

ITUEvents

3rd ITU Inter-regional Workshop on WRC-19 Preparation

4-6 September 2019
Geneva, Switzerland

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**3rd ITU INTER-REGIONAL WORKSHOP
ON WRC-19 PREPARATION
(Geneva, 4-6 September 2019)**

APT views and Preliminary Common Proposals

*Asia Pacific
Telecommunity*



Organized by:



APT views and **Preliminary** Common Proposals

Presented to 3rd ITU Inter-regional Workshop for WRC-19



Status of the overall preparations of APT

Chairman of APG19
Kyu-Jin WEE

Current status of APT Preliminary Common Proposals

- According to the APG Working Methods, the information to the 3rd ITU Inter-regional Workshop is preliminary status. **Preliminary** APT Common Proposal(**PACP**)
 - The PACP is currently under adoption process of 38 APT Members
 - Once it is supported by more than 25% (10 Members) and not opposed by more than 50% of the member who support (5 Members), it will become APT Common Proposal.
-

Recent APG meeting for WRC-19

- APG19-5 was held in July 31 to Aug.6 in Tokyo, Japan around 600 participants of 26 APT Members, representatives of regional groups, representatives of International Organizations
 - APG19-5 developed Preliminary APT Common Proposals with **consensus approach**
 - Consensus approach did not allow overriding the views supported by smaller numbers. In such cases PACP was developed with tbd or not developed.
 - APG will continue to elaborate the view on such cases in APG Coordination meeting during WRC-19.
 - APG will also continue to coordinate with other regional groups during WRC-19
 - It is still believed to find a possible way forward, which might not be exactly the same Methods in CPM Report
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Some thoughts for the consideration

- There may be some way forward to satisfy the Agenda Items in addition to the Methods in CPM Report
 - Early close of Drafting Group meeting schedule(e.g. Tuesday of 3rd week at latest of WRC-19) would allow Plenary in normal working hour, particularly in the last week, and also allow more time to focus for preparing the future Agenda Items
 - Facilitation among the regional groups' coordination would also help the work of Conference
-

Further thoughts on Issues under Agenda Item 9.1

WRC	Numbers of Agenda Items under 1	Numbers of Issues under 9.1	Numbers of Workload
WRC-03	1.1 – 1.39	0 issues	39
WRC-07	1.1 – 1.21	4	21+4=25
WRC-12	1.1 – 1.25	3	25+3=28
WRC-15	1.1 – 1.18	8	18+8=26
WRC-19	1.1 – 1.16	9	16+9=25
WRC-23	1.1 – 1.n	?	N+?=???

APT Member's View on 5.441B

- There was a general acceptance of the mechanism that could be used to justify sending submissions to WRC-19. It is recognized that the matter could be dealt with under AI 9.1. This would make the connection with the “invites ITU-R” bullet points 6 and 7 included in WRC-15 Resolution 223.
 - There was a general acceptance that the criterion to footnote 5.441B is subject to review at WRC-19.
 - The exact date of the application of the identification of IMT in the RR footnote may need to be specified (as “after WRC-19” may not be a sufficiently clear indication).
 - Ongoing discussions between interested parties is strongly encouraged.
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SESSION 1

IMT related issues, agenda item (AI) 1.13 (band 24.25-27.5 GHz)

Dr. Hiroyuki Atarashi(Japan)
DG Chair on 1.13 of APG19
Email: hiroyuki.atarashi.yt@nttdocomo.com

AI 1.13

< 24.25-27.5 GHz >

- APT Members support identifying the 24.25-27.5 GHz frequency band for IMT globally through Method A2 together with a new WRC Resolution.
- In principle, APT Members support Alternative 2 under Method A2. However, it may be subject to the regulatory provisions to be specified in the new WRC Resolution associated with Condition A2e.
- In addition, APT Members have the following APT Views on Options under the respective Conditions for Method A2 contained in the CPM Report (see the next slide). It should be noted that APT Members are still investigating the Options to be selected for some of the Conditions.



AI 1.13

< 24.25-27.5 GHz >

Condition		Supported Option
A2a	Protection measures for the EESS (passive) in the 23.6-24 GHz frequency band	1 (Note1)
A2b	Protection measures for the EESS (passive) in the 50.2-50.4 GHz and 52.6-54.25 GHz frequency bands	2
A2c	Protection measures for earth stations in the SRS/EESS (25.5-27 GHz (space-to-Earth))	To be developed
A2d	Measures related to transmitting earth stations in the FSS (Earth-to-space) at known locations	To be developed
A2e	Protection measures for the ISS and FSS (Earth-to-space) receiving space stations	To be developed
A2f	Protection measures for the RAS (23.6-24 GHz)	To be developed
A2g	Protection measures for multiple services	To be developed

(Note 1) APT Members are still investigating the active service band and unwanted emission limits for IMT stations to be specified in Resolution 750 (Rev.WRC-19).

AI 1.13

< TRP >

- APT Members agreed the following description for TRP.
 - *“The unwanted emission power level is measured by total radiated power (TRP). The TRP is to be understood here as the integral of the power transmitted in different directions over the entire radiation sphere.”*
 - The above description is included in the PACP for revision of Resolution 750 in the 24.25-27.5 GHz frequency band.
-

AI 1.13

< TRP >

- Furthermore, in order to avoid any unintended consequences on the regulatory provisions for other services and applications, APT Members are of the view that in the context of WRC-19 agenda item 1.13 outcomes, description of TRP should be solely limited to the regulatory implementation for this agenda item.
- Therefore, any changes made as a result of agenda item 1.13 should limit use of the term TRP to IMT.





SESSION 2

IMT related issues (Cont'd), AI 1.13 (other supported bands)

(plus information on AIs 9.1.1, 9.1.2 and 9.1.8)

Dr. Hiroyuki Atarashi
DG Chair on 1.13 of APG19

AI 1.13

< 37-40.5, 40.5-42.5 and 42.5-43.5 GHz >

- APT Members support identifying the 37-43.5 GHz frequency band, or portions thereof, for IMT globally through Methods C2, D2 and E2 with Alternative 2 together with a new WRC Resolution.
- In addition, APT Members have the following APT Views on the Options under respective Conditions for Methods C2, D2 and E2 contained in the CPM Report (see the next slide). It should be noted APT Members are still investigating the Options to be selected for these Conditions.
- Regarding the frequency band 37-40.5 GHz, APT Members do not support Method C3 in the CPM Report.



AI 1.13

< 37-40.5, 40.5-42.5 and 42.5-43.5 GHz >

Condition		Supported Option
C2a	Protection measures for the EESS (passive) in the 36-37 GHz frequency band	To be developed
C2b	Protection measures for the FSS (space-to-Earth)	To be developed
C2c	Protection measures for the SRS (space-to-Earth)	To be developed
C2d	Measures for the SRS (Earth-to-space) and EESS (Earth-to-space)	To be developed
C2e	Protection measures for multiple services	To be developed
D2a	Protection measures for the FSS (space-to-Earth)	To be developed
D2b	Protection measures for the RAS	To be developed
D2c	Protection measures for multiple services	To be developed
E2a	Protection measures for the FSS (Earth-to-space)	To be developed
E2b	Protection measures for the RAS	To be developed
E2c	Protection measures for multiple services	To be developed
E2d	Measures related to transmitting earth stations in the FSS (Earth-to-space) at known locations	To be developed

AI 1.13

< 66-71 GHz >

- In principle, APT Members support identification of the frequency band 66-71 GHz for IMT. However, APT Members are still investigating Method and condition(s) to be adopted when identifying this band for IMT.



PACP 66-71 GHz

AI 1.13

< Other frequency bands >

- APT Members agreed not to support IMT identification at WRC-19 for the following frequency bands.
 - 31.8-33.4 GHz
 - 45.5-47 GHz
 - 47-47.2 GHz



PACP 31.8-33.4
GHz



PACP 45.5-47 GHz



PACP 47-47.2 GHz

AI 1.13

< Other frequency bands >

- APT Members agreed to further investigate whether the following frequency bands (or portions thereof) could be considered for IMT identification at WRC-19.
 - 47.2-50.2 GHz
 - 50.4-52.6 GHz
 - 71-76 GHz
 - 81-86 GHz
-



AI 9.1, issue 9.1.1

- APT Members recognize the ITU-R studies on possible technical and operational measures to ensure coexistence and compatibility between the terrestrial component of IMT (in the mobile service) and the satellite component of IMT (in the mobile service and the mobile-satellite service) in the frequency bands 1 980–2 010 MHz and 2 170–2 200 MHz in different countries, in accordance with Resolution **212 (Rev.WRC-15)**.
 - With respect to the regulatory actions and associated views, while there was more supports for View 2 as contained in the CPM Report according to the input documents, however no consensus was reached on either of these two Views.
-

A view on other regional group's proposal (Issue 9.1.1)

- It was noted the European Common Proposal recently adopted by CEPT contained several areas of proposed changes to the Radio Regulations that would apply to both Region 1 and Region 3.
 - Although as a regional position, CEPT could make such a proposal, but it was observed that those proposed regulatory changes would have regulatory implication to Region 3.
 - Recognising that the decision is with CEPT in developing any European Common Proposals that are appropriate, however it would be appreciated that such proposals should be consulted with APT in the future.
-

AI 9.1 (Issue 9.1.2)

◆ APT Views

APT members do not support the possible actions 2, 4, 6, 7, 8 and 9 among the 9 possible actions in the CPM Report.

