

# APT Preparation for WRC-23

Dr. Kyu Jin WEE  
Chair, APG23

(Most part of this slide was also submitted to the 2<sup>nd</sup> ITU Inter-Regional Workshop.)

## Outline:

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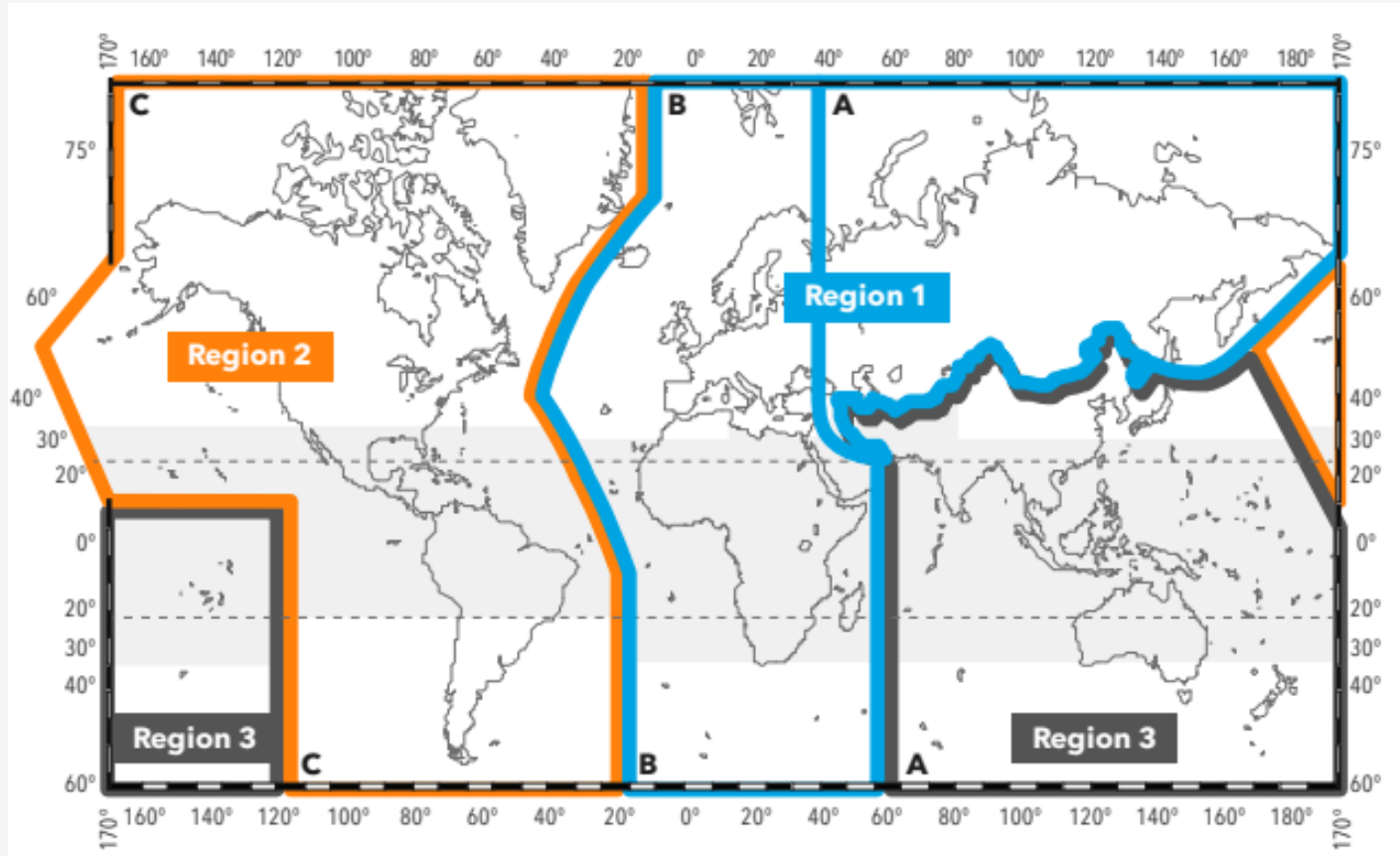
- ❖ Understanding of WRC and its preparation process
- ❖ recent APG meeting(APG23-4)
- ❖ The Asia-Pacific Telecommunity (APT) and APT Conference Preparatory Group for WRC-23 (APG-23)
- ❖ Structure of the APG-23
- ❖ APG-23 Meeting Schedule and Process of Developing APT Common Proposals to WRC-23
- ❖ Drafting Groups of APG-23
- ❖ APT Preliminary Views on WRC-23 Agenda Items (as outcome of APG23-4)
- ❖ Other necessary information

# World Radiocommunication Conferences (WRCs)

- **Updated the Radio Regulations, the international treaty on the use of radio spectrum and satellite orbits**
- **Brought together all stakeholders** in a process that is aimed at **building consensus**
- Provided a **stable and predictable regulatory environment** needed **for future investments**
- Enabled **new radiocommunication systems and applications** to **access the radio spectrum**
- Protected the operation of **existing radiocommunication services**
- Ensured the **rational, equitable, efficient and economical use** of the **radio-frequency spectrum and satellite-orbit resources**



# Worldwide or Regional Spectrum Harmonization

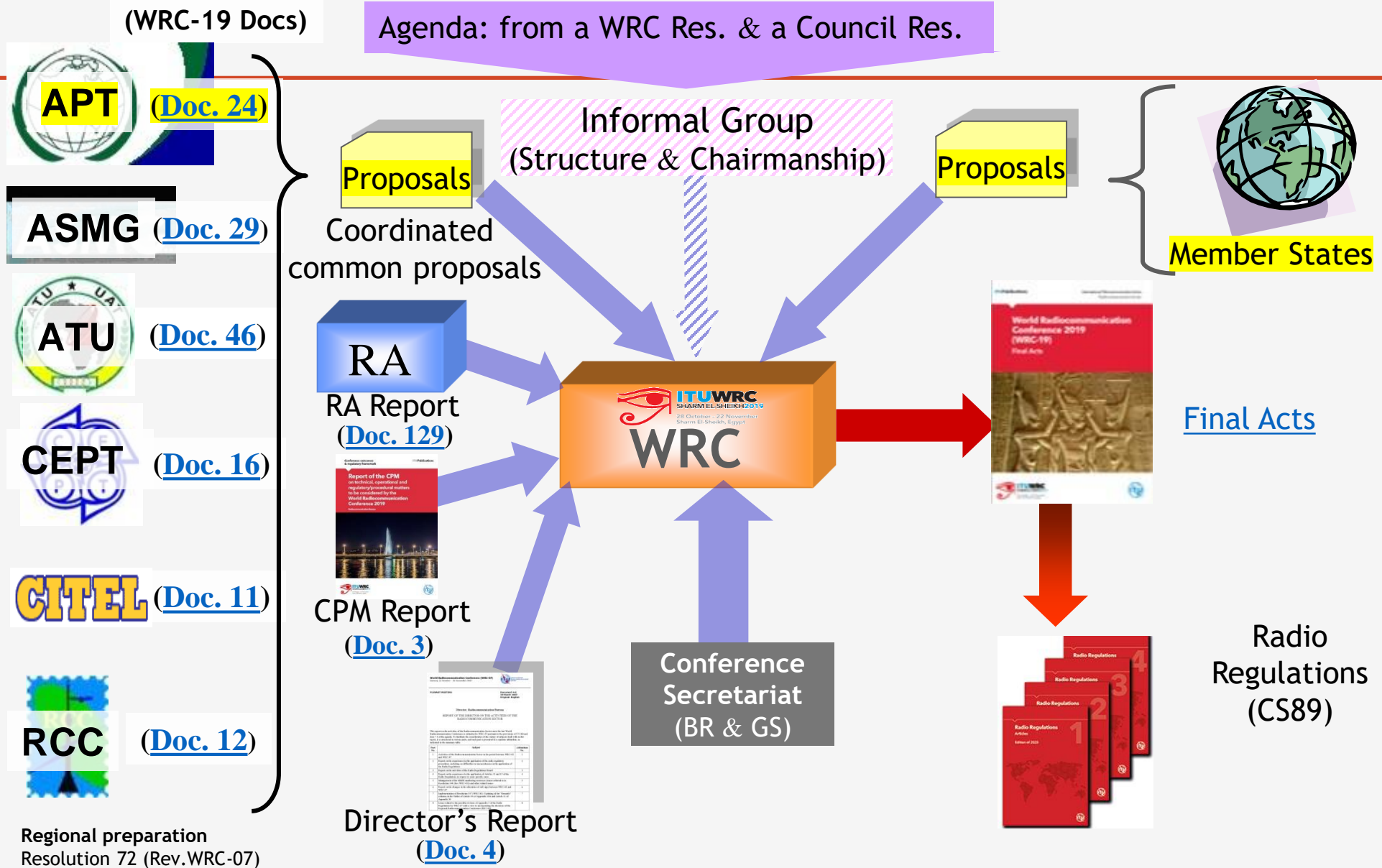


Benefits :

