing AIS equipment on board existing vessels, but rather allow for new applications using AIS technology to evolve, supported by communication primarily on the new frequencies identified by WRC-12, while protecting the integrity of the original operational purpose of AIS as the primary function on the existing AIS frequencies.
  - That the frequency band identified for VDES should accommodate the expected future AIS VDL loading.
  - It is needed to take full account of the outcomes of WRC-12 on digital communication channel arrangements in RR Appendix **18** for the global and regional channel allocation for VDES. Different types of VDES applications and equipment in different scenarios and operating in different frequency arrangement plan could be considered

AGENDA ITEM 1.16

- **APT's Preliminary Views:**
  - Any new allocation for the future applications, including satellite application, to the frequency bands listed in the Appendix **18** should be based on issued ITU-R Recommendation(s) to contain gap analysis, sharing and compatibility, experiments and tests, applications, system architecture, characteristics, shipborne equipment standards, performance or managing requirements, etc.
  - Transitional arrangements are required to minimize the impact of use of new applications on the existing services using frequencies listed in the Appendix **18**. The VDES equipment should provide backwards compatibility for existing AIS, the installation costs should be minimized and the proper transitional period should be considered.
  - New VDES should not adversely impact VHF radiotelephony channels used for maritime safety at sea and ports.
  - Operation of designated ASM channels should not adversely impact AIS 1 and AIS 2 channels.
  - VDES Satellite downlinks should not adversely impact AIS 1 and AIS 2 channels, and terrestrial component of VDES.
  - It is desirable to consider the possibility of VDES involvement in the future modernized GMDSS.
  - The channels AIS 1, AIS 2, ASM 1 and ASM 2 should not be subject to harmful interference and blocking from transmissions from ships.
  - The two channels 2027 and 2028 should be used for new AIS applications, the usage of remaining channels 1027 and 1028 should be taken into account.

AGENDA ITEM 1.17

- *"to consider possible spectrum requirements and regulatory actions, including appropriate aeronautical allocations, to support wireless avionics intra-communications (WAIC), in accordance with Resolution **423 (WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members support relevant ITU-R studies on WAIC in accordance with Resolution **423 (WRC-12)**.
  - APT Members support a primary allocation to AM(R)S in the frequency band 4 200 - 4 400 MHz, limited to WAIC systems.
  - APT Members are also of the view that the introduction of WAIC systems should not constrain the existing primary service to which this frequency band is allocated

AGENDA ITEM 1.18

- *"to consider a primary allocation to the radiolocation service for automotive applications in the 77.5-78.0 GHz frequency band in accordance with Resolution **654 (WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members support a primary allocation to the radiolocation service for automotive applications in the 77.5-78.0 GHz frequency band, provided that it does not place any additional constraint on the services to which the frequency band is allocated. APT Members are still considering views on Method A and Method B

Working Party 4

CPM Chapter 4: Satellite Services

Agenda Items: 1.6, 1.7, 1.8, 1.9.1, 1.9.2 & 1.10

Website: http://www.apt.int/APG-WP4

AGENDA ITEM 1.6

- ***Agenda Item 1.6.1:*** *"to the fixed-satellite service (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1; and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU-R studies, in accordance with Resolution **151 (WRC-12)**"*

- **APT 's Preliminary Views:**
  - APT Members support ITU-R to conduct studies on Agenda Item **1.6.1** in accordance with Resolutions **151 (WRC-12)**, while ensuring protection of existing primary services in the band(s). In addition, it should be ensured that the possible additional allocations to the FSS (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1 under the WRC-15 Agenda item **1.6.1** would protect and not cause undue constraints to the existing primary services in Region 3
  - APT Members are of the view that, if consideration is given to use of the band 14.5-14.8 GHz, there is a need to take appropriate measures to ensure the integrity and adequate protection of the AP**30A** Plan and List in Region 3 from any new fixed-satellite service utilization of the bands in Region 1.