No consensus was reached at APG19-5 regarding the measures to protect IMT from BSS (sound) space station and to protect BSS (sound) receiver from IMT in the 1452 - 1492 MHz frequency band taking into account the possible actions 1, 3 and 5 in the CPM Report.

◆ Preliminary APT Common Proposal

None.

APT Members will continue discussions with a view to reaching consensus on this issue by WRC-19.

DG Chair: Dr. Dae-Sub Oh (Rep. of Korea)

Email: trap@etri.re.kr



AI 9.1 issue (9.1.8)

DG Chair: Mr. Fierza Pasaribu (Rep. of Indonesia)

Email: fierza@postel.go.id



- APT Members support no change to the Radio Regulations as indicated in the conclusion of the CPM Report to WRC-19.
 - to support the conclusions in CPM Report that there is no need to take any regulatory action in the Radio Regulations with respect to specific spectrum for the use of narrowband and broadband MTC applications in the Radio Regulations.

- PACP:



Draft PACP 9.1.8
Rev3.docx

SESSION 3

HAPS related issues, AI 1.14

Mr. Dong ZHOU(China)
DG Chair on 1.14 of APG19
Email : zhou.dong1@zte.com.cn



Agenda item 1.14

- APT Views :
 - Support no changes to the Radio Regulations (Method A) to ensure protection of all existing services to which frequency bands are allocated and their future development in the frequency bands 6 440-6 520 MHz and 6 560-6 640 MHz.
 - That any consideration of the frequency band 24.25-27.5 GHz in Region 2 under this agenda item should not limit the possibility to identify the band for IMT on a global basis under WRC-19 Agenda item 1.13.
 - That protection of all existing services to which frequency bands are allocated and their future development should be ensured.
 - No consensus was reached on any Method to address this agenda item in the frequency bands 27.9-28.2 GHz, 31-31.3 GHz, 38-39.5 GHz, 47.2-47.5 GHz and 47.9-48.2 GHz, thus no PACP was agreed in these frequency bands.
-

SESSION 4

WAS/RLAN related issues, AI

1.16

**(plus information on AIs 1.11, 1.12, 1.15
and 9.1.5)**

AI 1.16 (1/2)

DG Chair: Dr. Fang Jicheng(China)

Email: jchfang@163.com



- APT Members are of the view that the protection of incumbent services including their current and planned use in the frequency bands 5 150-5 350 MHz, 5 350-5 470 MHz, 5 725-5 850 MHz and 5 850-5 925 MHz should be ensured, without unacceptable constraints on these services.
 - In the frequency bands 5 250-5 350 MHz, 5 350-5 470 MHz and 5 850-5 925 MHz, APT Members support NOC to the Radio Regulations for the use of WAS/RLAN to protect incumbent services.
-

AI 1.16 (2/2)

- In the frequency band 5 725-5 850 MHz, APT Members support to allocate the 5 725-5 850 MHz frequency band to the mobile service on a primary basis in Region 3.
- In the frequency band 5150-5250 MHz, APT Members do not support Method A2, A4, A5 and A6. Moreover no consensus was reached on either Method A1 or A3. However APT Members support further consideration and investigation on the possibility of outdoor WAS/RLANs operation under the condition that incumbent services including the future development of these services are fully protected.

- PACP:



PACP on AI1.16

AI 9.1, issue 9.1.5

DG Chair: Dr. Fang Jicheng(China)

Email: jchfang@163.com



- APT Members support Approach A by referencing Resolution **229 (Rev. WRC-12)** in RR No. **5.447F** and **5.450A** as a long-term solution that would avoid reopening the issue of re-assessing technical and regulatory impacts when referencing new versions of ITU-R Recommendations in the future, while creating no additional constraints to the mobile service, and also ensuring protection of the radiolocation service.

- PACP:



PACP on AI 9.1,
issue 9.1.5

Agenda item 1.11

DG Chair: Mr. Liu Bin (China)
Email: liubin@srrc.org.cn



■ APT Views

- APT Members agree to propose a draft new WRC-19 Resolution on the spectrum harmonization for railway radiocommunication systems between train and trackside (RSTT).
- APT Members encourage that frequency bands (or parts thereof) within the ranges of 70-74.8 MHz, 75.2-88 MHz, 142-144 MHz, 146-149.9 MHz, 150.05-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-161.9625 MHz, 161.9875-162.0125 MHz, 162.0375-174 MHz, 335.4-399.9 MHz, 406.1-430 MHz, 440-470 MHz, 470-520 MHz*, 703-748 MHz, 758-803 MHz, 873-915 MHz, 918-960 MHz, 1770-1880 MHz, 43.5-45.5 GHz, 92-94 GHz, 94.1-100 GHz and 102-109.5 GHz, within the existing mobile service allocations on primary basis, are to be considered with the view to achieve spectrum harmonization for RSTT in Region 3, in particular for train radio applications.
 - Note: The frequency band 470-520 MHz is within the preliminary Agenda Item for WRC-23, therefore the decision of WRC-23 on this matter should not be pre-judged.
- APT Members also invite other regional groups to consider frequency bands (or parts thereof) within the ranges of 148-149.9 MHz, 150.05-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-161.9625 MHz, 161.9875-162.0125 MHz, 162.0375-174 MHz, 335.4-399.9 MHz, 406.1-430 MHz, 440-470 MHz, 873-902 MHz and 928-960 MHz, within the existing mobile service allocations on primary basis, for achieving global frequency harmonization for RSTT, in particular for train radio applications.

Agenda item 1.11

- APT Members are also of the following views:
 - International standards and global/regional harmonized frequency bands could facilitate the current and future development of RSTT;
 - Deployment of RSTT requires significant long term investment and a stable radio regulatory environment is important for the railway industry;
 - As train radio application of RSTT directly ensures passenger safety and security for train operations, harmonization of frequency bands for train radio application may have the priority among the four categories of RSTT applications;
 - when implementing RSTT, in particular for cross-border operations, administrations should take reasonable steps to effectively use the spectrum resources and minimize the risk of interference;
 - The current and future ITU-R studies on RSTT should not be restricted to, or preclude, any particular relevant technology or delivery model.
-

Agenda item 1.11

- In the proposed new WRC-19 Resolution:
 - **resolves**
 - 1 to encourage administrations in Region 3 to consider frequency bands within the frequency ranges, or parts thereof, listed in the *considering n)*, with the view to achieve regional frequency harmonization for RSTT, in particular for train radio applications, within existing mobile service allocations on a primary basis;
 - 2 to encourage administrations to consider frequency bands within the frequency ranges (or parts thereof) specified in *resolves 1* and other possible future frequency ranges, as well as countries' specific frequency bands for RSTT, within existing mobile service allocations on a primary basis, which are listed in the relevant ITU-R Recommendation(s) on RSTT spectrum harmonization, with the view to achieve global/regional spectrum harmonization for RSTT, in particular for train radio applications.
 - **Considering**
 - *n)* that in Region 3, the frequency bands within following frequency ranges (or parts thereof) are to be considered for spectrum harmonization for RSTT, in particular for train radio applications: 70-74.8 MHz, 75.2-88 MHz, 142-144 MHz, 146-149.9 MHz, 150.05-156.4875 MHz, 156.5625-156.7625 MHz, 156.8375-161.9625 MHz, 161.9875-162.0125 MHz, 162.0375-174 MHz, 335.4-399.9 MHz, 406.1-430 MHz, 440-470 MHz, 470-520 MHz*, 703-748 MHz, 758-803 MHz, 873-915 MHz, 918-960 MHz, 1 770-1 880 MHz, 43.5-45.5 GHz, 92-94 GHz, 94.1-100 GHz and 102-109.5 GHz,
-