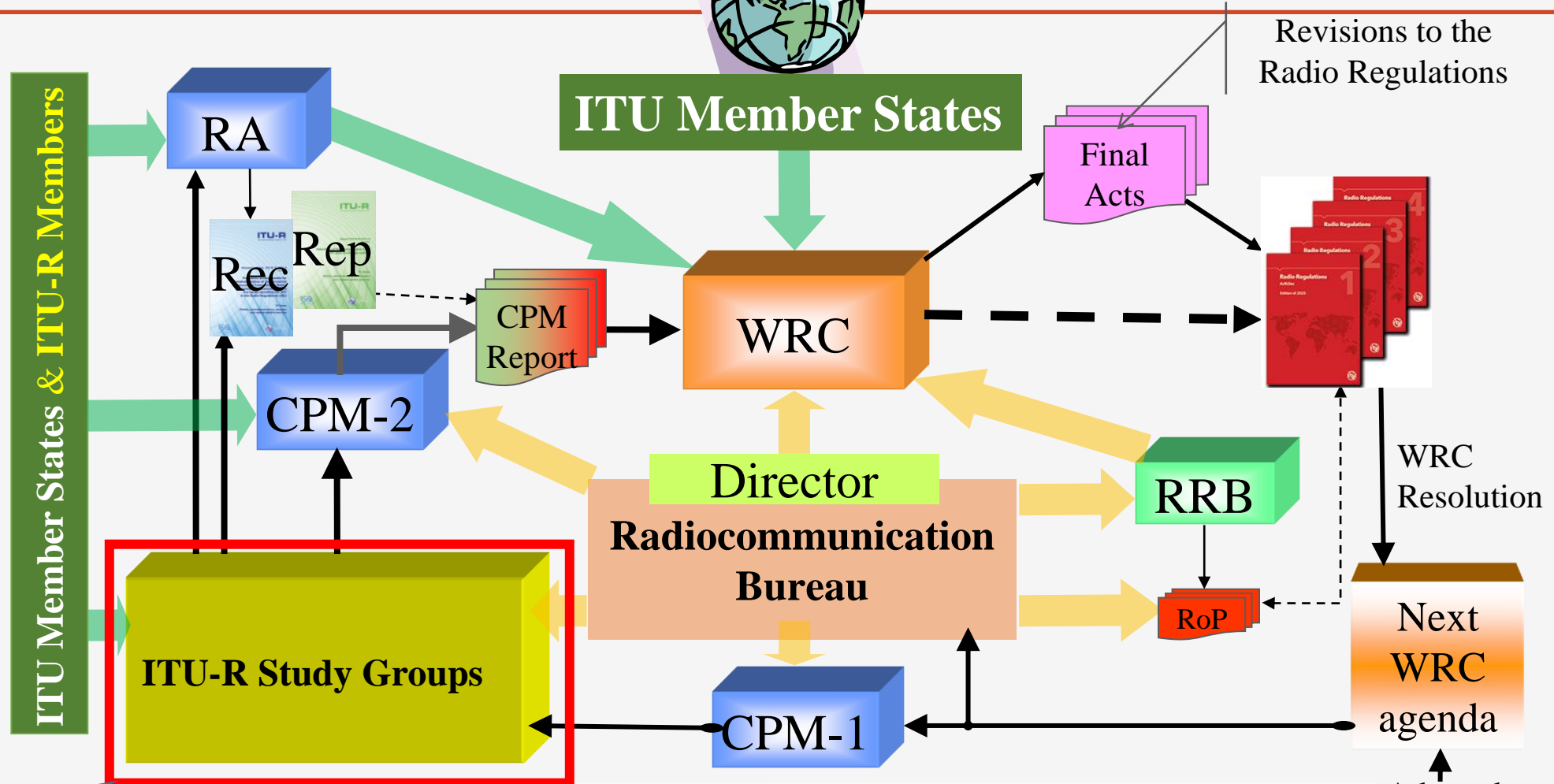
- Reduces the potential for **harmful interference**
- Enables interoperability and **international roaming**, allowing citizens to use the same device in different countries
- Increases economies of scale, thereby enabling **affordable devices and services**
- Supports **emergency communications**

# The WRC Process

Agenda: from a WRC Res. & a Council Res.



# The WRC Cycle



We are here

**RRB:** Radio Regulations Board  
**RA:** Radiocommunication Assembly  
**WRC:** World Radiocommunication Conference  
**CPM:** Conference Preparatory Meeting  
**Rec/Rep:** ITU-R Recommendation/Report  
**RoP:** Rules of Procedure

# recent APG meeting(APG23-4), August 15 – 19, 2022

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- Update APT Preliminary Views(APT PV)
  - APT PV is a formal position of APT members' view collectively
- Summary of Discussion during APG23-4
  - Besides APT PV, it provides additional issues on how APT members currently consider WRC Agenda Item
  - More importantly it also leads the preparation of members' for the next APG meeting
- Revised APG Working Methods
  - Gender neutral words in accordance with the decision of APT Management Committee
  - Establish a process for dynamic coordination with other regional groups during WRC





## The APT Conference Preparatory Group for WRCs (APG)

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- **APG was started in 1996 with the objective of harmonizing views and developing common proposals from the Asia-Pacific region for the World Radiocommunication Conference (WRC)**

The main objective of APG is to organize coordinated regional activities for WRCs and RAs in order to ensure that the interests of APT Members on Radiocommunication issues are properly represented. The activities include but are not limited to:

- a. develop inputs for the interest of the Asia-Pacific region for WRCs and RAs;
- b. develop inputs to ITU-R Conference Preparatory Meetings (CPMs); and,
- c. assist APT Members, especially developing countries, in their preparations and **in coordinating issues of common interest** for WRCs, RAs and CPMs.

# APG-23: Structure and Management Team

The APT Conference Preparatory Group for WRC-23 (APG-23) was established at the 1<sup>st</sup> APG Meeting for WRC-23 (APG23-1), 24-25 September 2020

## Management Team of APG-23

<b>Chair:</b> <b>Dr. Kyu-Jin Wee (Republic of Korea)</b>	
<b>Vice-Chairs:</b> <b>Ms. Zhu Keer (P. R. of China)</b> <b>Mr. Muneo Abe (Japan)</b>	 
<b>Chair of Editorial Committee:</b> <b>Mr. Christopher Hose (Australia)</b>	
<b>Special Senior Adviser:</b> <b>Mr. Kavouss Arasteh</b>	

## Structure of Working Parties of APG-23: Same as CPM-23 Chapters

WP1

- **Fixed, Mobile and Broadcasting Issues:** 1.1, 1.2, 1.3, 1.4, 1.5, 9.1(c) and RR21.5
- Co-Chairs: Dr. Hiroyuki Atarashi (Japan), Dr. Jae-Woo Lim (Rep. of Korea)

WP2

- **Aeronautical and Maritime Issues:** 1.6, 1.7, 1.8, 1.9, 1.10, 1.11 and Res. 427
- Chair: Mr. Bui Ha Long (Viet Nam)

WP3

- **Science Issues:** 1.12, 1.13, 1.14, 9.1 (a) & (d) and Res.655
- Chair: Dr. Wahyudi Hasbi (Indonesia)

WP4

- **Satellite Issues:** 1.15, 1.16, 1.17, 1.18, 1.19 and 7
- Co-Chairs: Ms. Fenhong Cheng (P. R. of China), Mr. Mrunmaya Pattanaik (India)

WP5

- **General Issues:** 2, 4, 8, 9.1 (b), 9.2 and 10
- Chair: Dr. Taghi Shafiee (Islamic Rep. of Iran)

# Drafting Groups of APG-23

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- **Detail list of the Drafting Groups is available from the following link;**
- **[List of the Chairs of the Drafting Groups on WRC-23 Agenda Items \(16 Nov 2022\)](#)**

# Meeting Schedule of APG-23

Meetings	When and where	What to do
APG23-1	24 - 25 September 2020, Virtual	<ul style="list-style-type: none"> <li>• Elected Chair and Vice-Chair</li> <li>• Established the WP Structure</li> <li>• Appointed Chairmen for the WPs</li> <li>• Adopted tentative workplan</li> </ul>
APG23-2	19 - 23 April 2021, Virtual	<ul style="list-style-type: none"> <li>• Established Drafting Groups (DGs) and appointed Chairmen for DGs</li> <li>• Developed APT Preliminary Views on WRC-23 Agenda Items</li> </ul>
APG23-3	8 - 13 November 2021, Virtual	<ul style="list-style-type: none"> <li>• Review the progress of studies in ITU-R Study Groups on WRC-23 Agenda Items</li> <li>• Update APT Preliminary Views</li> </ul>
APG23-4	15 - 20 August 2022(Hybrid)	<ul style="list-style-type: none"> <li>• Review the progress of studies in ITU-R Study Groups on WRC-23 Agenda Items</li> <li>• Update APT Preliminary Views on WRC-23 Agenda Items</li> </ul>
APG23-5	20 – 25 Feb 2023, Busan, Rep. of Korea (Hybrid)	<ul style="list-style-type: none"> <li>• Review the draft CPM Report on WRC-23 Agenda Items</li> <li>• Develop the contributions of APT to CPM23-2</li> <li>• Update APT Preliminary Views on WRC-23 Agenda Items on WRC-23 Agenda Items</li> </ul>
APG23-6	14 – 19 Aug 2023, Brisbane, Australia (Hybrid)	<ul style="list-style-type: none"> <li>• Develop Preliminary APT Common Proposals (PACPs) on WRC-23 Agenda Items</li> <li>• Develop PACPs for RA-23</li> </ul>

## Process of Developing APT Common Proposals to WRC-23

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- Six APG meetings are planned for the Preparatory Cycle for WRC-23
- The meetings develop and update **APT Preliminary Views** on WRC Agenda items based on the ITU-R studies available and input contributions from Members
- At the final APG meeting, **Preliminary APT Common Proposals (PACPs)** are developed
- Two Stage procedures are followed for developing **APT Common Proposals (ACPs)**

# Process of Developing APT Common Proposals to WRC-23

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## Stage One: Adoption of PACP during the APG Meeting

- Based on the APT Preliminary Views on Agenda Items Proposals are developed by the WPs mainly at the 6<sup>th</sup> APG meeting
- A proposal will become a **PACP** once it is adopted by the Plenary

## Stage Two: Adoption of ACP by Correspondence following the APG Meeting

- 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 more than 50% of the number of Members who support it

# APT Preliminary Views on WRC-23 Agenda Items

## Working Party 1: Fixed, Mobile and Broadcasting Issues

**Agenda Items: 1.1, 1.2, 1.3. 1.4, 1.5 and 9.1 Topic: c & RR No. 21.5**

### Co-Chairs:

Dr. Hiroyuki Atarashi (Japan)

Dr. Jae Woo Lim (Rep. of Korea)



# DG Chairs of WP1

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Agenda Items	DG Chair
1.1	Mr. Fierza Mutuahdi Pasaribu (Rep. of Indonesia) Email: <a href="mailto:fier001@kominfo.go.id">fier001@kominfo.go.id</a>
1.2	Dr. Tan Wang (People's Republic of China) Email: <a href="mailto:wangtan@srrc.org.cn">wangtan@srrc.org.cn</a>
1.3	Dr. Azim Fard (Islamic Republic of Iran) Email: <a href="mailto:azimfard@cra.ir">azimfard@cra.ir</a>
1.4	Mr. Shiro Fukumoto (Japan) Email: <a href="mailto:shiro.fukumoto01@g.softbank.co.jp">shiro.fukumoto01@g.softbank.co.jp</a>
1.5	Dr. Azim Fard (Islamic Republic of Iran) Email: <a href="mailto:azimfard@cra.ir">azimfard@cra.ir</a>
9.1 c)	Dr. Yongseok Seo (Republic of Korea) Email: <a href="mailto:on1yys@korea.kr">on1yys@korea.kr</a>
RR21.5	Mr. Dong Zhou (People's Republic of China) Email: <a href="mailto:zhou.dong1@zte.com.cn">zhou.dong1@zte.com.cn</a>



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.1**

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- **APT Preliminary Views :**

- APT Members support the on-going ITU-R studies relating to Agenda Item 1.1.