AGENDA ITEM 1.6

- **APT ‘s Preliminary Views:**
  - APT Members are of the view that to obtain the pfd coordination threshold, MSPACE simulations have been run to calculate the maximum pfd that a new assignment in Region 1 and 3 Feeder link Plan and List could produce in the orbital position of an existing BSS feeder link Plan assignment and not “affect” it. An assignment is considered as not affected when the equivalent protection margin (EPM) of the existing AP 30A assignment does not fall more than 0.45 dB below 0 dB, or, if already negative, more than 0.45 dB. Extrapolating, the pfd value obtained has been proposed as threshold for coordination for a new assignment in the FSS (Earth-to-space) allocation with respect to any existing BSS feeder link. Further information could be found in the latest draft CPM text (Annex 21 of Document 4A/468)

  - APT Members further have a view that, the bands 10.6-10.7 GHz and 13.25-13.75 GHz should be excluded from the candidate bands under Agenda item **1.6.1** to protect the EESS (passive) and EESS (active) respectively.

AGENDA ITEM 1.6

- ***Agenda Item 1.6.2:*** *"to the fixed-satellite service (Earth-to-space) of 250 MHz in Region 2 and 300 MHz in Region 3 within the range 13-17 GHz; and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU-R studies, in accordance with Resolution* ***152 (WRC-12)"***

- **APT's Preliminary Views**
  - APT Members support ITU-R to conduct studies on Agenda Item **1.6.2** in accordance with Resolutions **152 (WRC-12)**, while ensuring protection of existing primary services in the band(s)
  - APT Members are of the view that, if consideration is given to use of the 14.5-14.8 GHz band, there is a necessity to take appropriate measures to ensure the integrity and adequate protection of the AP**30A** Plan and List from any new fixed-satellite service utilization of the bands
  - APT Members are of the view that to obtain the pfd coordination threshold, MSPACE simulations have been run to calculate the maximum pfd that a new assignment in Region 1 and 3 Feeder link Plan and List could produce in the orbital position of an existing BSS feeder link Plan assignment and not "affect" it. An assignment is considered as not affected when the equivalent protection margin (EPM) of the existing AP 30A assignment does not fall more than 0.45 dB below 0 dB, or, if already negative, more than 0.45 dB. Extrapolating, the pfd value obtained has been proposed as threshold for coordination for a new assignment in the FSS (Earth-to-space) allocation with respect to any existing BSS feeder link. Further information could be found in the latest draft CPM text (Annex 21 of Document 4A/468)

AGENDA ITEM 1.6

- **APT's Preliminary Views**
  - APT Members are of the view that, the band 13.25-13.40 GHz should be excluded from the candidate bands under Agenda item **1.6.2**.
  - APT Members are of the view that, the band 13.40-13.75 GHz should be excluded from the candidate bands under Agenda item **1.6.2** unless sharing studies ensure the compatibility between FSS (uplink) and the EESS (active).

AGENDA ITEM 1.7

- *"to review the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in accordance with Resolution **114 (Rev.WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members support the current Method A of the draft CPM text as shown in Annex 23 of Document 4A/468. APT Members also noted that the future application of ARNS systems in the band 5091-5150MHz should be protected from harmful interference and the development should not be limited.

AGENDA ITEM 1.8

- *"to review the provisions relating to Earth Stations located on board Vessels (ESVs), based on studies conducted in accordance with Resolution **909 (WRC-12);**"*

- **APT's Preliminary Views**
  - APT Members support ITU-R studies relating to ESVs operating in the fixed-satellite service in the uplink bands 5 925 – 6 425 MHz and 14.0 – 14.5 GHz, in accordance with Resolution **909 (WRC-12)**.
  - Some APT Members are of the view that change to the provisions applying to ESVs operating in the fixed-satellite service in the uplink bands 5 925 – 6 425 MHz and 14.0 – 14.5 GHz, in accordance with Resolution **909 (WRC-12)** may adversely impact the deployment of their national fixed and mobile services.

