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|  | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 4th Meeting of the APT Conference Preparatory**  **Group for WRC-19 (APG19-4)** | **APG19-4/OUT-20** |
| 7 – 12 January 2019, Busan, Republic of Korea | 11 January 2019 |

Working Party 3

**PRELIMINARY VIEWS ON WRC-19 AGENDA ITEM 1.4**

**Agenda Item 1.4:**

*“to consider the results of studies in accordance with Resolution* ***557 (WRC-15)****, and review, and revise if necessary, the limitations mentioned in Annex 7 to Appendix* ***30 (Rev.WRC-15)****, while ensuring the protection of, and without imposing additional constraints on, assignments in the Plan and the List and the future development of the broadcasting-satellite service within the Plan, and existing and planned fixed-satellite service networks”.*

*Resolution* ***557 (WRC-15)*** - *Consideration of possible revision of Annex 7 to Appendix* ***30*** *of the Radio Regulations.*

**1. Background**

WRC-15 adopted Resolution (Resolutions **557 (WRC-15)**) to study possible revisions of the limitations mentioned in Annex 7 to Appendix **30 (Rev.WRC-15)** in order toequitably access to orbital resources for broadcasting-satellite-services (BSS). It should be noted that BSS is not subject to Appendix **30** (12.5-12.7 GHz) in Region 3 and therefore is not the subject of consideration in accordance with Resolution **557 (WRC-15)**.

It should be emphasized that studies calling for revision of Annex 7 to Appendix **30 Rev.WRC-15** under Resolution **557 (WRC-15)** in no way was intended to have any impact on the other provisions of Appendix **30** for Regions 3.

The Annex 7 to Radio Regulation Appendix **30 (Rev.WRC-15)** contains several orbital position limitations for proposed modifications to the Region 2 Plan and for proposed new or modified assignments in the Regions 1 and 3 List applicable to specific parts of the band 11.7-12.7 GHz.

ITU-R Working Party 4A (WP-4A) has been assigned as the responsible group for this Agenda Item. To date, ITU-R WP 4A has had five meetings since WRC-15 to progress the work of WRC-19 Agenda Item 1.4. Detailed of ongoing analysis of each study could be found in the working document towards a preliminary draft new Report of ITU-R BO [AP30. Annex 7]. ITU-R WP-4A summarized the limitations in Annex 7 to Appendix **30** (**Rev. WRC-15**) as presented in Table 3/1.4/1-1 in the Document 4A/675.

**2. Documents**

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| Input Documents:   1. [INP-17](https://www.apt.int/sites/default/files/2019/01/APG19-4-INP-17_AUS3_-_Australian_Contribution_to_APG19-4_Chapter_3.docx) 2. [INP-31](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-31_THA3_WP3_AI_1.4_9.1.2_and_9.1.9.doc) 3. [INP-55](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-55_Malaysia_WP3_AI1_4_7E_7I_Final.docx) 4. [INP-61](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-61_3_J_WP3.docx) 5. [INP-77](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-77_WP3_kor.docx) 6. [INP-92](https://www.apt.int/sites/default/files/2019/01/APG19-4-INP-92_WP3_Singapore_1.4_1.5_1.6_7.docx) 7. [INP-98](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-98_China2_Preliminary_views_on_WRC-19_AI_1.4_1.5_1.6_7_9.1_issues_9.1.2_9.1.3_9.1.9.docx) | Australia  Thailand  Malaysia  Japan  Republic of Korea  Singapore  China (Republic of) |
| Information Documents:    [INF-22](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-22_CITEL_PPT.pdf)  [INF-23](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-23_CEPT_PPT.pdf)  [INF-24](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-24_RCC.pdf) | CITEL  CEPT  RCC |

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Australia** - **Document APG19-4/**[INP-17](https://www.apt.int/sites/default/files/2019/01/APG19-4-INP-17_AUS3_-_Australian_Contribution_to_APG19-4_Chapter_3.docx)

Australia does not have a view on the relaxation of orbital restrictions where Australia will not be visible.