Agenda item 1.12

DG Chair: Mr. Suppapol Jaroonvanichkul (Thailand)
Email: suppapol.j@nbt.go.th



▪ APT Views

- APT Members are of the view that there are needs for harmonization of spectrum use in existing mobile service allocations for evolving ITS. APT Members support possible harmonization of frequency bands in existing mobile service allocations for the implementation of evolving ITS. APT Members support the consideration of the frequency band 5 850-5 925 MHz, or parts thereof, as global harmonized frequency band for evolving ITS. APT Members also support the consideration of examples of ITS frequency bands in current use, as listed in the Annex of Recommendation ITU-R M.2121 for regional harmonized ITS frequency bands.
 - APT Members agreed that no changes to the Table of Frequency Allocations are required for harmonization of spectrum use for ITS.
 - APT Members are also of the view that evolving ITS should not be restricted to, nor exclude, any particular evolving ITS technology including LTE based V2X and its evolution technologies.
 - APT Members are also of the view that the use of frequency bands by ITS should not adversely affect other primary services to which these frequency bands are allocated should not claim protection from other primary services including FSS earth station uplinks.
 - APT Members support the suppression of Resolution **237 (WRC-15)**.
-

Agenda item 1.12

- Summary of PACP:
 - The APT Members support to establish a new WRC-19 Resolution, for encouraging administrations to use globally and regionally harmonized frequency bands for evolving ITS to the extent possible
 - Revised Resolution is a combination of CPM Method C+A
 - Resolution shall not modify or change Vol 1 (Articles) and Vol 2 (Appendices) of the RR (from Method A)
 - Harmonization achieved for Administrations through the Most Recent Version of ITU-R Rec M.2121 (Not Incorporated by Reference)
 - Continuation of studies and ITU-R text through RA action only (i.e. RA-23)
 - Encourage member states to protect FSS
-



Agenda item 1.15

- APT Views

- Support to consider identification of frequency bands for use by the land mobile and fixed service applications operating in the frequency range 275-450 GHz, taking into account the study results conducted by the relevant ITU-R WPs, provided that the protection of passive services identified in No. **5.565** is ensured. APT Members support adding a new footnote to the relevant part of the Radio Regulations.
- In the bands identified for RAS in RR No. **5.565** (275-323 GHz, 327-371 GHz, 388-424 GHz and 426-442 GHz), separation distances and/or avoidance angles between RAS stations and FS stations should be considered depending on the deployment environment of FS stations.

NOC to RR No. **5.565**, and ADD a new footnote for the LMS and FS.

Agenda item 1.15

ADD

5.X115 The following frequency bands are identified for use by administrations for the implementation of the following active service applications:

- land mobile service applications: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz;
- fixed service applications: 275-296 GHz, 306-313 GHz, 320-330 GHz and 356-450 GHz.

The above-mentioned identification for implementation does not establish priority over other applications of radio services in the range of 275-450 GHz.

Administrations wishing to make these above-mentioned frequency bands available for land mobile and/or fixed service applications are urged to take all practicable steps to protect passive services operating according to No. **5.565** until the date when the Table of Frequency Allocations is established in the 275-1 000 GHz frequency range. Considering the protection of the Earth exploration-satellite service (passive), the bands 296-306 GHz, 313-320 GHz and 330-356 GHz should not be used for land mobile and fixed services.

In the frequency bands 275-296 GHz, 306-313 GHz, 318-323 GHz, 327-333 GHz, and 388-424 GHz, mitigation measures (e.g. minimum separation distances and/or avoidance angles) should be implemented as appropriate to ensure protection of radio astronomy sites from land mobile and/or fixed service applications, on a case-by-case basis. (WRC-19)



SESSION 5

Maritime related issues, Als

1.8, 1.9.1, 1.9.2,

(plus information on other issues in Als 1.1, 1.10 and/or 9.1.4, as appropriate)

Chairman of WP5, APG
Mr. Bui Ha Long (Viet Nam)

AI 1.8 (1/2)

◆ APT Views:

Regarding Resolves 1,

APT Members support the Method A2 in the CPM Report.

APT Members support the incorporation of NAVDAT systems and NAVDAT frequencies, both in MF and HF as described in Recommendation ITU-R M.2010 and ITU-R M.2058.

APT Members are also of the view that:

- the existing frequencies used for NAVTEX should be retained and protected;
- the recognition of national NAVDAT frequencies in the bands 415-495 kHz and 505-526.5 kHz (505-510 kHz in Region 2) should not impose any additional constraints on existing services;
- the recognition of these MF NAVDAT and HF NAVDAT frequencies as GMDSS for inclusion into RR Appendix 15 would be considered at a future WRC after IMO concludes its work on the modernization of the GMDSS.

Regarding Resolves 2,

APT Members support the introduction of additional satellite systems to support GMDSS for enhancement of safety-of-life in accordance with the Resolution 359 (Rev.WRC-15), while protecting the services within the frequency band and the adjacent bands, see Section 5 below.

DG Chairs:

Mr. Byungok Kim (Rep. of Korea)

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Mr. Zhao Xiaoding (P. R. of China)

Email: xiaodongzhao1963@vip.sina.com

AI 1.8 (2/2)

◆ PACPs:

Regarding Resolves 1:

MOD RR. No. 5.79

ADD RR. No. 5.A18

MOD RR. Appendix 17 ANNEX 2 PART A to the Table and new note pp) was added

MOD Resolution **359 (REV.WRC-15)**

APT Views were proposed as general matter to the Conference



PACP on AI 1.8

DG Chair: Mr. Liu Falong (P. R. of China)

Email: ctticiufalong@163.com

AI 1.9.1

◆ APT Views:

APT members support Methods A and B1 in the CPM Report to satisfy WRC-19 agenda item 1.9.1.

◆ PACPs:

For AMRD Group A:

MOD RR. Appendix 18 note f)

For AMRD Group B:

MOD RR. Appendix 18 note r)

SUP Resolution **362 (WRC-15)**



PACP on AI 1.9.1

AI 1.9.2 (1/2)

◆ APT Views:

In regards to the possible modification of the Radio Regulations under WRC-19 Agenda Item 1.9.2, APT Members are of the view that:

- Existing allocations and systems in the same and adjacent bands, especially the current terrestrial VDES components, ASM and AIS operations, should be protected, not be degraded or subject to additional constraints, which include but are not limited to, any modification requested to existing AIS equipment;
- Search and rescue aircraft systems operating in maritime frequencies must be protected;
- VDES satellite components should not claim protection from harmful interference caused by stations of a land mobile service to which frequencies are already assigned;
- A new spectrum allocation should be allocate to the maritime mobile-satellite service (MMSS) (Earth-to-space and space-to-Earth) in Appendix 18, with the provision they do not cause harmful interference, and have no claim of protection from incumbent services on a primary basis in the same and adjacent frequency bands; and
- In order to protect the RAS, Annex 1 to Resolution 739 (Rev.WRC-15) should be revised.

DG Chair: Mr. Yoshio Miyadera (Japan)

Email: miyadera.yoshio@jrc.co.jp



AI 1.9.2 (2/2)

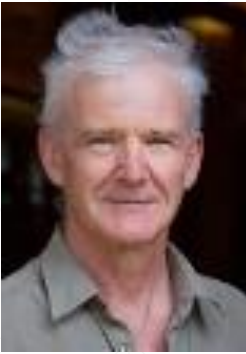
◆ PACPs:

- MOD RR. No. 5.208A
- MOD RR. No. 5.208B
- ADD RR. No. 5.A192
- ADD RR. No. 5.B192
- MOD RR. Table of allocation for the band 148-161.9375 MHz
- MOD RR. Appendix 18
- SUP RESOLUTION **360 (REV.WRC 15)**
- MOD RESOLUTION **739 (REV.WRC 15)**

AI 1.1

DG Chair: Mr. Dale Hughes (Australia)

Email: dalevk1dsh@gmail.com



◆ APT Views:

- APT members are of the view that any changes made to the Radio Regulations under WRC-19 agenda item 1.1 shall not adversely impact the incumbent amateur, broadcasting, fixed and mobile services in the 50-54 MHz frequency band and adjacent frequency bands in Region 3.
- On this condition, APT members support an allocation in part or all of the 50-54 MHz frequency band to the amateur service in Region 1, with necessary appropriate footnotes to provide protection for services which already have an allocation in the band for achieving the globally harmonized use of spectrum at least in some part of this frequency band and promoting the study of radio propagation in this frequency range.