AGENDA ITEM 1.9.1

- *"to consider, in accordance with Resolution **758 (WRC-12),** possible new allocations to the fixed-satellite service in the frequency bands 7 150-7 250 MHz (space-to-Earth) and 8 400-8 500 MHz (Earth-to-space), subject to appropriate sharing conditions;"*

- **APT's Preliminary Views:**
  - APT Members support technical and regulatory studies in ITU-R on the possible new allocations to the fixed-satellite service (FSS) in the frequency bands 7 150-7 250 MHz (space-to-Earth) and 8 400-8 500 MHz (Earth-to-space), ensuring sharing and compatibility with existing services
  - APT Members also support that the pfd limits for a space station of the FSS or MSS in the band 7 250-7 375 MHz (space-to-Earth) shown in Table 21-4 of Article 21 of the Radio Regulations could be applicable to the space station of the FSS in the band 7 150-7 250 MHz with respect to the terrestrial services allocated on a primary basis in the band
  - APT Members are of the view that the possible new allocation should be limited to FSS systems not including small VSAT-like FSS earth stations in order to enable appropriate compatibility with systems of other services.

AGENDA ITEM 1.9.2

- *"to consider, in accordance with Resolution **758 (WRC12)**: the possibility of allocating the bands 7 375-7 750 MHz and 8 025-8 400 MHz to the maritime-mobile satellite service and additional regulatory measures, depending on the results of appropriate studies"*

- **APT's Preliminary Views:**
  - APT members support the ITU-R technical and regulatory studies for possible new allocations of maritime-mobile satellite service (MMSS) in the 7/8 GHz bands, while ensuring compatibility with existing services and their future development in these bands and no undue constraints should be placed on existing services

  - APT members also support that the pfd limits for a space station of FSS in the band 7 375-7 750 MHz (space-to-Earth) shown in Table **21-4** of Article **21** of the Radio Regulations could also be applicable to a space station of MMSS with respect to the existing terrestrial stations taking into account of the study results of the ITU-R.

AGENDA ITEM 1.10

- *"to consider spectrum requirements and possible additional spectrum allocations for the mobile-satellite service in the Earth-to-space and space-to-Earth directions, including the satellite component for broadband applications, including International Mobile Telecommunications (IMT), within the frequency range from 22 GHz to 26 GHz, in accordance with Resolution **234 (WRC-12)**"*

- **APT's Preliminary Views:**
  - APT Members expressed their concerns regarding studies of potential allocation for MSS. The Members are of the view that the frequency requirements for the 22-26 GHz band should be clearly identified for the potential MSS allocation taking into account current allocations for MSS above 19 GHz
  - Considering the potential impact of interference from possible allocation for MSS in the frequency band 22-26 GHz, APT Members have a view that sharing studies should be conducted taking into account protection to incumbent services including Fixed Service
  - The requirements and additional allocations should take into account the result of studies yet to be completed by the ITU-R

APT's Preliminary Views on WRC-15 Agenda Items

Working Party 5

CPM Chapter 5: Satellite Regulatory Issues

Agenda Items: 7, 9.1.1, 9.1.2, 9.1.3, 9.1.5, 9.1.8 & 9.3

Website: http://www.apt.int/APG-WP5

AGENDA ITEM 7

- *"to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)** to facilitate rational, efficient, and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;"*

- **APT Preliminary Views:**
  - **General Consideration:**
    - APT Members support the review of the advance publication, coordination, notification and recording procedures of satellite networks subject to this agenda item in accordance with Resolution 86 (Rev. WRC-07), on the basis, activity under this Agenda Item would not be used to make any change to the Table of Frequency Allocations of Article 5 RR and associated footnotes of that Article. This should be done by careful consideration of each issue under this Agenda Item respectively taking into account rational and efficient use of orbit/spectrum resources

    - APT Members are of the view that this issue is for the purpose of improvement of advanced publication, coordination and notification procedures, but not used as allowing new WRC Agenda Items.