- **Issues in APG-23:**

- The following issues will be discussed further
  - ✓ The use of spectrum in “international airspace and waters”,
  - ✓ The pfd issues in RR No. **5.441B**
  - ✓ The “*resolve 5*” of Resolution **223 (Rev.WRC-19)**

DG Chair: Mr. Fierza Mutuahdi Pasaribu (Republic of Indonesia)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.2**

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- **APT Preliminary Views:**

- **7 025-7 125 MHz (globally):** APT Members support the on-going sharing and compatibility studies in ITU-R in accordance with Resolution **245 (WRC-19)**. APT Members support potential IMT identification in the frequency band 7 025-7 125 MHz to achieve globally harmonized utilization with appropriate regulatory and technical conditions, where applicable, taking into account the results of studies to ensure the protection of services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate).
- **3 300-3 400 MHz (Region 2 and amend footnote in Region 1):** APT Members support ITU-R studies with a view that any possible IMT identification/or action in the frequency band 3 300-3 400 MHz in Region 1 and Region 2 shall protect the services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3 so that these services shall in no way be adversely affected.
- **3 600-3 800 MHz (Region 2):** APT Members support ITU-R studies with a view that any possible IMT identification in the frequency band 3 600-3 800 MHz in Region 2 shall protect the services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3 so that these services shall in no way be adversely affected.
- **6 425-7 025 MHz (Region 1):** APT Members are of the view that any possible IMT identification in the frequency band 6 425-7 025 MHz in Region 1 shall protect the services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3 so that these services shall in no way be adversely affected. APT Members support the on-going sharing and compatibility studies in ITU-R in accordance with Resolution **245 (WRC-19)** for the frequency band.
- **10 000-10 500 MHz (Region 2):** APT Members support ITU-R studies with a view that any possible IMT identification in the frequency band 10.0-10.5 GHz in Region 2 shall protect the services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3 so that these services shall in no way be adversely affected.

# APT Preliminary Views on WRC-23 Agenda Items: AI 1.2

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- **Issues in APG-23:**

- **Benefits of economies of scale in relation to the IMT identification of the frequency bands in other Regions**

- Some APT Members consider that this factor is important especially for many developing countries in Region 3. Therefore, they are of the view that APT could support the possible identification of the frequency bands for IMT in other Regions.
- Some other APT Members believe that economies of scale arising from the IMT identifications in other Regions are incidental benefits and not a driver in deciding on a Region 3 position.

- **Considerations on protecting incumbent services in Region 3.**

It was expressed by some APT Members:

- due to long border to Region 1 countries, any possible IMT identification in Region 1 shall protect Region 3 services.
- the protection of FSS, including AP30B as a worldwide treaty, shall be fully ensured.

- **Development of technical and regulatory conditions.**

- Administrations are encouraged to consider the technical and regulatory conditions, if any, to protect the services to which the frequency bands are allocated on a primary basis (and in adjacent bands, as appropriate) from the impact of possible IMT identification.

DG Chair Mr. Tan Wang (P. R of China)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.3**

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- **APT Preliminary Views:**

- In the interest of global harmonization, APT Members support ongoing sharing and compatibility studies in ITU-R in accordance with Resolution **246 (WRC-19)** to the possibilities of upgrading mobile service to primary allocation in the band 3 600 – 3 800 MHz in Region 1.
- APT Members are of the view that a possible upgrade of the mobile service to a primary allocation in the band 3 600 – 3 800 MHz in Region 1 shall protect services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3.
- APT Members are also of the view that this is a Region 1 issue, and such upgrading shall not have any adverse effect on the allocation of the existing services and their future development in Region 3.
- APT Members are of the view that any discussions on this agenda item shall not be mixed up on the discussions being followed / carried out under Agenda Item 1.2, i.e., no identification of the frequency band 3 600 – 3 800 MHz for IMT.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.3**

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- **Issues in APG-23:**

- The following issues will be discussed further
  - ✓ The scope of identification of the band 3 600 – 3 800 MHz in R1 for IMT
  - ✓ The global harmonization and economical scale
- Noting that Region 3 has an existing primary allocation to the mobile service in the 3 600 – 3 800 MHz frequency band, the expected action of Region 3 at WRC-23, needs to be carefully discussed at subsequent APG meetings



**DG Chair: Dr. Azim Fard (Republic of Iran)**

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.4**

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- **APT Preliminary Views:**

- APT Members support the ongoing ITU-R studies for establishing a new globally or regionally harmonized regulatory framework for HIBS with a view to providing flexibility of spectrum usage for HIBS in certain frequency bands below 2.7 GHz already identified for IMT referred to in Resolution **247 (WRC-19)**, while ensuring the protection of the existing services, to which the frequency band is allocated on a primary basis, and adjacent bands, as appropriate, without adversely affecting in their deployment including other IMT uses, existing systems and the planned development of primary services.
- APT Members are considering that there is a need to develop the definition of HIBS with a view to potentially be included in the ITU-R Radio Regulations

# APT Preliminary Views on WRC-23 Agenda Items: AI 1.4

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- **Issues in APG-23:**

- APT is concerned with the protection of existing services, especially terrestrial IMT, the broadcasting service (470-694 MHz, 694/698-862 MHz), the aeronautical mobile and the aeronautical radionavigation service (960-1 164 MHz), and the satellite services (2500-2690 MHz and 2483.5 - 2500 MHz). Further discussions will be held to develop an APT position on the appropriate protection conditions for existing services, taking into account ITU-R studies including clarification of differences in results for the same service and whether UE connected to HIBS are subject to study.
- Another issue of interest is the HIBS operating altitude, which is defined in RR 1.66A as 20-50 km for high altitude platform station, but the ITU-R has also been conducting sensitivity analysis at 18 km altitude. Based on the results of this ITU-R study, APT will further discuss on a regulatory proposal to lower the altitude to 18 km provided that the protection of existing services should be ensured. During ITU-R study, a concern was raised about the impact on Gateway-link if the operational altitude of HIBS will be less than 20 km. While gateway links are not subject to Agenda Item 1.4, the analysis of gateway links at an altitude of 18 km in the APT Report "Technical and regulatory analysis of the usage of HAPS gateway-links not specified in the Radio Regulations" issued in September 2022 ([APT/AWG/REP-127](#)) is helpful in addressing this concern.

DG Chair: Mr. Shiro Fukumoto (Japan)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.5**

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- **APT Preliminary Views:**

- APT Members are of the view that conclusions to be reached on Agenda Item 1.5 are a Region 1 issue, and WRC-23 decisions shall in no way adversely affect Region 3 frequency allocations and existing and future use of the relevant frequency band or in no way subject Region 3 to any changes procedural or regulatory provisions.

- **Issues in APG-23:**

- The following issues will be discussed further
  - ✓ The condition of sharing and compatibility studies
  - ✓ The global harmonization and economical scale



**DG Chair: Dr. Azim Fard (Republic of Iran)**



# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 c)**

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- **APT Preliminary Views:**

- APT Members support the on-going ITU-R studies in accordance with Resolution **175 (WRC-19)** under WRC-23 agenda item 9.1 topic c).
- APT Members support reviewing existing ITU-R Recommendation(s), Report(s) and/or Handbook. If this review identifies any need for their revision to meet the objective of this topic, APT Members support revising them accordingly. Should such a revision still not satisfy the requirements of this topic, the development of new Recommendation(s), Report(s) and/or Handbook is supported.
- APT Members support no change to the Radio Regulations under agenda item 9.1 topic c), except for suppression of Resolution 175 (WRC-19).
- APT Members are of the view that the term “fixed wireless broadband” could include a range of applications.
- APT Members are of the view that there is no need to have any draft new or revised Resolution on this matter in the draft CPM text.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 c)**

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- **Issues in APG-23:**

- **The meaning of term “Fixed wireless broadband”** was discussed whether to mention this point in the APT Preliminary Views. There was a proposal to include specific examples of fixed wireless broadband applications, such as “access and core network transport”. After the discussion, it was decided not to include such details.



DG Chair: Dr. Yongseok SEO (Republic of Korea)

# APT Preliminary Views on RR No. **21.5** (1)

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- **APT Preliminary Views:**

- APT Members support the on-going ITU-R studies on the applicability of the limits specified in RR No. **21.5** to IMT stations using active antenna systems (AAS) and the verification of RR No. **21.5** regarding the notification of these IMT stations, in accordance with the scope mentioned in Document 550 of WRC-19 and the guidance provided by the Chairmen of ITU-R Study Group 4 and 5.
- APT Members are of the view that the ITU-R studies should address the matters being raised so far and prepare solutions which provide regulatory provisions/measures for the operation of terrestrial IMT and space services and their future development in a balanced and fair manner

## APT Preliminary Views on RR No. 21.5 (2)

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- **Issues in APG-23:**

- What reference bandwidth should apply in the TRP approach, which is related to the bandwidth adjustment factor being discussed in the current WP 5D studies?
- Should the approach, “the power delivered by a single transmitter to the antenna of an IMT station” be used, what would be the impact of that to the space services?
  - ✓ The following elements need to be discussed further:
    - Value of the power delivered by a single transmitter and its relationship with the number of transmitters of that IMT station,
    - Antenna gain in the direction of satellite.
- Should the TRP approach be used, what would be the effect of that approach on the terrestrial services including IMT and space services, as appropriate?
- Are there any alternative solution(s)?

DG Chair: Mr. Dong Zhou (Peoples' of Republic of China)



# APT Preliminary Views on WRC-23 Agenda Items

Working Party 2: Aeronautical and Maritime Issues

Agenda Items: 1.6, 1.7, 1.8, 1.9, 1.10, 1.11, Res 427(WRC-19)

Chair:

Mr. Bui Ha long (Viet Nam) ([Longbh@rfd.gov.vn](mailto:Longbh@rfd.gov.vn))



# DG Chairs of WP2

Agenda Items	DG Chair
1.6	Mr. Wei Tan (People's Republic of China) Email: <a href="mailto:tanwei@bittt.cn">tanwei@bittt.cn</a>
1.7	Mr. Kok Pin Puah (Singapore) Email: <a href="mailto:puah_kok_pin@caas.gov.sg">puah_kok_pin@caas.gov.sg</a>
1.8	Mr. Nguyen Anh Tuan (Viet Nam) Email: <a href="mailto:tuanna3@vnpt.vn">tuanna3@vnpt.vn</a>
1.9	Mr. Glenn Odlum (Australia) Email: <a href="mailto:glennodlum@bigpond.com">glennodlum@bigpond.com</a>
1.10	Dr. Jicheng Fang (People's Republic of China) Email: <a href="mailto:jchfang@163.com">jchfang@163.com</a>
1.11	Issue A/resolve 1 – GMDSS modernization: Mr. Yoshio Miyadera (Japan) Email: <a href="mailto:miyadera.yoshio@jrc.co.jp">miyadera.yoshio@jrc.co.jp</a>
	Issue B/resolve 2 – eNavigation: Dr. Byungok Kim (Republic of Korea) Email: <a href="mailto:kimbo60@hanmail.net">kimbo60@hanmail.net</a>
	Issue C/resolve 3 – new satellite systems: Ms. Xia Ge (People's Republic of China) Email: <a href="mailto:gexia@bsnc.com.cn">gexia@bsnc.com.cn</a>
<b>Res. 427 (WRC-19)</b>	Mr. Bui Ha Long (Viet Nam) <a href="mailto:longbh@rfd.gov.vn">longbh@rfd.gov.vn</a>

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.6**

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- **APT Preliminary Views:**

- APT Members support ITU-R studies of spectrum needs for communications between stations on board sub-orbital vehicles and terrestrial/space stations and of appropriate modification, if any, to the Radio Regulations consistent with Resolution **772 (WRC-19)**.
- APT Members also support that a new WRC Resolution should be developed, which contains the provisions to operate radiocommunications for sub-orbital vehicles and the definition or description of suborbital vehicle.