Australia can support any of the three Methods in the Draft CPM Report (Document CPM19-2/1) but prefers Method A or Method C**.**

**3.1.2 Thailand** - **Document APG19-4/**[INP-31](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-31_THA3_WP3_AI_1.4_9.1.2_and_9.1.9.doc)

Thailand supports ITU-R studies and is of the view 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 impose constraints on current and future FSS/BSS usage in the 11.7 – 12.7 GHz frequency band for Region 3.

**3.1.3 Malaysia** - **Document APG19-4/**[INP-55](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-55_Malaysia_WP3_AI1_4_7E_7I_Final.docx)

Malaysia supports **Method C** which proposes the deletion of some limitations of Annex 7 and addition of relevant draft new Resolutions,as well as theadditional application of respective draft new Resolution with revised criteria for protection of future BSS networks with respect to limitations “A1a” and “A2a”.

**3.1.4 Japan** - **Document APG19-4/**[INP-61](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-61_3_J_WP3.docx)

Japan is of the view 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 impose any constraints on all assignments of Appendix **30** for Region 3 and ensure protection of existing and planned fixed-satellite service networks. Japan is also of the view that all the Methods in the draft CPM Report would not impose any additional constraints on all assignments of Appendix 30 for Region3, provided appropriate adjustments are incorporated in Method B and Method C.

**3.1.5 Republic of Korea** - **Document APG19-4/**[INP-77](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-77_WP3_kor.docx)

Republic of Korea is of the view 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 impose any constraints on all assignments for Appendix **30** for Region 3.

**3.1.6 Singapore** - **Document APG19-4/**[INP-92](https://www.apt.int/sites/default/files/2019/01/APG19-4-INP-92_WP3_Singapore_1.4_1.5_1.6_7.docx)

Singapore is of the view that Method C includes the necessary regulatory measures to still allow the expansion of the Region 2 and Region 1 BSS Networks located within new arcs following the removal of limitation A1a and A2a in Annex 7 of Appendix 30 and without imposing additional constraints to future FSS networks in line with Resolution **557 (WRC-15).**

Singapore invites APT members to consider the deletion of Method B and to support Method C which includes the necessary regulatory measures to take into account concerns of all interested parties.

**3.1.7 China (Republic of)** - **Document APG19-4/**[INP-98](https://www.apt.int/sites/default/files/2018/12/APG19-4-INP-98_China2_Preliminary_views_on_WRC-19_AI_1.4_1.5_1.6_7_9.1_issues_9.1.2_9.1.3_9.1.9.docx)

China is of the view that any revisions of the limitations of Annex 7 of Radio Regulations Appendix 30 (Rev.WRC-15) should base on rigorous study, and the protection of current and future BSS/FSS assignments or satellite networks in the 11.7-12.75 GHz frequency band involved should be ensured.

**3.2 Summary of issues raised during the meeting**

1. Japan pointed out that both Method B and Method C include a proposal to suppress A1a with keeping A1b. However, it should be noted that if only A1b is maintained, Region 1 BSS would be prohibited at anywhere further east than 146E, that is, in the 360 degree orbit and Region 1 BSS cannot be located anywhere. The other end matching with A1b need to be specified for defining the prohibit arc. The same comment applies to the suppression of A2a/A2b with keeping A2c.
2. However in the Summary and Analysis section of the [WP4A Chairman’s Report Document 4A/826 Annex 27](https://www.itu.int/dms_ties/itu-r/md/15/wp4a/c/R15-WP4A-C-0826!N27!MSW-E.docx) (Draft CPM text for WRC-19 Agenda Item 1.4), it is mentioned that the limitations are independent and removal of individual limitations are unrelated. In practice it is necessary to define both ends of the prohibited arc which involves coupling of the limitations.
3. Members are encouraged to raise this issue at the CPM19-2.

**4. APT Preliminary Views**

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 impose undue constraints on current and future FSS/BSS usage in the 11.7 – 12.7 GHz frequency band for Region 3.

**5. Other Views from APT Members**

Some APT Members support method C, other members require the outcome of further studies prior to making a decision.

**6. Issues for Consideration at Next APG Meeting**

APT members are encouraged to consider technical and regulatory matters and the further developments of the APT Views and also submit contributions as necessary to ITU-R WP-4A and the next APG meeting.