AGENDA ITEM 7

- **Issue A (SC-WP): Informing the BR of a suspension under RR No. 11.49 beyond six months**
  - APT Members support Methods A1 or A2 in the 1st SC-WP Chairman's Report.
  - APT Members do not support Method A3 in the 1st SC-WP Chairman's Report.
  - In view of difficulties of the issue, further studies are required. APT Members are therefore invited to carry out necessary studies in this regard and submit their contributions for further considerations in future meetings.

- **Issue B (SC-WP): Publication of information on bringing into use of satellite networks at the ITU website**
  - APT Members are of the view that it is necessary to make available the information on bringing into use and suspension of satellite networks on the ITU website and publish it in the BR IFIC. No consensus has been reached at APG15-3 on appropriate method to satisfy this issue, which needs further consideration

- **Issue [C] (SC-WP): Modifications to RR Appendix 30B in relation to the suspension of use of a frequency assignment**
  - APT Members support the conclusion reached in 1st SC-WP which an alignment between RR Appendix 30B, RR Article 11 and RR Appendices 30 and 30A in relation to the suspension of use of a frequency assignment is required

AGENDA ITEM 7

- **Issue [D] (SC-WP): Clarification of the capability of a space station when bringing into use frequency assignments under No. 11.44B of the Radio Regulations**
  - Taking into account of discussion on this issue in the last WP-SC meeting, APT Members support further studies and considerations on this issue that conducted by ITU-R under WP4A and SC-WP
- **Issue [E] (SC-WP): Possible cancellation of advance publication mechanism for satellite networks subject to coordination under Section II of Article 9 of the Radio**
  - APT Members are of the view that potential impact of API suppression and the required necessary transitional measures should be carefully studied before making any decision
- **Issue [F] (SC-WP): Using one space station to bring frequency assignments at different orbital locations into use within a short period of time**
  - Taking into account the discussion taken place in the WP-SC meeting in December 2013, APT Members are of the view that this issue should be carefully studied before making any conclusion
- **Issue [G] (SC-WP): Failure of a [newly launched] satellite during the ninety-day bringing into use period**
  - No Consensus

AGENDA ITEM 7

- **Issue D (WP4A): Possible method to mitigate excessive filings issue**
  - APT Members are called upon to continue monitoring the studies in ITU-R WP4A and the SC and contribute to the next APG15-4 meeting

- **Issue B (APG15-2): Possible modification of RR No. 11.41**
  - Taking into account that currently a large number of assignments recorded in the MIFR are entered in application of the provision RR No. 11.41, APT Members are of the view that the relevant remarks or indications relating to assignments for which an unfavorable finding led to the relevant recording could not be removed permanently unless the coordination procedure specified in RR No. 11.32 is completed, even though harmful interference may not be observed for many years
  - APT Members noted the discussions taken place at the February 2014 WP 4A meeting which was indicated in Section 4.3 of Doc.4A/468. Taking into account that the issue is quite complex, APT Members are of the view that the issue should be carefully studied before making any conclusions

- **Issue C (APG15-2): Application of RR AP30B No. 6.29 (elimination of harmful interference of frequency assignments)**
  - Having due regard to the differences between Article 11 and Appendix 30B with respect to term of interference, APT Members support that at this stage there is no need to include in Appendix 30B a provision that is equivalent to the provisions No. 11.42A of Article 11

AGENDA ITEM 7

- **Issue: Qualification of issues under WRC-15 agenda item 7**
  - Noting that this issue has only been discussed in the SC-WP once, APT Members are of the view that the consideration of this issue is premature and thus requires further study

- **Issue: Satellite leasing**
  - At this stage, APT Members support no change to the Radio Regulations