DG Chair: Mr. Wei Tan (P. R. of China)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.7**

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- **APT Preliminary Views:**

- APT Members support ITU-R studies defined in Resolution **428 (WRC-19)** for a new AMS(R)S allocation for both the Earth-to-space and space-to-Earth directions in all or part of the frequency band 117.975-137 MHz, while taking into account the protection of existing services operating in this frequency band and in adjacent frequency bands.
- APT Members are considering to support Method B, with the associated conditions as contained in the Draft CPM text.

DG Chair: Mr. Kok Pin Puah (Singapore)





# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.8**

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- **APT Preliminary Views:**

- APT Members support ongoing studies being carried out by ITU-R in relation to Agenda Item 1.8 in accordance with Resolution **171 (WRC-19)**.

- **Issues raised:**

- APT Members note that, due to the complexity of the agenda item and the difficulties caused to this work by COVID-19, the work on preparing draft regulatory text for Method B has not been completed.
- In particular, the questions on how to ensure safety of flight through regular non-safety FSS links, the responsibilities of different administrations/organizations/entities involved in the operation of UAS CNPC systems, the interference management mechanism of frequency assignments, and also the ways to protect terrestrial services are issues that have not yet been settled. From contributions to WP 5B making suggestions for revisions to Resolution **155 (Rev. WRC-19)** under Method B, there are diverging views expressed on the principles for solutions on the above issues as well as other issues and should CPM manage to complete the regulatory text for Method B, there might be different options in respect of several elements of the revision to Resolution **155 (Rev. WRC-19)**. This may have an impact on developing future APT Preliminary Views.

DG Chair: Mr. Nguyen Anh Tuan (Viet Nam)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.9**

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- **APT Preliminary Views:**

- APT Members support any necessary modifications to RR Appendix **27** to accommodate wideband HF technologies for the aeronautical mobile (route) service (AM(R)S) between 2 850 and 22 000 kHz in accordance with Resolution **429 (WRC-19)** with the need to avoid harmful interference to Primary services in the same and adjacent bands in particular existing AM(R)S HF systems.
- APT Members noted that there are differing Wideband HF technologies and are of the view that changes to RR Appendix **27** should allow new digital wideband HF systems taking into account technology neutrality.
- APT Members are also of the view that the implementation of new wideband AM(R)S HF systems may require necessary coordination through ICAO given their role in organizing HF aeronautical channel plans in flight information regions.

DG Chair: Mr. Glenn Odium (Australia)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.10**

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- **APT Preliminary Views:**

- APT Members support ongoing ITU-R studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of non-safety aeronautical mobile applications, in accordance with Resolution 430 (WRC-19);
- APT Members are of the view that the protection of existing primary services in the 15.4-15.7 GHz and 22-22.21 GHz frequency bands and, as appropriate, in adjacent frequency bands should be ensured.
- APT Members are also of the view that:
  - the radiolocation, aeronautical navigation and fixed-satellite (Earth-to-space) services are allocated and used in the 15.4-15.7 GHz band, and future AM(OR)S shall not cause unacceptable interference to nor claim protection from these services.
  - the frequency band 21.2-23.6 GHz is extensively used by terrestrial services, in particular the fixed service, to support the development of telecommunication infrastructure in many countries and is crucial in developing countries and no adverse effect by the potential AM(OR)S allocation on the terrestrial services allocated in this band and its future development should be ensured.

DG Chair: Mr. Jicheng Fang (P. R. of China)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.11**

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- **APT Preliminary Views:**

- **Resolves 1: GMDSS Modernization**

- APT Members support modernization of GMDSS, taking into consideration the activities of IMO, as follows:
      - the deletion of the NBDP for distress and safety communications from GMDSS;
      - the implementation of an ACS for MF and HF;
      - the introduction of MF and HF NAVDAT frequencies into Appendix **15** of the Radio Regulations; and
      - the implementation of the AIS-SART as locating equipment as alternative to Radar SART.
    - APT Members are of the view that introduction of new radiocommunication technologies should not adversely affect the operation of the GMDSS and ensure no adverse effect on the allocation of the existing services and their future development in the same and adjacent frequency bands.
    - APT Members are also of the view that the modernization of GMDSS including the introduction of the automatic connection system (ACS) should be affordable and simple to operate, so that non-SOLAS/non-Convention vessels could also benefit from it.
    - APT Members support the removal of the use of satellite EPIRBs from the frequency band 1645.5-1646.5 MHz.

- **Issues raised:**

- There is an issue raised during the discussion that there should be some transitional periods for introduction of new technologies and removal of incumbent technologies.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.11**

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- **APT Preliminary Views:**

- **Resolves 2: E-navigation**

- APT Members are of the view that it is not necessary to modify the Radio Regulations in support of e-navigation

- **Resolves 3: Introduction of additional satellite systems into the GMDSS**

- APT Members support the introduction of additional GSO satellite systems into the GMDSS, under the conditions that:
      - IMO's action to introduce a new GMDSS satellite system is completed;
      - Coordination and notification in accordance with the relevant and applicable provisions of Articles **9** and **11** of the Radio Regulations and associated Rules of Procedure are applied in order to protect services to which the bands are currently allocated; and
      - Existing services in the same and adjacent bands are not adversely affected.

DG Chairs:



*Resolve 1: Mr. Yoshio Miyadera (Japan)*



*Resolve 2: Mr. Byungok Kim (Rep. of Korea)*



*Resolve 3: Ms. Ge Xia (P. R. of China)*

## APT Preliminary Views on WRC-23 Agenda Items: **Res. 427(WRC-19)**

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- **APT Preliminary Views:**

- APT Members support ITU-R studies on the relevant Articles of the Radio Regulations and their associated appendices to identify outdated aeronautical provisions, and the development of regulatory texts for updating these provisions, in accordance with Resolution **427 (WRC-19)**.
- APT Members are of the view that any proposed changes to the Radio Regulations should not impact current and planned aeronautical systems or applications.

DG Chair: Mr. Bui Ha Long (Viet Nam)



# APT Preliminary Views on WRC-23 Agenda Items

Working Party 3: Science Issues

Agenda Items: 1.12, 1.13, 1.14, 9.1 a), 9.1 d) and Res.655 (WRC-15)

Chair:

Dr.-Ing. Wahyudi Hasbi (Indonesia)



# DG Chairs of WP3

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Agenda Items	DG Chair
<b>1.12</b>	Mr. Kevin Knights (Australia) Email: <a href="mailto:kevin.knights@csiro.au">kevin.knights@csiro.au</a>
<b>1.13</b>	Mr. Rui Han (People's Republic of China) Email: <a href="mailto:hanrui@srrc.org.cn">hanrui@srrc.org.cn</a> ; <a href="mailto:henryxju@gmail.com">henryxju@gmail.com</a>
<b>1.14</b>	Mr. Sohel Rana (Bangladesh) Email: <a href="mailto:sohel@btrc.gov.bd">sohel@btrc.gov.bd</a>
<b>9.1 a)</b>	Mr. Takahiro Yokoyama (Japan) Email: <a href="mailto:t.yokoyama@joy.ocn.ne.jp">t.yokoyama@joy.ocn.ne.jp</a>
<b>9.1 d)</b>	Dr. Hwangjae Rhee (Republic of Korea) Email: <a href="mailto:rhee@syncthecno.com">rhee@syncthecno.com</a>
<b>Res. 655 (WRC-15)</b>	Mr. Takahiro Yokoyama (Japan) Email: <a href="mailto:t.yokoyama@joy.ocn.ne.jp">t.yokoyama@joy.ocn.ne.jp</a>



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.12**

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- **APT Preliminary Views:**

- APT Members are of the view that a new secondary allocation could be supported for the Earth exploration-satellite service (active) for spaceborne radar sounders in the 40 – 50 MHz frequency band if completed ITU-R studies show that the protection of in-band and adjacent band incumbent services would be ensured while not adversely affecting those services. It is noted that the spaceborne radar sounder is only intended to operate in either uninhabited or sparsely populated areas of the globe.

- **Issues during APG23**

- Identifying the specific frequency range for possible allocation at 40 – 50 MHz.
- Highlighting the intent of radar sounder operations to be conducted in uninhabited and sparsely populated areas of the globe

DG Chair: Mr. Kevin Knights (Australia)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.13**

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- **APT Preliminary Views:**

- APT Members support ITU-R studies for the consideration of upgrading the SRS allocation from secondary to primary in the frequency band 14.8-15.35 GHz. Any possible upgrade of the SRS to primary service shall protect and not adversely affect the incumbent services in this frequency band as well as the adjacent bands, including the band 15.35-15.4 GHz to which the RAS is allocated.

- **Issues during APG23**

- There is some discussion to include or not the sentence “The SRS shall not claim protection from stations in the fixed and mobile services. No. 5.43A does not apply.” as the APT preliminary view.
- Considering the progress of WP 7B “the transitional measures” need to be proposed to the WP 7B.
- Appropriate transitional measures need to be developed to protect incumbent services that are allocated on a secondary basis in the frequency band 15.2-15.35 GHz.

DG Chair: Mr. Rui Han (P. R. of China)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.14**

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- **APT Preliminary Views:**

- APT Members support possible adjustments to the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz in accordance with Resolution 662 (WRC-19) subject to the outcome of the study results. However, any changes to the EESS (passive) allocations in the frequency range 231.5-252 GHz shall not adversely affect the operation of other primary services allocated in this frequency range.

DG Chair: Dr. Sohel Rana (Bangladesh)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 a)**

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- **APT Preliminary Views:**

- APT Members support the ITU-R studies relating to the identification of space weather sensors, their technical and operational characteristics, spectrum requirements and appropriate radio service designations with a view to describing appropriate recognition, including a definition for space weather in Article 1 of the Radio Regulations.
- Should the preliminary agenda of WRC-27 include space weather as an agenda item, it is necessary that studies include, inter alia, protection of services to which the band is allocated as well as services in the adjacent band.

- **Issues during APG23**

- Some APT Members expressed their views that any changes to the Radio Regulations are out of the scope of Agenda item 9.1.