◆ PACP:

Noting that agenda item 1.1 is a Region 1 issue, APT members support an allocation (the amount of spectrum to be agreed at WRC-19) in part or all of the 50-54 MHz frequency band to the amateur service in Region 1. Any changes made to the Radio Regulations under WRC-19 agenda item 1.1 must not adversely affect the existing allocations to the incumbent amateur, broadcasting, fixed and mobile services in the 50-54 MHz frequency band in Region 3, nor subject Region 3 to any changed procedural or regulatory provisions.



AI 1.10 (1/2)

DG Chair: Mr. Sungchul Chae (Rep. of Korea)

Email: scchae@korea.kr



◆ APT Views:

APT Members are of the view that:

- no additional spectrum allocations and no changes to Article 5 of the Radio Regulations are required
- modification of Chapter VII in the Radio Regulations to facilitate introduction of GADSS is required including modification of Article 30 General provision and addition of Article 34A
- the details of the GADSS elements are defined in Annexes to the ICAO Convention
- any studies on regulatory provisions required for the implementation of GADSS should take into account the GADSS concept provided by ICAO

APT Members support Method A contained in the CPM report regarding this agenda item.

AI 1.10 (2/2)

◆ PACPs:

NOC RR. Article 5

MOD RR. No. 30.1

ADD RR. No. 30.1A

ADD RR. Article 34

ADD RR. No. 34A.1

ADD RR. No. 34A.2

SUP **RESOLUTION 426 (WRC 15)**



AI 9.1 (Issue 9.1.4)

DG Chair: Mr. Yudhistira Prayoga (Indonesia)

Email: yudhistira.prayoga@postel.go.id

◆ APT Views:

APT Members are of the view that no changes to the Radio Regulations (RR) are required at WRC-19.

APT Members support the ongoing ITU-R studies through revised Resolution 763 (WRC-15) or under new Resolution.

◆ PACP:

RESOLUTION 763 (WRC 15)



SESSION 6

**Science related issues, Als
1.2, 1.3 and/or 1.7**

A.I. 1.2

APT Views

For the band 399.9-400.05 MHz

APT members support **Method C** in the CPM Report for this Agenda Item

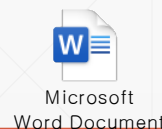
APT members are of the view that transitional period until 22 November 2024 are needed to ensure that the existing telecommands for EESS systems, including those systems to be notified before November 22, 2019, may continue to operate.

For the band 401-403 MHz

APT members support **Method E** in the CPM Report for this Agenda Item.

APT members are of the view that transitional arrangements are needed to ensure that the existing telecommands for EESS, including those systems to be notified and brought into use before November 22, 2019, may continue to operate until November 22, 2024 or 2029 (date to be agreed on at WRC-19). Some APT members support the Method E of the CPM Report with a transition period for applying the relevant e.i.r.p. limits of up to November 22, 2029 in this band.

PACP



DG chair : Mr. Wang Xiaodong (PR China)

Email : wxd@srrc.org.cn

A.I. 1.3

◆ APT Views

Some APT members support **Method C** while one APT member supports **Method B** of the CPM-19 Report.

One APT member is of the view that pfd limits are to be revised for both non-GSO and GSO MetSat/EESS satellites to give additional protection needed by mobile services that require higher protection based on further ITU-R studies.

◆ PACP

No PACP is developed since no consensus could be reached.

A.I. 1.7.

APT Views

APT Members do not support allocations for non-GSO SD systems in the following frequency ranges:

- Maritime mobile VHF radiocommunication in the frequency ranges 156-157.45 MHz, 160.6-160.975 MHz and 161.475-162.05 MHz, in accordance with RR No. **5.226** and Appendix **18 (Rev. WRC-15)**.
- The frequency range 406-406.1 MHz that is dedicated for satellite emergency position-indicating radio beacons, in accordance with Resolution **205 (Rev. WRC-15)**; and
- Frequency bands used by Global Maritime Distress and Safety System (GMDSS) included in Appendix 15 of RR.

The main support from APT members is for **Method A** and **Method C**, with a preference for Method C if the protection can be ensured for AM(R)S below the 137-138 MHz frequency band and the FS and MS in the 148-149.9 MHz frequency band.

Some APT members do not support Method C.

PACP

No PACP is developed since no consensus could be reached.

DG chair : Mr. Nguyen Huy Cuong (Vietnam)

Email : cuongnh@rfd.gov.vn



SESSION 7

ESIM (AI 1.5) & NGSO FSS

(AI 1.6) related issues,

(plus information on AIs 1.4, 9.1.3 and 9.1.9)

DG Chair on 1.5 : Mr. Nobuyuki Kawai (Japan)
Email: no-kawai@kddi.com

AI 1.5 (1/6)

◆ APT Views

APT Members support the PACP as shown in the follow-on slides developed based on the input contributions and discussions during the meetings.

With respect to protection to terrestrial service by any type of ESIM using Annex 2 with its pfd approach including various options providing modality how to implement these options as contained in CPM Report, no consensus was reached at APG19-5 meeting.

With respect to the protection of terrestrial services by A-ESIM two approaches were proposed.

Approach 1: Establish of pfd mask/limit which shall not be exceeded on any point at the earth surface.

Approach 2: Establish of altitude limit below which aircraft on which ESIM operates shall not transmit.

No consensus was reached on either of these two approaches or both approaches together thus no PACP will be proposed in this regard.

APT will continue discussions on the above issues till WRC-19.

AI 1.5 (2/6)

◆ Preliminary APT Common Proposal to WRC-19

APT Members basically support Method B of CPM Report with the following options and modifications: (only major options/modifications are described below)

ADD 5.A15 (Option 1)

The operation of earth stations in motion communicating with geostationary FSS space stations in the frequency bands 17.7-19.7 GHz and 27.5-29.5 GHz shall be subject to draft new Resolution **[A15] (WRC-19)**. (WRC-19)

ADD DRAFT NEW RESOLUTION [A15] (WRC-19)

recognizing

c)bis (new) that the successful compliance of this Resolution does not oblige any administration to authorize/licence any ESIM to operate within the territory under its jurisdiction unless such an operation it fully complies with its national jurisdiction;

AI 1.5 (3/6)

◆ Preliminary APT Common Proposal to WRC-19 (continued)

ADD DRAFT NEW RESOLUTION [A15] (WRC-19)

resolves

1.1.1 (modified)

with respect to satellite networks or systems of other administrations, the ESIM characteristics shall remain within the envelope characteristics and coordination envelope of the satellite network with which the ESIM communicate;

1.1.3.1(new) (Examination of ESIM in relation to a GSO satellite network recorded in the MIFR)

upon receipt of the information provided in accordance with *resolves* 1.1.3 above, the Bureau shall examine it in relation to the requirements referred to in *resolves* 1.1.1 based on the information recorded in the MIFR and any other reliable information available to it . If following this examination, the Bureau concludes that the ESIM characteristics are within the envelope of the satellite network, the Bureau shall publish the results for information in the BR IFIC, otherwise the information shall be returned to the notifying administration;

AI 1.5 (4/6)

◆ Preliminary APT Common Proposal to WRC-19 (continued)

ADD DRAFT NEW RESOLUTION [A15] (WRC-19)

resolves

1.1.3.2(new) (Examination of ESIM in relation to a GSO satellite at coordination stage which could subsequently be recorded in the MIFR)
upon receipt of the information provided in accordance with *resolves* 1.1.3 above, the Bureau shall examine it in relation to the requirements referred to in *resolves* 1.1.1 based on the complete information submitted. If, following this examination, the Bureau concludes that the ESIM characteristics are within the envelope of the satellite network under coordination , the Bureau shall publish the results for information in the BR IFIC indicating the provisional nature of the coordination process with the remarks that once the coordination is successfully completed and recorded in the MIFR the finding would be reviewed and, if necessary, revised, otherwise the information shall be returned to the notifying administration;

AI 1.5 (5/6)

◆ Preliminary APT Common Proposal to WRC-19 (continued)

ADD DRAFT NEW RESOLUTION [A15] (WRC-19)

resolves

1.1.4, 1.1.5 -> suppressed

1.2.2bis (new) for the implementation of resolves 1.2.2 above, the notifying administration of the GSO FSS network with which aeronautical ESIM communicate shall send the Bureau the relevant Appendix 4 information related to the characteristics of the aeronautical ESIM. The Bureau shall examine the information with respect to its conformity with the pfd limits specified in Part 2 of Annex 2 on the Earth's surface. Should the result of examination is unfavourable the BR shall return submission to the notifying administration of ESIM.