AGENDA ITEM 9.1

- *"to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on the activities of the Radiocommunication Sector since WRC-12;"*

- **APT's Preliminary Views:**
  - **Issue 9.1.1:** *Resolution **205 (Rev.WRC-12)** - Protection of the systems operating in the mobile-satellite service in the band 406-406.1 MHz*
    - APT Members support appropriate regulatory, technical and operational studies with a view to ensure the adequate protection of MSS systems in the frequency band 406-406.1 MHz from any emissions that could cause harmful interference. However, all incumbent services to which the relevant bands are allocated should be protected for existing and planned assignments and undue constraints should not be imposed on such assignments

AGENDA ITEM 9.1

- **APT's Preliminary Views:**
  - **Issue 9.1.2:** *Resolution **756 (WRC-12)** - Studies on possible reduction of the coordination arc and technical criteria used in application of No. 9.41 in respect of coordination under No. 9.7*
    - APT Members are of the view that the reduction of coordination arc is directly related to application of RR 9.41. The issue is complex and currently is being studied under ITU-R Study Groups (WP4A). The reduction in size of coordination arc may reduce the requirement of coordination under RR 9.7 and RR9.27 and Appendix 5 to the RR but it may increase the amount of work to be carried out under RR 9.41. This reduction might have an adverse impact on the existing networks.
    - Use of pfd masks may ease the task of coordination for incoming satellite network but it might have adverse impact on the sensitive existing networks coordinated and notified under the Radio Regulations. The regulatory implementation of pfd masks under relevant provisions is also a matter to be studied.
    - APT supports the studies being carried out within the WP4A and such a work should continue in a comprehensive manner including consideration of increasing the DT/T coordination threshold, reduction of coordination arcs, determination of the appropriate pfd masks, etc., along with inter-related effects from one criterion to another. The related items to be thoroughly studied are contained partly in the above paragraphs.
    - APT will take into account the results of studies being carried out by ITU-R which become available before finalizing its views

AGENDA ITEM 9.1

- **APT's Preliminary Views:**
  - **Issue 9.1.3:** *Resolution **11 (WRC-12)** - Use of satellite orbital positions and associated frequency spectrum to deliver international public telecommunication services in developing countries*
    - Taking into account that some concerns were raised over some regulatory amendments to relevant resolutions of the ITU-R including Resolution **11 (WRC-12)** and Resolution **15 (WRC-03),** APT Members are of the view that this matter should be further studied and considered as appropriate to put emphasis on developed countries so that it may be possible for developing countries to access required services in their geographical local regions, and not to deny their requests unreasonably as clearly mentioned by their primary rights in United Nations and ITU Constitutions. APT Members appreciate that additional efforts be undertaken jointly by the ITU-R and ITU-D to further support capacity building in the area of satellite telecommunications, which is recommended by Working Party 4A in association with Resolution **11 (WRC-12)**

AGENDA ITEM 9.1

- **APT's Preliminary Views:**
  - **Issue 9.1.5:** *Resolution **154 (WRC-12)** - Consideration of technical and regulatory actions in order to support existing and future operation of fixed-satellite service earth stations within the band 3 400-4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in some countries in Region 1(WP 4A (technical and regulatory aspects), SC (regulatory and procedural aspects))*
    - APT Members are encouraged to monitor ITU-R studies noting that this is a Region 1 issue. APT Members do not support any aspects of this Agenda item being applied to Region 3.
  - **Issue 9.1.8:** *Resolution **757 (WRC-12)** - Regulatory aspects for nano- and picosatellites*
    - APT Members support the study to examine the necessary procedures for notifying nano- and picosatellites taking into account their unique characteristics while ensuring the protection of existing allocated services and existing and future radio stations operated in accordance with the RR and avoiding inconsistencies with other provisions of the RR