DG Chair: Mr. Takahiro Yokoyama (Japan)



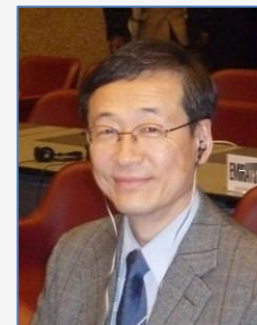
# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 d)**

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- **APT Preliminary Views:**

- APT Members support further studies in the ITU-R to determine appropriate unwanted emission power limits for the protection of EESS (passive) sensors operating in the band 36-37 GHz from non-GSO FSS systems operating in the band 37.5-38 GHz with due consideration of operational aspects of non-GSO FSS system.

DG Chair: Dr. Hwangjae Rhee (Rep. of Korea)



## APT Preliminary Views on WRC-23 Agenda Items: **Res. 655(WRC-15)**

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- **APT Preliminary Views:**

- APT Members support the ongoing ITU-R studies called for by Resolution 655 (WRC-15), recognizing that the 27th General Conference on Weights and Measures (CGPM) in November 2022 will consider adopting Resolution D which proposes that the maximum value for the difference (UT1 – UTC) will be increased. APT Members would like to end leap seconds, while recognizing that it is not the responsibility of the ITU-R to make this decision.

DG Chair: Mr. Takahiro Yokoyama (Japan)



# APT Preliminary Views on WRC-23 Agenda Items

## Working Party 4: Satellite Issues

Agenda Items: 1.15, 1.16, 1.17, 1.18, 1.19 and 7

### Co-Chairs:

Ms. Fenhong CHENG (CHN)

Mr. Mrunmaya Pattanaik (IND)



# DG Chairs of WP4

Agenda Items	DG Chair
1.15	Mr. Phung Nguyen Phuong (Viet Nam) Email: <a href="mailto:phuongpn@rfd.gov.vn">phuongpn@rfd.gov.vn</a>
1.16	Mr. Noriyuki Inoue (Japan) Email: <a href="mailto:ni-inoue@kddi.com">ni-inoue@kddi.com</a>
1.17	Mr. Jiaqian Zhang (People's Republic of China) Email: <a href="mailto:zjq0224@163.com">zjq0224@163.com</a>
1.18	Dr. Daesub Oh (Republic of Korea) Email: <a href="mailto:trap@etri.re.kr">trap@etri.re.kr</a>
1.19	Mr. Risdianto Yuli Hermansyah (Rep. of Indonesia) Email: <a href="mailto:risdianto@telkomsat.co.id">risdianto@telkomsat.co.id</a>
7	<p>General, Topics A, B, F, G, H and L: Ms. Ting Ling Lee (Singapore) Email: <a href="mailto:tingling.lee@ses.com">tingling.lee@ses.com</a></p> <p>Topics C, D, E, I, J and K: Ms. Geetha Remy Vincent (Malaysia) Email: <a href="mailto:geetha@measat.com">geetha@measat.com</a></p>



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ APT Preliminary Views:

- APT Members support on-going studies being carried out by ITU-R Working party 4A for the use of the frequency band 12.75 – 13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO space stations in the FSS while ensuring protection of existing services in those frequency bands and in adjacent bands, in accordance with Resolution **172 (WRC-19)**.
- APT Members are considering to support Method B provided that the remaining elements and part of that method as referred to draft CPM text of agenda item 1.15 are duly completed and finalized and agreed. This includes the following:
  - Interference management mechanism to deal with interference occurring from operation of ESIM to other administrations;
  - Switching facility allowing transmission over these territories of countries which agreed to be included in the service area and/or authorized operation of the service on the territory under jurisdiction and no transmission over these countries if they are not in the service areas or they have not given their authorization for operation of that ESIM;
  - Methodology to enable the Radiocommunication Bureau to examine the conformity with PFD limit as contained in Annexes of draft resolution;
  - Finalisation of calculation of PFD of A-ESIM in different altitudes and elevation angles;
  - Other elements yet to be discussed at the next meeting.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ APT Preliminary Views (cont'd):

➤ APT Members also have preliminary views as follows:

- The use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels shall not limit the access of other administrations to their national resources in Appendix **30B** as well as implementation of Resolution **170 (WRC 19)**.
- The use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels shall not cause unacceptable interference to nor claim protection from the operation of terrestrial services and their future development. With respect to the sharing and compatibility studies between earth stations on aircraft and vessels and terrestrial services, the protection of terrestrial services shall be ensured under all circumstances and conditions in the various sharing scenario.
- Supports the development of a methodology regarding examination by the Bureau of compliance with PFD limits by A-ESIM, or of adequate transitional measures should WRC-23 not finalise the methodology.
- The use of earth stations on board aircraft and vessels shall not cause unacceptable interference (more than what is stipulated in relevant annexes to AP**30B** of the Radio Regulations) to allotments, assignments converted from allotments within the limits of initial characteristics as contained in Plan or modified characteristics, for providing services to national territory as well as those from application of Article 6 and 7 of AP**30B** and those submitted under Resolution **170 (WRC-19)** as well as all existing and planned services in that frequency band and adjacent bands operating in accordance with the Radio Regulations.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ APT Preliminary Views (cont'd):

- Earth stations on board aircraft and vessels shall not claim protection from the allotment plan, assignments in the List of AP30B for national coverage, and other services including terrestrial services to which the frequency band is allocated and operating in accordance with the provisions of Radio Regulations.
- With respect to the sharing and compatibility studies between earth stations on board aircraft and vessels communicating with geostationary space stations in the fixed-satellite service and the fixed service in the frequency band 12.75-13.25 GHz, both long-term and short-term interference scenarios under relevant ITU-R Recommendations should be considered and carried out in these studies.
- For the operation of A-ESIM and M-ESIM, the technical, operational and regulatory provisions including responsibilities of administrations and entities responsible for the operation, authorization and the interference management system of these earth stations need to be clearly defined.
- The only administration that could notify ESIM is the same administration as the one notifying the GSO network to which the ESIM communicate. Thus, notification of any frequency assignment for ESIMs shall only be made by one single administration, which will be responsible for resolving potential interferences, operational issues and monitoring of ESIM to comply with Radio Regulations.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ APT Preliminary Views (cont'd):

- The notifying administration of the satellite network shall ensure that ESIMs operate only in the territory under the jurisdiction of any administration/country from which an explicit authorization has been obtained. Moreover, it has been emphasized that for the implementation of the Resolution, the notifying administration of the satellite network/ system with which ESIMs communicate shall ensure that ESIMs are designed and operate so as to cease transmission over the territory of any administration/country from which authorization has not been obtained.
- Regarding the use of PFD mask in A-ESIM operation, one possible acceptable way is to provide a PFD mask as guidance to administration intending to authorize the operation of the A-ESIMs to determine whether or not the interference which may be caused to its terrestrial stations/assignments.
- The compliance with the PFD mask does not release the notifying administration of the A-ESIM with respect to discharging its responsibility that such earth station shall not cause unacceptable interference to nor claim protection from terrestrial stations/ assignments.
- An administration authorizing the operation of A-ESIM and M-ESIM in their territories (air space and territorial waters) shall be within the service area of the subject satellite network and authorize the operation of the associated gateway earth station as needed.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ APT Preliminary Views (cont'd):

- The relevant examination shall be done by the Bureau and if the latter is unable to examine, that A-ESIM with respect to conformity with the PFD limits on the Earth's surface specified in the Draft CPM text to comply with the limit, then the notifying administration of the A-ESIM shall send to BR a commitment that the A-ESIM will comply with those limits; for this purpose it is mentioned in the draft CPM text that the BR shall formulate a qualified favourable finding with respect to the limits, otherwise it shall formulate an unfavourable finding.
- Any transmissions from M-ESIM within the minimum distance, as specified in the Resolution for this agenda item, in order to protect terrestrial services shall be subject to prior agreement of the concerned administration.
- For sharing and compatibility of M-ESIM with the fixed service, both long-term and short-term interference scenarios should be considered, in which [X\*] km should be treated as the minimum distance for M-ESIM sharing and compatibility with FS from the low-water mark as officially recognized by the coastal State.
- There are still several issues on the operation of ESIMs to be clarified and specified in the Draft New Resolution.

\* X: The minimum distance ranges from 86 – 190 km as the current result of ITU-R WP4A studies

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.15**

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## ◆ Topics for discussion:

- Interference management mechanism to deal with interference occurring from operation of ESIM to other administrations;
- Switching facility allowing transmission over these territories of countries which agreed to be included in the service area and/or authorized (agreed) operation of the service on the territory under jurisdiction and no transmission over these countries unauthorized (not agreed);
- Methodology to enable the Radiocommunication Bureau to examine the conformity with PFD limit as contained in Annexes of draft resolution;
- Calculation of PFD of A-ESIM in different altitudes and elevation angles.

DG Chair: Mr. Phung Nguyen Phuong (VTN)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.16**

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## ◆ APT Preliminary Views:

- APT Members are of the view that in order to make it possible to use the aeronautical and maritime ESIM communicating with non-GSO FSS in the frequency bands 17.7–18.6 GHz, 18.8–19.3 GHz and 19.7–20.2 GHz (space-to-Earth), and 27.5–29.1 GHz and 29.5–30 GHz (Earth-to-space), it is required to continue studies to develop technical and regulatory solution(s) for all concerns that are currently raised. Completion of studies and decisions shall be made to ensure the protection of the existing services in accordance with Resolution **173 (WRC-19)**.
- APT Members are also of the view that sharing studies should be finalized and results of the studies transferred to the Draft New Resolution.
- APT Members are also of the view that regulatory provision, and technical and operational measures with appropriate examination methodology by the Bureau for non-GSO ESIM should be established to ensure the protection of services to which the frequency bands are allocated and operated in accordance with the Radio Regulations. In the absence of such methodology necessary transitional measures should be developed and agreed by WRC-23.
- APT Members are also of the view that the only administration that could notify ESIM is the same administration as the one notifying the non-GSO system to which the ESIM communicate. Thus, notification of any frequency assignment for ESIMs shall only be made by one single administration, which will be responsible for ESIM operation.
- APT Members are also of the view that interference management mechanism and operation mechanism of ESIMs shall be clearly defined by completing relevant studies for inclusion in the Draft New Resolution.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.16**

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## ◆ APT Preliminary Views (cont'd):

- APT Members are also of the view that studies to ensure non-GSO FSS ESIM deployment in the bands 17.7 - 18.6 GHz and 18.8 - 19.3 GHz (space-to-Earth) will not result in increased adjacent band interference to EESS (passive) operations in the 18.6 - 18.8GHz band should be finalized.
- APT Members are also of the view that with respect to the sharing/compatibility studies and PFD examination method for aeronautical non-GSO ESIM studies, the protection of terrestrial services shall be ensured in accordance with Resolution **173 (WRC-19)**.
- APT Members are of the view that the non-GSO ESIM operating in the frequency bands 17.7-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (see No.5.524) shall not claim protection from terrestrial services as contained in the Radio Regulations.
- APT Members are also of the view that for the protection of other space services, non-GSO ESIM characteristics shall remain within the envelope characteristics of typical earth stations associated with the non-GSO satellite system within which these ESIM communicate.
- APT Members are also of the view that for the protection of GSO FSS networks operating in the 17.8-18.6 GHz, 19.7-20.2 GHz, 27.5-28.6 GHz, and 29.5-30.0 GHz the relevant EPFD limits in Nos. **22.5C**, **22.5D** and **22.5F** shall apply.
- APT Members are also of the view that there are still several issues on the operation of ESIMs operating with non-GSO space stations to be clarified and specified in the Draft New Resolution by ITU-R WP 4A.