1.2.3, View 1 and View 2 -> suppressed

1.2.4 (Option 1)

1.2.5

No proposal -> See APT Views.

AI 1.5 (6/6)

◆ Preliminary APT Common Proposal to WRC-19 (continued)

ADD DRAFT NEW RESOLUTION [A15] (WRC-19)

resolves

2.1(new) that the operation of ESIM shall be strictly limited to provide civil application only thus any such operation for non-civil application purposes is prohibited.

3(new) that the notifying administration for the satellite network within which ESIM communicate with in collaboration with the administration authorizing operation of ESIM in its territory shall ensure that the ESIM have the capability to limit the operation to the territory or territories of administrations having authorized those earth stations and to comply with Article 18 ;

ANNEX 2 TO DRAFT NEW RESOLUTION [AI1.5]

PART 1 MARITIME ESIM

1.1 (Minimum distance 70km)

PART 2 AERONAUTICAL ESIM

No proposal. ->See APT Views.

ANNEX 3 TO DRAFT NEW RESOLUTION [AI1.5] →No consensus

AI 1.6 (1/2)

◆ APT Views

APT Members support the establishment of regulatory and procedural conditions for non-GSO FSS satellite systems in the frequency bands 37.5- 39.5 GHz (space-to-Earth), 39.5 - 42.5 GHz (space-to-Earth), 47.2 - 50.2 GHz (Earth-to-space) and 50.4 - 51.4 GHz (Earth-to-space) while ensuring protection to GSO satellite networks in FSS, MSS and BSS, and other existing primary services in the same bands as well as protection of the EESS (passive) in the frequency bands 36-37 GHz and 50.2-50.4 GHz and the radio astronomy in the frequency bands 42.5-43.5 GHz, 48.94-49.04 GHz and 51.4-54.25 GHz.

APT Members support Method A of Issue 1 in the CPM Report.

In the absence of suitable ITU-R Recommendations to be incorporated by reference, APT Members support consideration of a WRC Resolutions, addressing:

- generic GSO Reference Links and calculation procedures, that may be used to verify the compliance of non-GSO systems; and
 - regulatory provisions to protect GSO satellite networks based on appropriate sharing methodology and reference characteristics of GSO satellite networks.
-

AI 1.6 (2/2)

◆ ATP Views (continued)

APT Members support ensuring the protection of EESS (passive) from unwanted emission in adjacent bands. In relation to Issue 2 relating to possible modifications to Resolution **750 (Rev. WRC-15)**, preference towards Option A has been expressed, and Option B is still under consideration.

◆ Preliminary APT Common Proposal to WRC-19

- Propose Method A of CPM Report on Issue 1.
- No proposal on Issue 2.

DG Chair: Mr. David Kershaw (New Zealand)

Email: dave.kershaw@dkconsulting.co.nz



AI 1.4

◆ APT Views

APT Members support Method B of CPM19-2 text on this Agenda Item. APT Members are of the view to support ITU-R studies and that any possible revision of the limitations of Annex 7 to Radio Regulations Appendix **30 (Rev.WRC-15)** under Resolution **557 (WRC-15)** should not adversely affect current and future FSS/BSS usage in the 11.7 – 12.7 GHz frequency band for Region 3.

◆ Preliminary APT Common Proposal to WRC-19

Same as Method B of CPM Report.

DG Chair: Mr. Meiditomo Sutyarjoko (Indonesia)

Email: meiditomo.sutyarjoko@bri.co.id



AI 9.1 (Issue 9.1.3)

◆ APT Views

APT Members support no change (NOC) to the Radio Regulations to satisfy agenda item 9.1, issue 9.1.3 based on study results of ITU-R for new non-GSO systems in the 3 700-4 200 MHz, 4 500-4 800 MHz, 5 925-6 425 MHz and 6 725-7 025 MHz frequency bands under the terms of Resolution **157 (WRC-15)**.

◆ Preliminary APT Common Proposal

Same proposal as indicated in the first study of Conclusion Part (§ 3/9.1.3/4) of CPM Report (NOC).

DG Chair: Mrs. Cheng Fenhong (P. R. of China)

Email: chengfenhong@chinasatcom.com



AI 9.1 (Issue 9.1.9)

◆ APT Views

APT Members support a new primary allocation to the fixed-satellite service (Earth-to-space) in the frequency band 51.4-52.4 GHz limited to FSS gateway links for geostationary orbit use subject to regulatory provisions to ensure protection of currently allocated services in the same frequency band and in adjacent frequency bands.

◆ Preliminary APT Common Proposal

Same as the proposed example of a possible regulatory solution in CPM Report

DG Chair: Mrs. Cheng Fenhong (P. R. of China)

Email: chengfenhong@chinasatcom.com



AI 9.3

◆ APT Views

APT Members support the ITU-R studies on this issue, in accordance with Resolution **80 (Rev.WRC-07)**.

APT Members are encouraged to consider the Radiocommunication Bureau Director's Report to WRC-19 on any responses to Resolution **80 (Rev.WRC-07)** that may include the outcome of the Radio Regulations Board under Resolution **80 (Rev.WRC-07)**.

◆ Preliminary APT Common Proposal to WRC-19

None

DG Chair: Ms. Geetha Remy Vincent (Malaysia)

Email: geetha@measat.com





SESSION 8

**Satellite regulatory issues,
AIs 7 relevant issues (e.g.
issues A, I)**

**(plus information on other AI 7 issues and
AIs 9.1.7 and 9.3)**

Mr. Muneo Abe (Japan)
Chairman of WP3, APG-19
Email: Abe.Muneo@cj.MitsubishiElectric.co.jp

AI 7

Issue A: NGSO BIU and consideration of a milestone-based deployment approach (1/5)

◆ APT Views

BIU definition:

APT members are of the view that the definition of the BIU of frequency assignments to non-GSO systems should be in accordance with the current practice as contained in the Rules of Procedure, which means to keep a continuous period of 90 days for frequency assignments of the FSS/MSS/BSS, and no fixed period for frequency assignments other than the FSS/MSS/BSS.

With respect to the regulatory provision No. **11.44C** of the BIU, notified orbital planes (11.44C.1), APT Members could support Option 2, as outlined in the CPM19-2 report.

AI 7

Issue A: NGSO BIU and consideration of a milestone-based deployment approach (2/5)

◆ APT Views (continued)

Milestone-based approach

Milestones	Milestone timing (Number of years after the end of the seven-year regulatory period or after 1st January 2021, whichever falls later)	Minimum required % of satellites deployed to meet the milestone
1 st	2 to 3 years	10 %
2 nd	4 to 5 years	30 – 50 %
3 rd	7 years	90-95%/100%

Note:

The WRC-19 Conference when considering the ranges of Milestones and associated deployment factors in the above table, may consider allowing a degree of flexibility to Non-GSO satellite operators if they missed the percentage criterion in the milestone 1 or 2 above, it would need to achieve those criteria's at the subsequent Milestone.

AI 7

Issue A: NGSO BIU and consideration of a milestone-based deployment approach (3/5)

◆ APT Views (continued)

Transitional Measures

APT Members could support Option 1, the commencement date of the milestone process to be 1 Jan. of 2021, at this stage.

Frequency bands and services for application of the milestone-based approach

APT Members support application of the milestone-based approach to non-GSO systems operating in the FSS, BSS and MSS, but not those operating in the RNSS.

APT Members do not object, at this stage to the application of the approach to the following MSS frequency bands for which no consensus was reached and listed in the CPM Report: 137-137.025 MHz, 137.025-137.175 MHz, 137.175-137.825 MHz, 137.825-138 MHz, 148-149.9 MHz, 149.9-150.05 MHz (This band 149.9-150.05 MHz appears to have been mistakenly listed in the CPM Report as 137-138 MHz), 399.9-400.05 MHz, and 400.15-401 MHz.

AI 7

Issue A: NGSO BIU and consideration of a milestone-based deployment approach (4/5)

◆ APT Views (continued)

Milestone based approach – consequences of non-submission of milestone information (resolves 11 to 11ter)

APT members expressed preference for Alternative 1.

Milestone based approach – reuse of spacecraft to BIU or count towards milestones of other systems (resolves 12)

APT members expressed slight preference for Alternative 2 (NOC), at this stage.

Bringing into use – tolerances in orbital characteristic values

APT Members do not support the application of tolerance values at this stage, because no technical basis has been developed within the ITU-R in this study cycle to determine how much deviation could be tolerated between the characteristics of the notified orbital planes and the characteristics of the orbital planes associated with any deployed space stations.