APT's Preliminary Views on WRC-15 Agenda Items

Working Party 6

CPM Chapter 6: General Issues

Agenda Items: 2, 4, 8, 9.1.4, 9.1.6, 9.1.7, 10

Website: http://www.apt.int/APG-WP6

AGENDA ITEM 2

- *"to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution **27 (Rev.WRC-12)**;"*

- **APT's Preliminary Views:**
  - APT Members support examination and review of ITU-R Recommendations incorporated by reference and the corresponding references in the Radio Regulations in accordance with Resolution **28 (Rev.WRC-03)** and the principles contained in Annex 1 of Resolution **27 (Rev.WRC-12)**.
  - APT Members are urged to use the basic concepts and processes presented in Resolutions **27 (Rev.WRC-12)** and Resolution **28 (Rev.WRC-03)** to develop their proposals for consideration by future APG meetings.

AGENDA ITEM 4

- *"in accordance with Resolution **95 (Rev.WRC-07)**, to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;"*

- **APT's Preliminary Views:**
  - APT Members are encouraged to review Resolutions and Recommendations of the previous conferences in accordance with Resolution **95 (Rev.WRC-07)** with a view to developing regional positions in APG15

AGENDA ITEM 8

- *"to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-07)**;"*

- **APT's Preliminary Views:**
  - APT Members are encouraged to review their footnotes and to propose, as soon as possible, the deletion of their country names or the deletion of country footnotes to the Table of Frequency Allocations in Article **5** of the Radio Regulations, if no longer required*, taking into account* Resolution **26 (Rev.WRC-07)**.
  - APT Members do not support the use of this Agenda item to facilitate the adding of country names to footnotes or the addition of new country footnotes.

AGENDA ITEM 9.1

- *"to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention on the activities of the Radiocommunication Sector since WRC-12;"*

- **APT's Preliminary Views**
  - **Issue 9.1.4:** *Updating and rearrangement of the Radio Regulations*
    - APT Members are invited to follow the ITU-R studies on this issue. However, APT Members are of the view that revision of the Radio Regulations should not lead to any difficulty in the interpretation and its implementation.
  - **Issue 9.1.6:** *Resolution **957 (WRC-12):** Studies towards review of the definitions of fixed service, fixed station and mobile station*
    - Noting that the responsible working parties for satellite and terrestrial services have indicated that modifications to the definitions of fixed service, fixed station or mobile station would have adverse impact on the operation of various satellite radiocommunication services/systems, therefore APT Members are of the view that there is no need to modify the existing definitions of fixed service, fixed station and mobile station.
    - APT Members support the conclusion reached by ITUR-WP1B under this item i.e. no change to the Radio Regulations and suppression of Resolution **957 (WRC-12)**.

AGENDA ITEM 9.1

- **APT's Preliminary Views**
  - **Issue 9.1.7:** *Resolution **647 (Rev.WRC-12)**: Spectrum management guidelines for emergency and disaster relief radiocommunication*
    - APT Members support to continue the ITU-R studies related to spectrum management guidelines for emergency and disaster relief radiocommunication. APT Members are encouraged to consider the outcomes of ITU-R Working Party 1B, June 2014 and contribute to the next APG meeting.

AGENDA ITEM 10

- *"to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention;"*

- **APT's Preliminary Views**
  - APT Members are invited to examine the proposed Agenda items within the Resolution **808 (WRC-12)**. APT Members are also invited to provide new items for inclusion to agenda of WRC-18, taking into account the principles described in Resolution **804 (WRC-12)** and using the template annexed to the Resolution.

CONTACT FOR APG

- For any information about APG please contact:
  - Mr. Forhadul Parvez, Project Coordinator (Radiocommunication)
  - Email: parvez@apt.int
  - Phone: +6625730044 (Ext.117)
  - APG Webpage: http://www.apt.int/APTAPG

APG Documents and Preliminary views are available at: www.apt.int/APTAPG

THANK YOU!