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.16**

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## ◆ Topics for discussion:

### ➤ Sharing and compatibility studies

Since there needed to be more time to discuss sharing and compatibility studies in the working document of this AI in the previous WP 4A meetings, the handling of those studies should be identified.

### ➤ PFD examination methodology

There was not enough time to review and discuss the PFD examination methodology for aeronautical non-GSO ESIM. It will be worth identifying how to align the PFD examination methodology for aeronautical GSO ESIM of Resolution 169(WRC-19) discussed in another WP 4A SWG with that for aeronautical non-GSO ESIM of this AI.

### ➤ Protection of Secondary Allocation

Some APT Members had concern about the protection of secondary allocation in the band 29.5 - 30 GHz from the operation of non-GSO ESIM, which was always discussed in WP 4A. Since the principle of the allocation of the non-GSO ESIM was confirmed in the last WP 4A meeting, the descriptions of the draft CPM text and the draft new resolution could be resolve the issue.

DG Chair: Mr. Noriyuki Inoue (J)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.17**

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## ◆ APT Preliminary Views:

- APT Members support ITU-R studies on the sharing and compatibility as well as to develop technical conditions and regulatory provisions for the use of satellite-to-satellite operations in the 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz frequency bands or portions thereof, in accordance with Resolution **773 (WRC-19)**, as such the use shall ensure protection of the FSS and other services to which the frequency bands are allocated as well as those services in the adjacent bands to the above services , including passive services.
- APT Members are of the view that the use of these bands for satellite-to-satellite links needs to protect the FSS in these bands, taking into account that the parts of these frequency bands studied under the agenda item are the core FSS bands which are used for telecommunication infrastructure in many countries.
- APT Members are of the view that currently there is no coordination procedure to protect other services, in particular FSS, due to the fact that the inter satellite link composed of GSO and NGSO link for which according to the RRB Rules of Procedure, the protection of other services is not possible. See [\(Document 4A/691/Annex 30\)](#).
- APT Members are of the view that the technical conditions and regulatory provisions developed under WRC-23 agenda item 1.17 shall ensure not causing unacceptable interference to the terrestrial services operating in the frequency band 27.5-29.5 GHz.
- APT Members are also of the view that consideration should be given to the operation of the secondary terrestrial services as currently contained in the Radio Regulations in order that these terrestrial services should not be adversely affected by satellite-to-satellite links in the frequency band being studied under WRC-23 AI 1.17.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.17**

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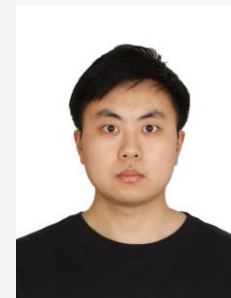
## ◆ APT Preliminary Views (cont'd):

- APT Members support the protection of the BSS in the band 11.7-12.2 GHz in Region 3 and not to impose any additional constraints on future development of the BSS in the band 11.7 - 12.2 GHz in Region 3.
- APT Members support satellite-to-satellite transmissions according to the FSS directionality indicators (i.e. Earth-to-space or space-to-Earth) and “within the cone of coverage” concept of operations.
- APT Members are considering to support NOC for the allocation in the band 11.7-12.2 GHz in Region 3 at this stage.

## ◆ Topics for discussion:

- Issue raised during the APG23-4 meeting, that using the satellite-to-satellite link transmissions and potential intended impact on primary services allocated in the bands and in the adjacent bands, should be taking into account the part of these frequency band has been used for the FSS in many countries.

DG Chair: Mr. Jiaqian ZHANG (CHN)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.18**

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## ◆ **APT Preliminary Views:**

- APT Members support sharing and compatibility studies with existing primary services to determine the suitability of new allocations to the mobile-satellite service (MSS), to protect primary services.
- APT Members are of the view that this agenda item is a Region 1 and 2 issue, Region 3 is not in scope, therefore any allocation to the mobile satellite service in other Regions should not have an adverse impact on existing services to which the frequency bands are allocated in Region 3.
- Taking into account the preliminary views mentioned above and Section 3.2 (due to disagreement of NB-MSS system parameters and incomplete sharing studies for protection of existing services in relevant frequency bands in ITU-R), APT Members support No Change of the RR with regard to this agenda item at the current stage.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.18**

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## ◆ Topics for discussion:

### ➤ NB-MSS system parameters

APT Members raised a concern that the NB-MSS system parameters are not determined yet, so there is serious difficulty to conduct sharing studies between NB-MSS systems and incumbent services and to review the results of the sharing studies on time.

### ➤ Draft CPM Text

It was expressed the position to support No change of the Radio Regulations (Method A in the draft CPM text) with regard to this agenda item, due to disagreement of NB-MSS system parameters and incomplete sharing studies for protection of existing services in relevant frequency bands in ITU-R. Therefore, it was proposed that APT members support the No change of the RR as APT preliminary view at the current stage.

DG Chair: Dr. Daesub Oh (KOR)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.19**

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## ◆ APT Preliminary Views:

- Any studies in the ITU-R related to Agenda Item 1.19 needs to ensure protection of the services as referred to in Resolution **174 (WRC-19)** dealing to which the bands are allocated in the same and adjacent bands without imposing any additional constraints on existing allocations to the broadcasting-satellite service (space-to-Earth) and the fixed-satellite service (Earth-to-space).
- Any new allocation in Region 2 in the band 17.3-17.7 GHz (space-to-Earth) shall not cause harmful interference to the Space Station Receivers associated with AP30A Feeder Link and shall not claim protection from the broadcasting-satellite service feeder-link earth stations operating under AP30A, nor put any limitations or restrictions on the locations of the broadcasting-satellite service feeder-link earth stations anywhere within the service area of the feeder link.
- The new allocation to FSS in Region 2 in the band 17.3-17.7 GHz (space-to-Earth) shall not adversely affect existing allocations and services for Region 3 and shall not impose any constraints to the incumbent services operating in the concerned frequency bands and adjacent bands in Region 3.
- The mitigation requirements referred to in Study #1 of the draft CPM text considered to avoid significant interference in the equatorial-limb case should also be reflected in the form of regulatory procedures including the technical conditions in the proposed method to satisfy this agenda item and its associated regulatory text.
- It is also prepared to consider Method B at this stage, if the studies show that the new allocation is feasible and the protection of AP30A Feeder Link in Region 3 is addressed.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 1.19**

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## ◆ Topics for discussion:

- Issue raised during the APG23-4 meeting, that the existing primary services in Region 3 in the frequency band considered under the Agenda Item 1.19 of WRC-23, including Appendix **30A** satellite networks, should be protected from any impact of the ITU-R study results for this agenda item.

DG Chair: Mr. Risdianto Yuli Hermansyah (INS)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 7**

Topics	Content
A	Non-GSO Orbital tolerances
B	Post-milestone reporting
C	7/8 & 20/30 GHz GSO MSS protection
D	D1 – Mod to App 1 to Annex 4 of RR AP30B D2 – New AP4 parameters for Rec. S.1503 updates D3 – BR reminders for BIU/BBIU
E	AP30B Improved procedures for new Member States
F	Excluding uplink service area in AP30A for R1&3 and AP30B
G	Amendments to Res. <b>770 (WRC-19)</b>
H	Enhanced protection of AP30/30A in R1&3 and AP30B
I	Special agreements under AP30B
J	MODs to Res. <b>76 (Rev.WRC-15)</b>
K	MODs to Res. <b>553 (Rev.WRC-15)</b>
L	TT&C for non-GSO in-orbit servicing

- Ms. Lee is responsible for General matters, Topics A, B, F, G, H and L;
- Ms. Vincent is responsible for Topics C, D, E, I, J and K

DG Chairs:

Ms. Geetha Remy Vincent  
(MLA)



Ms. Ting Ling Lee (SNG)





# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic A)

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## ◆ APT Preliminary Views:

- APT Members support the development of the definition of tolerances of non-geostationary-satellite orbit (non-GSO) space stations in the FSS, BSS and MSS. APT Members support the development of these tolerances in the context of ITU regulatory procedures such as bringing into use (BIU) and the milestone-based approach.
- APT Members are of the view that the development of the definition of tolerances of non-geostationary-satellite orbit (non-GSO) space stations in the FSS, BSS and MSS, should be limited to the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane, to account for potential differences between the notified and deployed orbital characteristics.
- APT Members are also of the view that appropriate regulatory consequences/measures should be developed taking into account the operational aspects of the non-GSO space stations in the FSS, BSS and MSS, if the operations are beyond the specified allowable tolerances. These regulatory measures should not have retroactive application. Moreover, necessary transitional measures for application of the decision of WRC-23 may need to be developed.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7 (Topic A)**

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## ◆ Topics for discussion:

- Currently there are 4 methods in the draft CPM text:
  - Method A1: No change to the Radio Regulations.
  - Method A2: A draft new WRC-23 Resolution on the implementation of tolerances for certain orbital characteristics of satellites of NGSO FSS/BSS or MSS systems to be referred to in RR Nos. **11.44C.1, 11.49.2 and 11.51**
    - Option A: covers satellites of NGSO FSS, BSS or MSS systems
    - Option B: covers satellites of NGSO FSS, BSS or MSS systems subject to Resolution **35 (WRC-19)**
  - Method A3: Modify RR Appendix **4** data items related to the planned tolerances for each of the four orbital characteristics for NGSO systems subject to RR No. **11.44C** and refer to them in the relevant provisions of RR Article **11** and in Resolution **35 (WRC-19)**
  - Method A4: New footnotes in RR Article **11** pointing to a draft new WRC-23 Resolution, applicable to the Resolution **35 (WRC-19)** frequency bands, calling for periodic reporting on the altitude and inclination of deployed satellites and providing provisions for ensuring that deviations, excluding temporary deviations, do not increase interference or require additional protection
- The Method to be selected:
  - should not overregulate the process; and
  - should provide equal and fair opportunity to all administrations to implement and their systems irrespective of their design and deployment stage(s).
- Based on the APT Preliminary View, Methods A2 A3 or A4 could be supported