AI 7

Issue A: NGSO BIU and consideration of a milestone-based deployment approach (5/5)

◆ Preliminary APT Common Proposal to WRC-19

Due to the provisional nature of several items associated with Milestone-based approach and because of strong interrelation of some of these factors with each other's, individual decision on one element without agreement of other element(s) seems inappropriate and counterproductive since such decision undermine the flexibility that WRC-19 should have at its disposal to make an overall evaluation of all elements of Milestone-based approach taking into account dependency of each element to others elements as well as through analysis of the most possible alternatives.

APT decided to submit range of most probable options (see the table under Milestone-based approach) in order to permit WRC-19 to freely and clearly analyse the situation without being biased by any specific option, make thorough analysis of the situation and decide accordingly taking into account the results of negotiation to be carried out between the existing and immediate potential users/operators of the NGSO Milestone-based approach.

AI 7

Issue B: Ka-band coordination arc - FSS vs MSS and MSS vs MSS

◆ APT Views

APT Members support the use of the coordination arc with a value of 8 degrees as coordination criteria, to determine if coordination is required between FSS and MSS systems and between MSS systems in the frequency bands 29.5-30 GHz (Earth-to-space)/19.7-20.2 GHz (space-to-Earth), in all 3 Regions, while keeping the possibility to request application of RR No. **9.41** to include additional satellite networks that would be affected taking into account the $\Delta T/T > 6\%$ criteria without modifications to current category of allocation in the frequency bands above. APT Members agree to develop Preliminary APT Common Proposal (PACP) based on this view.

◆ Preliminary APT Common Proposal to WRC-19

Same as those proposed in CPM Report

AI 7

Issue C: *Issues for which consensus was achieved in ITU-R (1/4)*

Issue C1: *Inconsistency between RR No.11.43A and § 8.13 of AP30B*

◆ APT Views

APT Members support the single method in the CPM Report to address this issue by aligning the text of paragraph 8.13 of Article 8 of RR Appendix **30B** with that of RR No. **11.43A** of RR Article **11** while ensuring that this alignment should not impact on any other current regulatory practice.

Issue C2: *Possibility to notify/bring into use only one of the blocks/one sub-band under AP30B Article 6*

◆ APT Views

APT Members support the single method in the CPM Report which can allow administrations to submit an application for one of the blocks/sub-bands of 250 MHz (10.7-10.95 GHz or 11.2-11.45 GHz for downlink and 12.75-13.0 GHz or 13.0-13.25 GHz for uplink) in an explicit submission of one of the blocks/sub-bands under RR Appendix **30B**.

AI 7

Issue C: Issues for which consensus was achieved in ITU-R (2/4)

Issue C3: AP30B MOD to Article 6

◆ Preliminary View

APT Members support the single method in the CPM Report to add a new provision in Article 6 of RR Appendix **30B** to clearly state that § 6.13 to 6.15 of RR Appendix **30B** do not apply in the context of requirements associated with § 6.6 of RR Appendix **30B**.

Issue C4: AP30/30A single AP4 notice for List and Notification

◆ Preliminary View

APT Members support the single method in the CPM Report to modify § 4.1.12*bis* and § 4.2.16*bis* of RR Appendices **30** and **30A** to allow administrations to request the Bureau to have notices submitted under any of these two provisions also examined with respect to § 5.1.1 of RR Appendix **30** and § 5.1.2 of RR Appendix **30A** for notification.

AI 7

Issue C: *Issues for which consensus was achieved in ITU-R (3/4)*

Issue C5: *MOD to No. 11.46 and six month resubmission*

◆ APT Views

APT Members supports the single Method for the Issue C5, as outlined in the CPM19-2 Report.

Issue C6: *Single AP4 notice for entry into the AP30B List (under § 6.17) and Notification (under § 8.1)*

◆ APT Views

APT Members support the single method in the CPM Report to allow a single submission to be treated both in respect of entry into the List under § 6.17 and notification under § 8.1 of RR Appendix **30B** to reduce workload of both administration and the Bureau.

AI 7

Issue C: Issues for which consensus was achieved in ITU-R (4/4)

Issue C7: *Harmonization of AP30B with AP30/30A on possibility of obtaining agreement for a specific period*

◆ APT Views

APT Members support the single method in the CPM Report to add a new provision 6.15*bis* to Article 6 and a new provision § 8.16*bis* to Article 8 of RR Appendix 30B in order to recognize the possibility of obtaining agreement from affected administrations for a specified period. It is also proposed to modify § 5.2.6 of Article 5 of Appendix 30A to Radio Regulations.

◆ Preliminary APT Common Proposal to WRC-19 (for Issues C1 through C7)

Same as those proposed in CPM Report.

AI 7

Issue D: Identification of those specific sat. networks and systems with which coordination needs to be effected under 9.12, 9.12A and 9.13

◆ APT Views

APT Members support the Method D1 for the Issue D, as outlined in the CPM19-2 Report.

◆ Preliminary APT Common Proposal

Same as those proposed in Method D1 of CPM Report

AI 7

Issue E: Resolution related to RR Appendix 30B (1/4)

◆ APT Views

APT members support the single method in the CPM text to establish special measures to be applied once with respect to the submission received from an administration having no frequency assignments in the RR Appendix **30B** List the details of which are to be contained in a WRC Resolution to facilitate the tasks of those administrations to provide an economically viable satellite service to its national territory as initially considered when the allotment Plan was established in 1988.

APT members additionally propose to consider following matters in the WRC Resolution [A7E-AP30B] (WRC-19):

- a) To take into account the relative space station uplink receive antenna gain of the potentially affected assignment at the location of the interfering earth station for uplink PFD criteria;
- b) To assist administrations intending to use the special procedures to be able to implement/accommodate these satellite networks if all measures mentioned in draft resolution did not help to resolve incompatibility with respect to satellite network in Appendix 30B having Global/Regional coverage but with final service area limited to few numbers of contiguous or non-contiguous countries; and
- c) To take necessary actions for inclusion of above a) and b) in draft Resolution, as appropriate.

AI 7

Issue E: Resolution related to RR Appendix 30B (2/4)

◆ Preliminary APT Common Proposal

Propose the same one as CPM Report **with the following modification** to the draft Resolution:

1) DRAFT NEW RESOLUTION [A7(E)-AP30B] (WRC-19)

resolves

that as of ~~the date~~ 23 November 2019, the special procedure described in the Attachment to this Resolution for processing of submissions received by the Bureau under Article 6 of Appendix **30B** for conversion of the allotment of an administration into an assignment with modifications which are outside the envelope of the initial allotment while restricted to provide service to its national territory designated by test points as contained in the corresponding allotment, or submission by an administration of an additional system the service area of which is limited to its national territory designated by test points as contained in the allotment, in the frequency bands 4 500-4 800 MHz, 6 725-7 025 MHz, 10.70-10.95 GHz, 11.20-11.45 GHz and 12.75-13.25 GHz shall be applied if requested by an administration in respect of its submission as specified in the Attachment below.

Reasons: the special procedure should be applied as soon as possible.

AI 7

Issue E: Resolution related to RR Appendix 30B (3/4)

◆ Preliminary APT Common Proposal (continued)

2) DRAFT NEW RESOLUTION [A7(E)-AP30B] (WRC-19)

further resolve

that when coordinating networks submitted under these additional measures, administrations, in particular those having satellite networks in process or included in the List with global coverage, should exercise the utmost goodwill and endeavor to overcome any difficulties encountered by the incoming network in order to accommodate the incoming submission while respecting the underlying principles of RR No. 9.6 and its associated Rule of Procedure which would apply by analogy to Article 6 of Appendix 30B .

“in the application of Article 9 no administration obtains any particular priority as a result of being the first to start either the advance publication phase (Section I of Article 9) or the request for coordination procedure (Section II of Article 9).”

Reasons: this *further resolves* has been proposed to address essential regulatory measures or actions that when an administration having no assignment in the List of Appendix 30B or assignment submitted under § 6.1 of Appendix 30B applies the additional procedures of the draft new WRC Resolution [A7E-AP30B], coordination difficulties can still be encountered.

AI 7

Issue E: Resolution related to RR Appendix 30B (4/4)

◆ Preliminary APT Common Proposal (continued)

3) APPENDIX 1 TO ATTACHMENT TO DRAFT NEW RESOLUTION [A7(E)-AP30B] (WRC-19) 2.2)

• • • •

in the 6 725-7 025 MHz (Earth-to-space) the pfd produced at the location in the geostationary-satellite orbit of the potentially affected assignment under assumed free-space propagation conditions does not exceed $-201.0 - G_{RX}$ dB(W/(m² · Hz)) where G_{RX} is the relative space station uplink receive antenna gain of the potential

• • • •

in the 12.75-13.25 GHz (Earth-to-space) frequency band, the pfd produced at the location in the geostationary-satellite orbit of the potentially affected assignment under assumed free-space propagation conditions does not exceed $-205.0 - G_{RX}$ dB(W/(m² · Hz)) where G_{RX} is the relative space station uplink receive antenna gain of the potentially affected assignment at the location of the interfering earth station.

Reasons: Uplink pfd criteria should be corrected to take into account the relative space station uplink receive antenna gain of the potentially affected assignment at the location of the interfering earth station.

AI 7

Issue F: Measures to facilitate entering new assignments into AP30 List

◆ APT Views

APT Members support to further study the measures to facilitate entering new assignments into the RR Appendix 30B List.

◆ Preliminary APT Common Proposal

APT Members decided not to develop PACP on issue F in APG19-5.
APT Members will follow further studies conducted by ITU-R.

AI 7

Issue G: Updating AP30/30A reference situation (1/3)

◆ APT Views

APT Members do not support Method G2 in the CPM Report.

APT Members could not agree on a common view and decided not to develop Preliminary APT Common Proposal for Issue G.

◆ Summary of Discussions at APG19-5

Some APT Members support Method G1 in the CPM Report to modify § 4.1.18*bis* of RR Appendices **30** and **30A** such that, when a network has entered into the List using § 4.1.18, and when the recording of the associated assignment transitions from provisional to definitive while there is still disagreement, the reference situation of the interfered-with network should be updated in consultation with, and only with the agreement of the affected administration.

Some other APT Members support Method G3 in the CPM Report that is no change to the Radio Regulations.

AI 7

Issue G: Updating AP30/30A reference situation (2/3)

◆ Summary of Discussions at APG19-5 (continued)

Under Method G3, to further clarify actions under of § 4.1.18 and § 4.1.18bis, some APT Members are of the view that § 4.1.20 of RR Appendices 30 and 30A could be modified. An example of revision is proposed as follows in order to reflect the actions of § 4.1.20 of RR Appendices 30 and 30A and update EPM properly as a matter of consequential action after eliminating the interference.

AP30 MOD

4.1.20 Should harmful interference be caused by an assignment included in the List under § 4.1.18 to any ~~recorded~~ assignment in the ~~Master Register List~~ which was the basis of the disagreement, the administration using the frequency assignment included in the List under § 4.1.18 shall, upon receipt of a report providing the particulars relating to the harmful interference^[1]~~advice thereof~~, immediately eliminate this harmful interference. (WRC-0319)

[1] 4.1.20.1 When providing the particulars relating to the harmful interference under § 4.1.20, administrations involved shall use, to the maximum extent possible, the format prescribed in Appendix 10 of the Radio Regulations. (WRC-19)

AI 7

Issue G: Updating AP30/30A reference situation (3/3)

◆ Summary of Discussions at APG19-5 (continued)

ADD

4.1.20A In applying § 4.1.20 with respect to satellite networks, administrations involved shall cooperate in the elimination of harmful interference and may request the assistance of the Bureau, and shall exchange relevant technical and operational information required to resolve the issue. Within 30 days when the harmful interference has been eliminated, the administration responsible for the assignment included in the List under § 4.1.18 shall provide the Bureau with the modified characteristics to that effect. The Bureau shall update the characteristics of this assignment and publish it in a Special Section of its BR IFIC. The equivalent protection margin (EPM) shall be updated accordingly. (WRC-19)

ADD

4.1.20B Should any administration involved in the matter inform the Bureau that all efforts to resolve the harmful interference have failed, the Bureau shall immediately inform other involved administrations and prepare a report, together with all necessary supporting documents (including comments from the administrations involved), for the next meeting of the Board for its consideration and any required action (including the possible cancellation of the assignment recorded under § 4.1.18), as appropriate. The Bureau shall thereafter implement the decision of the Board and inform the administrations concerned. (WRC-19)

The same sentences should be added to AP30A.

AI 7

Issue H: MOD to AP4 items to be provided for NGSO systems

◆ APT Views

APT Members support the single Method for the Issue H, as outlined in the CPM19-2 Report.

◆ Preliminary APT Common Proposal to WRC-19

Same as those proposed in CPM Report

AI 7

Issue I : Modified regulatory procedure for NGSO satellite systems with short-duration missions

◆ APT Views

- ✓ APT members support the Method I2 in the CPM Report to develop a new WRC Resolution together with an associated regulatory procedure for non-GSO satellite systems with short-duration missions.
- ✓ APT members are of the view that the simplified regulatory regime for non-GSO satellite systems with short-duration missions should not place additional burden on potentially affected administrations.
- ✓ APT members support the retention of the typical 4 month commenting period from the date of BR IFIC containing information published under No. **9.2B**.
- ✓ APT members are of the view that this Resolution should apply only to non-GSO networks or systems identified by the notifying administrations as short duration mission. AP4 to RR should be modified to accommodate this indication of the administration's identification.

◆ Preliminary APT Common Proposal to WRC-19

Same as those proposed in CPM Report

AI 7

Issue J: Pfd limit in Sec 1 of Annex 1 of AP30

◆ APT Views

APT Members could not agree on a common view and decided not to develop Preliminary APT Common Proposal for Issue J.

◆ Summary of discussions at APG19-5

- ✓ Some APT Members supports Method J1 to modify Section 1, Annex 1 of RR Appendix **30** in order to allow List assignments to exceed the pfd limit given in Section 1 of Annex 1 to RR Appendix **30** only within the national territory of the notifying administration under the condition that the assignment does not overlap with the Regions 1 and 3 guardbands as defined in § 3.9 of Annex 5 to RR Appendix **30** and also under the condition that, on the border areas and other territory of another country, this pfd limit is not exceeded.
 - ✓ Some other APT Members supports Method J2 in the CPM Report that is no changes to the Radio Regulations.
 - ✓ APT Members will continue the discussions with a view to reaching consensus in this Issue by WRC-19.
-

AI 7

Issue K: Difficulties for Part B exams under § 4.1.12 or 4.2.16 of AP30/30A and § 6.21 c) of AP30B

◆ APT Views

APT Members support the Method in the CPM Report to add one more examination under § 4.1.12 and § 4.2.16 of RR Appendices **30** and **30A** and § 6.21 c) of RR Appendix **30B** such that should any remaining affected networks whose assignments have been entered in the List before the submission under § 4.1.12 and § 4.2.16 of RR Appendices **30** and **30A** or § 6.17 of RR Appendix **30B**, the Bureau shall further examine if the remaining corresponding assignments in the List are still considered as being affected.

◆ Preliminary APT Common Proposal to WRC-19

Same as those proposed in CPM Report

AI 7

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SESSION 9

Future WRC agenda items, AI 10

(plus information on the other AIs)

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Proposed Items for inclusion in the agendas of WRC-23

**Preliminary APT Common Proposals under WRC-19 Agenda Item 10 subject
to approval by APT Members**

APT Views and PACPs on preliminary items included in Resolution 810 (WRC-15)

Preliminary APT Common Proposal

APT Members support the preliminary agenda item 2.1 as follows:

1.x to consider possible regulatory actions to support Global Maritime Distress and Safety System (GMDSS) modernization and the implementation of e-navigation, in accordance with Resolution **361** (Rev.WRC-19);

Reason: possible regulatory actions in support of IMO's GMDSS modernization, including the introduction of additional satellite system into the GMDSS and e-Navigation activities.