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7 (Topic B)**

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## ◆ **APT Preliminary Views:**

- APT Members support the development of the post-milestone procedures for NGSO satellite systems in FSS, BSS and MSS subject to Resolution **35 (WRC-19)**.
- APT Members are of the view that the studies for developing final post-milestone procedures at WRC-23 need to take into account the reporting procedure defined in *resolves* 19 of Resolution **35 (WRC-19)**.
- APT Members support the adoption of a new Resolution to replace *resolves* 19 of Resolution **35 (WRC-19)** at WRC-23, suppressing *resolves* 19 of Resolution **35 (WRC-19)** and leaving the rest of the Resolution **35 (WRC-19)** as is otherwise.
- APT Members are also of the view that when developing the post-milestone procedures, some degree of operational flexibility which is necessary for the maintenance of the non-GSO system in the FSS, BSS and MSS, may need to be duly considered.
- APT Members also support the development of appropriate regulatory measures for frequency assignments to non-GSO space stations that do not comply with the post-milestone requirements/procedures.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic B)

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## ◆ Topics for discussion:

- Currently there are 2 methods in the draft CPM text:
  - Method B1: No change to the Radio Regulations.
  - Method B2: involves changes to Resolution **35 (WRC-19)** to remove *resolves* 19 and adoption of changes to RR Article **11** and a new Resolution to capture the post-milestone procedure for systems subject to Resolution **35 (WRC-19)**. The new draft Resolution contains 2 options regarding the required threshold for decreases in the number of deployed satellites capable of transmitting/receiving the recorded frequency assignments to apply such Resolution:
    - Option B2a: involves a single percentage of the system's satellites, without regard to the number of satellites in the NGSO system
    - Option B2b: proposes a different number depending on the number of satellites in the NGSO system.
- The Method to be selected:
  - should not overregulate the process; and
  - should provide equal and fair opportunity to all administrations to implement and their systems irrespective of their design and deployment stage(s) and
  - provide necessary regulatory procedure including some temporary flexibility on the real number of deployed satellites against those recorded in the MIFR.
- Based on the APT Preliminary View, Method B2(Option B2a or Option B2b) could be supported.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic C)

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## ◆ **APT Preliminary Views:**

- APT Members are of the view that existing regulations and its effectiveness to protect geostationary-satellite networks in the mobile-satellite service operating in the bands 7/8 GHz and 20/30 GHz from emissions of non-geostationary-satellite networks operating in the same bands and in same direction, need to be verified by ITU-R Working Party 4A.
- APT Members support application of concept of No. **22.2** of the Radio Regulations for MSS in the bands 7/8 GHz and 20/30 GHz.
- APT Members are considering two alternatives at this stage:

### **Alternative 1:**

Modify RR No. **5.461** to include text from RR No. **22.2** indicating that non-GSO systems in the appropriate frequency bands shall not cause unacceptable interference to and, unless otherwise specified in the RRs, shall not claim protection from assignments pertaining to GSO MSS. RR No. **5.43A** does not apply.

### **Alternative 2:**

Create a new provision RR No. **22.2bis** using the same text as contained in RR No. **22.2** replacing FSS and BSS by MSS in the appropriate frequency bands.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic C)

## ◆ Topics for discussion:

- Some APT Members considered two alternative approaches:

### Alternative 1:

**Option 1** - Modify RR No. **5.461** to include text from RR No. **22.2** indicating that non-GSO systems in the frequency bands 7/8 GHz shall not cause unacceptable interference to and, unless otherwise specified in the RRs, shall not claim protection from assignments pertaining to GSO MSS. RR No. **5.43A** does not apply.

**Option 2** - Modify RR No. **5.461** to include text from RR No. **22.2** indicating that non-GSO systems in the frequency bands 7/8 GHz and 20/30 GHz shall not cause unacceptable interference to and, unless otherwise specified in the RRs, shall not claim protection from assignments pertaining to GSO MSS. RR No. 5.43A does not apply.

### Alternative 2:

**Option 1** - Create a new provision RR No. **22.2bis** using the same text as contained in RR No. **22.2** replacing FSS and BSS by MSS in the frequency bands 7/8 GHz mentioned in Alternative 1 Option 1.

**Option 2** - Create a new provision RR No. **22.2bis** using the same text as contained in RR No. **22.2** replacing FSS and BSS by MSS in the frequency bands 7/8 GHz and 20/30 GHz mentioned in Alternative 1 Option 2.

**At APG23-4, some APT Members expressed preference for Alternative 1 Option 2 and Alternative 2 Option 2.**

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic D)

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## ◆ APT Preliminary Views:

### Topic D1

- APT Members support the single method to modify Section 2 of Appendix 1 to Annex **4** of Appendix **30B** of the Radio Regulations to reflect the values of the minimum orbital separation as adopted by WRC-19 in § 1.1 and § 1.2 of Annex **4** of RR Appendix **30B**.

### Topic D2

- APT Members support ITU-R studies for the possible modifications to RR Appendix **4** resulting from the updates to Recommendation ITU-R S.1503 based on ITU-R studies.

### Topic D3

- APT Members support ITU-R studies for the possible modifications to the relevant regulatory provisions to add a procedure for the sending of reminders by the BR for the case of an administration confirming the bringing into use or bringing back into use of frequency assignments under RR Nos. **11.44B**, **11.44C**, **11.44D** and **11.44E**.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic E)

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## ◆ **APT Preliminary Views:**

- APT Members support granting new ITU Member States the same right as those granted to other Member States in Appendix **30B**, based on principles stipulated in Article **44** of the Constitution, Resolution **2 (Rev.WRC-03)** and those contained in Article **1** of AP**30B**, taking into account Resolution **170 (WRC-19)**.
- APT Members support ITU-R studies to improve procedures under Appendix **30B** of the Radio Regulations for new ITU Member States.
- APT Members support technical assessments of the interference scenarios for new ITU Member States so that the possible solution, to the extent possible, does not affect the existing allotments in the Plan and assignments in the List of Appendix **30B**.
- APT Members encourage new ITU Member States to adjust the submissions in order to comply with the requirements as contained in § 1.2 of Annex 1 to Appendix **30B**.
- APT Members support finding a solution on a case-by-case basis, which could be compatible with allotments in the Plan and assignments in the List of Appendix **30B**, to meet the interference criteria defined in § 1.4 of Annex 1 to Appendix **30B** for this new ITU Member State.



# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic F)

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## ◆ **APT Preliminary Views:**

- APT Members support on-going ITU-R studies on the issue of excluding the territory of a country from the service area of the feeder link of Appendix **30A** and adjustment of coverage area of the feeder link to the smallest service area of that submission under RR Appendix **30A**, as well as adjustment of coverage area to the smallest to be aligned with the service area of the submissions under RR Appendix **30B**.
- APT Members support the exclusion of the territory of a country from the service area of feeder link of another country and the adjustment of coverage area to the smallest to be aligned with the service area of feeder link under RR Appendix **30A**.
- APT Members support developing specific measures to avoid creating obstacles to those administrations wishing to establish satellite networks of **AP30B** over their territories, taking into account the roll-off of the receiving beams of adjacent satellite networks.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic F)

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## ◆ Topics for discussion:

- Currently there are 4 methods in the draft CPM text:
  - Method F1: No change to the Radio Regulations.
  - Method F2: making amendments to provisions of Appendix 30A/Appendix 30B to request notifying administration of network with high receiving sensitivity (relative satellite antenna gain of at least 20 dB) over territory of other administration to accept uplink interference coming from territory of other administration, and to remove right to claim protection from harmful interference, from territory of administration that has not agreed to be included in service area
  - Method F3: making amendments to provisions of Appendix 30A/Appendix 30B to allow relocation of test points from excluded territory to new location, and to request notifying administration of a satellite network having relative satellite antenna gain derived from the minimum ellipse required to cover the service area of equal to or less than -20 dB over territory of other administration, to accept uplink interference coming from territory of other administration
  - Method F4: to allow an administration to request the exclusion of its territory from the feeder-link service area of a satellite network of other administrations under Appendix 30A, and to include definition of feeder link coverage area in Annex 3 of Appendix 30A.
- One point raised during the APG23-4 meeting, that should be taken into account when selecting the appropriate Method for this Topic is, the alignment of the coverage area with the service area is not always feasible, especially when the satellite network is already in operation.
- Based on the APT Preliminary View, more consideration is required on the appropriate Method to be selected.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic G)

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## ◆ APT Preliminary Views:

- APT Members support possible modifications to Resolution **770 (WRC-19)** to make its implementation feasible based on results of ITU-R studies.

## ◆ Topics for discussion:

- Currently there are 3 methods in the draft CPM text:
  - Method G1: No changes to Resolution **770 (WRC-19)**.
  - Method G2: Modify Resolution **770 (WRC-19)** to allow for its implementation.
  - Method G3: Remove Annex 2 from Resolution **770 (WRC-19)** and move it to a new Recommendation which would be incorporated by reference in Resolution **770 (WRC-19)**.
- Based on the APT Preliminary View, Methods G2 or G3 could be supported

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic H)

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## ◆ **APT Preliminary Views:**

- APT Members support studies on the possible removal of the concept of “implicit agreement” from the Appendices **30/30A** and Appendix **30B**.

## ◆ **Topics for discussion:**

- On the **aspect of implicit agreement in Appendices 30/30A/30B**, there are 3 methods in the current draft CPM text. H1A: no change to the Radio Regulations; H1B: remove implicit agreement for assignment of AP**30/30A** R1/3 Plans or intending to enter into those Plans and allotment of AP**30B** Plan or intending to enter into that Plan; H1C: new mechanism to replace implicit agreement whereby the administration of the additional use/system is allowed to operate (with commitment to respect certain conditions) until the bringing into use of the national assignment/allotment of the other administration.
- On the **aspect of EPM degradation tolerance in AP30/30A Regions 1/3**, there are 2 methods: H2A: no change to the Radio Regulations; H2B: to amend the current value of 0.25 dB to 0.45 dB
- During the APG23-4 meeting, on the aspect of reducing the EPM degradation tolerance in Appendices **30/30A** Regions 1/3, there was support as well as objection on this point. There was a proposal to implement a similar regulatory solution as Topic I for Topic H. There was also a proposal on amending provisions in Appendices **30/30A/30B** on the implicit agreement aspect.
- Based on the APT Preliminary View, on the aspect of implicit agreement, H1B or H1C could be supported. On the aspect of EPM degradation tolerance in AP**30/30A** Regions 1/3, further consideration is required

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic I)

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## ◆ APT Preliminary Views:

- None at this stage.