APT Views

- 1) APT Members could support the preliminary items:
 - 2.2: spaceborne radar sounders in 45 MHz,
 - 2.3: space weather sensors,
 - 2.5: review of 470-960 MHz in Region 1.
 - 2) APT Members object to preliminary item 2.4.
-

APT Preliminary Common Proposals (Proposed items for inclusion in the agendas of WRC-23)

- A) to consider identification for IMT in the 7 025-7 125 MHz frequency range in accordance with Resolution **[ASP-AI10-IMT] (WRC-19)**;
- In addition to frequency band 7 025-7 125 MHz, the frequency band 5 925-6 725 MHz was also considered for which consensus is yet to be reached at this stage.

resolves to invite ITU-R

3 to consider possible new identification for IMT within the frequency range of 7 025-7 125 MHz if the results of the sharing and compatibility studies are satisfactorily protect the existing use of incumbent services and their future development

APT Preliminary Common Proposals (Proposed items for inclusion in the agendas of WRC-23)

- B)** to consider identification of certain frequency bands below 2.7 GHz identified for IMT for use by high altitude platform station as IMT base stations (HIBS), and whether changes are needed to the set of existing bands identified for use by HIBS in accordance with Resolution **[ASP-AI10-HIBS] (WRC-19)**;
 - Using HIBS in existing IMT bands below 2.7 GHz to provide more flexibility on the use of these bands, in order to address the need to expand coverage and capacity in mobile broadband networks.
-

APT Preliminary Common Proposals (Proposed items for inclusion in the agendas of WRC-23)

resolves to invite ITU-R

3 to conduct and complete in time for WRC-23, taking into account the results of studies already performed and in progress in ITU-R, sharing and compatibility studies to ensure protection, and not imposing constraints on, of existing systems and their planned development of allocated services and, as appropriate, adjacent band, for the following frequency bands, or portions thereof, specified in RR Nos. **5.286AA**, **5.313A**, **5.317A** and **5.384A**;

- 450-470 MHz, 703-960 MHz, 1 710-1 885 MHz (1 710-1 815 MHz is only used for uplink in Region 3) and 2 500-2 690 MHz (2 500-2 515 MHz is only used for uplink in Region 3, 2 655-2 690 MHz is not to be identified for HIBS operations in Regions 1 and 3 and hence shall not be studied for Regions 1 and 3);

APT Preliminary Common Proposals (Proposed items for inclusion in the agendas of WRC-23)

- C)** to consider effective use of the VHF maritime frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz in the maritime mobile service in accordance with Resolution **[MARINE VHF] (WRC-19)**.
 - D)** to consider an AMS(R)S allocation in accordance with Resolution **[SPACE-BASED VHF APPLICATIONS]** for both the uplink and downlink of aeronautical VHF applications in the frequency band 117.975 – 137 MHz, while ensuring that any harmful interference is not caused or any additional constraints are not placed on incumbent services in the same and adjacent bands, especially the AM(R)S (117.975 – 137 MHz) and the ARNS (108 – 117.975 MHz).
-

APT Preliminary Common Proposals (Proposed items for inclusion in the agendas of WRC-23)

- E)** to take appropriate actions, based on the results of ITU-R studies, for the implementation of station on board suborbital vehicles,
- to study spectrum needs for communications between stations on board suborbital vehicles and terrestrial and space station providing functions, inter alia, voice/data communications, navigation, surveillance, telemetry, tracking and command (TT&C) and safety of life and property,
 - to study appropriate modification to the existing provisions to accommodate stations on board sub-orbital vehicles,
 - to conduct sharing and compatibility studies with incumbent services to which is allocated on a primary basis in the same and adjacent frequency bands to avoid harmful interference, regarding to the suborbital flight application scenarios.
-

APT Preliminary Common Proposals on WRCs Standing Agenda Items

A) WRC standing agenda item 7 (Satellite procedures)

➤ APT Members propose modifications to Resolution **86 (Rev. WRC-07)**

New resolves to consider only those issues which have been identified under the WRC standing agenda item mentioned in *resolves 1* and which have been studied by the ITU-R and included in the CPM Report;

APT Members are of the view that it is required to develop a course of action such as establishment of a deadline to identify and study issues under WRC standing agenda item 7. Therefore it is proposed that the identified issues under this agenda item should be studied by ITU-R before the second session of the CPM and required regulatory examples be included into the draft CPM Report. The Conference should only consider those issues which have been studied by ITU-R and included in the CPM Report.

APT Preliminary Common Proposals on WRCs

Standing Agenda Items

B) WRC standing agenda item 9 (Report of the BR Director)

➤ APT Members propose a New Resolution **[ASP/AI9] (WRC-19)**

resolves that any changes to the Radio Regulations should not be considered under the WRC standing agenda sub-item 9.1 (activities of the Radiocommunication Sector since the previous WRC);

APT Members are of the view that issues which are identified by WRC resolutions to be studied by ITU-R, the results of which are to be included in the Report of the BR Director, should not propose any changes to the RR. Such issues that may lead to a modification to the RR should not be included in the list of issues under agenda item 9.1. Instead, they should be considered as a regular WRC agenda item, if agreed by the Conference.

APT Preliminary Common Proposals on WRCs

Standing Agenda Items

resolves that the WRC standing agenda sub-item 9.2 is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the RR and the comments from administrations.

APT Members are of the view that standing WRC agenda item 9.2 is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the RR and the comments from administrations.

The difficulties or inconsistencies encountered by administrations in the application of the RR should be sent to the BR for appropriate action, and should not be considered by the Conference under this standing WRC agenda item.

APT Preliminary Common Proposals on WRCs

Standing Agenda Items

instructs the Director of the Radiocommunication Bureau

- 1 to submit a draft of the Report on any difficulties or inconsistencies encountered in the application of the RR, to the second session of the CPM for information,
 - 2 to publish the final Report on any difficulties or inconsistencies encountered in the application of the RR at least three months before the Conference.
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APT Preliminary Common Proposals on WRCs Standing Agenda Items

C) WRC standing agenda item 10 (Future Agendas)

➤ APT Members propose modifications to Resolution **804 (Rev.WRC-12)**

New resolves to encourage administrations and regional groups to submit, to the extent practicable, the items and or topics for inclusion in the agendas of future WRCs under WRC standing agenda item 10 to the second session of the CPM,

APT Members are of the view that administrations and regional groups need sufficient time to examine the proposed items for inclusion in the agenda of future WRC to prepare their views and proposals to the Conference.

➤ APT Members propose the following wording for Standing Agenda Item 10

10 to recommend to the ITU 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 **and Resolution 804 (Rev. WRC-19)**;

APT Coordinators for AI 8

Mr. Neil Meaney (Australia)

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Agenda Item 8

Country footnotes

Preliminary APT Common Proposals under WRC-19 Agenda Item 8 subject to approval by APT Members

APT Preliminary Common Proposals under Agenda Item 8

- APT Members propose modifications to Resolution **26 (Rev.WRC-07)**

New further resolves

1b) for the addition of country names to the existing footnotes, which are not related to the agenda items of the conference, based on the condition that there are no objections from the affected/concerned countries;

2 to encourage administrations to submit for information only, to the extent practicable, their preliminary proposals under WRC standing agenda item 8 to the second session of the CPM, and to submit final proposals to WRC no later than 21 calendar days before the conference;

3 that proposals under WRC standing agenda item 8 shall not include proposals for the addition of new country footnotes;

- APT Members propose the following wording for Standing Agenda Item 8

8 to consider and take appropriate action on proposals received from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, or to add their country name to the existing footnotes in accordance with *further resolves of Resolution 26 (Rev.WRC-19)*;

APT Preliminary Common Proposals under Agenda Item 8

Reasons:

- APT Members propose to modify Resolution **26 (Rev.WRC-07)** to improve clarity and align with WRCs current practice on the addition and deletion of country names to the existing footnotes.
 - APT Members are of the view that this standing agenda item is not intended for the addition of new country footnotes and propose to expressly include the current WRCs practice in Resolution **26(Rev.WRC-07)**.
 - APT Members are of the view that the proposals under this WRC standing agenda item should be available in a timely and efficient manner before a conference for due consideration of administrations.
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APT Coordinators for AI 2

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Agenda Item 2 Incorporation By Reference

Preliminary APT Common Proposals under WRC-19 Agenda Item 2 subject to approval by APT Members

APT Preliminary Common Proposals under Agenda Item 2

- APT Members propose to merge Resolutions **27 (Rev.WRC-12)** and **28 (Rev.WRC-15)**) in order to have a single Resolution that refers to incorporation by reference in the Radio Regulations.
 - APT Members propose the following wording for Standing Agenda Item 2
2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, *in accordance with further resolves of Resolution 27 (Rev.WRC-19)*, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in *resolves* of that Resolution;
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Issue 9.1.6(WPT) APT Member's view

- all radiocommunication services must be protected from harmful interference that may be generated by WPT-EV, both at the fundamental frequency and from unwanted emissions.
 - the Item 1) of Annex to Resolution **958 (WRC-15)** should be suppressed and that the ITU-R studies on WPT-EV, including studies on unwanted emissions, should be continued under the most recent version of Question ITU-R 210/1.
 - Since the ITU-R studies carried out in accordance with Resolution **958 (WRC-15)** are not completed yet, there is no need to change the Radio Regulations at WRC-19.
 - ITU-R will need to continue to closely collaborate with standards developing organizations to ensure that appropriate frequency ranges and technical limits are incorporated into standards to protect radiocommunication services.
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