*NOTE: In consideration of the current progress of this Topic under the ITU-R WP 4A meeting, it was agreed that there will be no APT Preliminary views on this Topic at this meeting.*

## ◆ Topics for discussion:

- None at this stage.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic J)

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## ◆ **APT Preliminary Views:**

- None at this stage.

*NOTE: In consideration of the current progress of this Topic under the ITU-R WP 4A meeting, it was agreed that there will be no APT Preliminary views on this Topic at this meeting.*

## ◆ **Topics for discussion:**

- Some APT Members support the possible modifications to Resolution 76 (Rev.WRC-15) to introduce the concept of “consultation process/meetings” in order to ensure protection of GSO FSS and BSS networks.
- Some APT Members do not support any reduction of existing protections in the bands identified.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic K)

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## ◆ APT Preliminary Views:

- APT Members support the ITU-R studies on the possible modifications to Resolution **553 (Rev.WRC-15)** to enhance equitable access to the frequency band 21.4-22 GHz and to remove those restrictions in Resolution **553 (Rev.WRC-15)** that can prevent administration from taking effective advantage of this Resolution.

## ◆ Topics for discussion:

- None at this stage.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 7** (Topic L)

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## ◆ APT Preliminary Views:

- APT Members support ITU-R study activities to develop regulatory provisions for TT&C frequencies for non-GSO in-orbit services (IOS) satellite systems.

## ◆ Topics for discussion:

- It was noted that WP4A decided to suppress Topic L based on a lack of sufficient studies, the fact that the proposed solutions were outside the scope of Resolution **86 (Rev.WRC-07)** on which WRC-23 AI 7 is based, and a lack of complete draft CPM text being proposed.



# APT Preliminary Views on WRC-23 Agenda Items

Working Party 5: General Issues

Agenda Items: 2, 4, 8, 9.1 b), 9.2 and 10



Chair:  
Dr. Mohammad Taghi Shafiee ([shafiee@cra.ir](mailto:shafiee@cra.ir))

# DG Chairs of WP5

Agenda Items	Chair
2 & 4	Ms. Keiko Mori (Japan) Email: <a href="mailto:keikom@wcore.com">keikom@wcore.com</a>
8	Mr. Neil Meaney (Australia) E-mail: <a href="mailto:neil.j.meaney@boeing.com">neil.j.meaney@boeing.com</a>
9.1 b)	Ms. Jaekyung Park (Republic of Korea) Email: <a href="mailto:jay.park@kca.kr">jay.park@kca.kr</a>
9.2	Mr. Paul Burford (Australia) Email: <a href="mailto:paul.burford@defence.gov.au">paul.burford@defence.gov.au</a>
10	<p>Aeronautical and Maritime Issues: Mr. Jia Huang (People's Republic of China) Email: <a href="mailto:ferrero.huang@srrc.org.cn">ferrero.huang@srrc.org.cn</a></p> <p>IMT Issues: Mr. HyoungJin Choi (Republic of Korea) Email: <a href="mailto:hj686.choi@samsung.com">hj686.choi@samsung.com</a></p>

# APT Preliminary Views on WRC-23 Agenda Items: AI 2

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- **APT Preliminary Views:**

- APT Members support the examination and review of ITU-R Recommendations incorporated by reference into the Radio Regulations and, where appropriate, the updating of these references in accordance with Resolution **27 (Rev.WRC-19)**
- APT Members are encouraged to participate and monitor the progress of the ITU-R studies in the relevant Working Parties, which may propose revisions of incorporates by reference (IBR) Recommendations, with a view to develop the APT positions on this agenda item towards the WRC-23

DG Chair: Ms. Keiko Mori (Japan)



# APT Preliminary Views on WRC-23 Agenda Items: AI 4

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- **APT Preliminary Views:**

- APT Members support the principle and intent of Resolution **95 (Rev.WRC-19)**, to ensure Resolutions and Recommendations of past WRCs are relevant and kept up to date
- Since a number of the studies requested by the WRC Resolutions are now under consideration at the relevant groups in the ITU-R, APT Members are encouraged to participate in these studies
- In reviewing the Resolutions/Recommendations listed in the Attachment 1 of Document *APG23-4/OUT-36*;
  - the progress of the studies is important information for those Resolutions that include *"invites ITU-R"*,
  - or similarly, the progress of the implementation work of the ITU Radiocommunication Bureau (BR) is also important for those Resolutions that include *"instructs the Director of the Radiocommunication Bureau"*

DG Chair: Ms. Keiko Mori (Japan)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 b)**

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- **APT Preliminary Views:**

- APT Members support ITU-R studies in accordance with Resolution **774 (WRC-19)**, and development of new ITU-R recommendations to protect RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz without considering the removal of the amateur and amateur-satellite service allocations. APT Members support no changes to the Radio Regulations under Agenda Item 9.1 Topic B.

- **Issues raised:**

- APT Members are required to monitor whether there is any proposals from other regional organizations to make changes in the Radio Regulations under AI 9.1 Topic b) and if this is the case, prepare to how to react to such proposals.

DG Chair: Ms. Jaekyung Park (Republic of Korea)



# APT Preliminary Views on WRC-23 Agenda Items: **AI 9.1 b)**

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- **Question:**

- Now, we are aware of the potential risks regarding interference to GNSS receivers from the amateur and amateur satellite services through ITU-R studies, and measures to mitigate the interference will be developed soon. We may monitor and review the secondary services usage and regulatory status.
- Then, which one is a good choice between “efficient” and “ better safe than sorry” for harmonized coexistence?



**VS**



# APT Preliminary Views on WRC-23 Agenda Items: **AI 10**

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## **1. New proposal for WRC-27 agenda item**

APG23-4 received and discussed new proposals for consideration as agenda items for WRC-27.

The following four topics will be further discussed at the next APG meeting.

### **(1) WPT**

To modify the RR in order to establish a status of Wireless Power Transmission (WPT) in the RR. The modifications of the RR might include:

- to designate, in the Table of Frequency Allocation, frequency ranges for WPT,
- to add a definition of WPT,
- to define a new radio service for WPT, if necessary,
- to modify the definition of ISM application to clarify the relationship between WPT and ISM application,
- to modify Nos. 15.12 and 15.13 as appropriate.

### **(2) Allocation of 275-300 GHz to MS, FS, RAS and EESS (passive) on a primary basis**

To extend frequency ranges in the Table of Frequency Allocations in the frequency range 275-300 GHz for radiocommunication services to accommodate the current and future requirements for radiocommunication services.

# APT Preliminary Views on WRC-23 Agenda Items: **AI 10**

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## **1. New proposal for WRC-27 agenda item** (Cont'd)

### **(3) IMT for 2030 and beyond**

To consider the possibility of the identification of additional frequency bands for International Mobile Telecommunications (IMT) including additional allocation to mobile service on a primary basis, in particular frequency bands which have not been studied for IMT at the previous WRCs, taking into account the evolution of IMT technology and the expanding role of IMT technology and the expanding role of IMT such as to bridge the digital divide and to facilitate the digital transformation

### **(4) GSO FSS in the 13.75-14 GHz**

To review the usage and sharing conditions of the band 13.75-14 GHz to enable efficient use of the band by uplink GSO FSS earth stations, including FSS earth stations using smaller antenna sizes, noting that the increasing need for the use of smaller GSO FSS antennas and the system characteristics changed over the past 20 years and the other services sharing the band, their applications and co-existence conditions might have also changed over these decades.

## **2. Preliminary agenda items contained in Resolution 812 (WRC-19)**

Further discussion is needed at the next APG meeting to develop APT views on preliminary agenda items contained in Resolution **812 (WRC-19)**



# APT Preliminary Views on WRC-23 Agenda Items: AI 10

## 3. General issues

### (1) Modification to Resolution 804 (Rev.WRC-19)

To forward the proposed modifications to Resolution **804 (Rev.WRC-19)** to the next APG.

APT Members are of the view that:

- the volume of the agenda of a WRC and the workload of the preparatory work needed to be kept at a manageable level. Therefore, number of agenda item shall be absolutely minimum and manageable.
- issues that can be resolved under the standing agenda items of WRCs or through the regular activities of ITU-R should not be converted into separate agenda item of WRCs.
- topic/subject under AI 9.1 should be avoided since some of them are more complex than standard agenda items.
- consistency between the title of agenda item and title of the supporting resolutions as well as operative parts of the resolutions. In additions every effort to be made in selecting Terms, Language and wording of the resolutions, in particular resolve parts to be non-ambiguous, meaningful and clear. Once the text of the resolutions in the initial language is agreed its full consistencies in other official languages of the Union needs to be ensured.
- the preamble of resolutions should be reduced to the absolute minimum necessary which are needed to justify the operative parts. Recognizing parts of the resolution should only be factual statements already agreed by ITU-R and ITU. Reference to the protection of other services (in band) and (adjacent band if necessary) should be clearly specified in the resolution.
- mandates and scope of ITU-R should not be mixed up with mandates and scope of works of other international organizations.
- during the Conference, estimation of workload of ITU-R Study Groups need to be indicated by the BR in consultation with current Study Groups/Working Parties Chairmen/Vice chairmen. Inclusion of identical agenda item in two WRCs shall be strictly avoided.
- during the Conference, RRB Members and Head of BR Departments are also invited to examine the operative parts of the proposed resolutions to declare their conformity with the RR and Rules of Procedure (RoP) and practices of the BR.

# APT Preliminary Views on WRC-23 Agenda Items: AI 10

## 3. General issues (Cont'd)

### (2) Input parameters for ITU-R studies to be carried out by various ITU-R study groups/working parties for relevant WRCs AIs

APT Members recognized that previous experiences show that during such ITU-R studies relevant to some WRC agenda items, different studies have been received that used different assumptions, even for the main parameters, for sharing and compatibility studies which leads to extremely different results. Therefore, it would be difficult or impractical for relevant ITU-R study group/working party to properly reflect such results in the section "Methods to satisfy the agenda item".

In order to resolve such problem, the following principles need to be taken into account:

- to agree on sharing and compatibility criteria, assumptions, simulation process and mitigation technique at the early stage of ITU-R studies relevant to WRC agenda items before interested membership begins with those studies;
- to use, to the extent practicable and available any sharing and compatibilities studies so far carried out in previous cycles, to avoid repeating studies previously performed;
- to investigate the extent to which in band sharing and compatibility studies to be carried out namely whether they should be limited to the services having primary status or also include other services having secondary status;
- to investigate the extent to which adjacent band sharing and compatibility studies to be carried out namely whether they should be limited to some sensitive services having primary status or also include other services irrespective of their sensitivities.

DG Chairs:

Mr. Jia HUANG (P. R. of China) – Aeronautical and maritime issues

Mr. HyoungJin CHOI (Rep. of Korea) – IMT issues



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# Thank you