**7. Views from Other Organisations** (as provided in the information documents to

APG19-4)

**7.1. Regional Groups**

**7.1.1** **CITEL - APG19-4/**[INF-22](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-22_CITEL_PPT.pdf)

DIAP based on Method C deleting some of the orbital separation limitations in section A. No changes are proposed to section B. Regions 1 and 2 BSS test points are used instead of the service area definition for the coordination with FSS through a new Resolution. A new Resolution would also protect BSS networks with antenna diameter that are less than 60 cm with a PFD mask.

**7.1.2** **CEPT - APG19-4/**[INF-23](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-23_CEPT_PPT.pdf)

CEPT does not support method A (No Change) of the draft CPM text.

CEPT still continues discussing methods B and C, that only differ on the limitations A1a and A2a.

CEPT supports the deletions of the limitations:

• Limitation A1a (No assignments in the Region 1 List further west than 37.2°W)

• Limitation A2a (No modification in the Region 2 Plan further east than 54°W)

CEPT is still considering whether these limitations can be suppressed without any additional regulatory measure (method B of draft CPM text) or if new additional measures, including a new Resolution to not limit future deployment of Region 1 and Region 2 FSS with respect to new BSS assignments (method C of draft CPM text), are necessary.

CEPT also supports the deletions of the limitations:

• Limitation A2b (No modification in the Region 2 Plan further east than 44°W)

• Limitation A3b (Maximum e.i.r.p. of 56 dBW for assignments in the Regions 1 & 3 List at specific allowable portions of the orbital arc between 37.2°W and 10°E specified in Table 1 of Annex 7 to Appendix 30)

• Limitation A3c (Maximum power flux density of -138 dB(W/(m2·27 MHz)) at any point in Region 2 by assignments in the Regions 1 & 3 List located at 4°W and 9°E)

• Limitation A3a (No assignments in the Regions 1 & 3 List outside specific allowable portions of the orbital arc between 37.2°W and 10°E specified in Table 1 of Annex 7 to Appendix 30)

Regarding the A3a limitation, CEPT considers that the protection of the BSS satellite networks implemented in accordance with the current provisions of Annex 7 to Appendix 30 (which includes antennas smaller than 60 cm in the allowable portions of the orbital arc), must be guaranteed. To achieve it, CEPT supports the solution which proposes that in the examination to determine if these implemented satellite networks will be affected by new Region 1 and 3 BSS satellite networks from some specific orbital locations, only the EPM criteria will be applied and the pfd mask criteria will not be considered. This solution implies the deletion of this limitation and the incorporation of a new Res.

CEPT supports the retentions of the limitations:

• Limitation A2c (No modification in the Region 2 Plan further west than 175.2°W)

• Limitation A1b (No assignments in the Region 1 List further east than 146°E)

CEPT is of the view that Limitation B deals with the grouping concept of space stations in the Region 2 Plan and therefore decisions over this limitation are out of the scope of CEPT.

In addition, after the removal of the relevant limitations described above, CEPT supports the application of a new Resolution that would give 90 days priority to submit new satellite networks to those Administrations with national assignments in the Regions 1 and 3 Plan with equivalent downlink protection margin values equal or below -10 dB.

CEPT supports to apply as of 23 November 2019 the modifications to Annex 7 of Appendix 30, to this effect, a revision of Article 59 and a draft new Resolution are proposed.

**7.1.3** **RCC - APG19-4/**[INF-24](https://www.apt.int/sites/default/files/2019/01/APG19-4-INF-24_RCC.pdf)

The RCC Administrations do not oppose the deletion of the following limitations (Atlantic Region):

• Limitation A1a (No assignments in the Region 1 List in the frequency band 11.7-12.2 GHz further west than 37.2°W);

• Limitation A2a (No modification in the Region 2 Plan in the frequency band 12.5-12.7 GHz further east than 54°W);

• Limitation A2b (No modification in the Region 2 Plan in the frequency band 12.2-12.5 GHz further east than 44°W).

The RCC Administrations do not oppose maintaining the following limitation (Pacific Region):

• Limitation A1b (No assignments in the Region 1 List in the frequency band 11.7-12.2 GHz further east than 146°E).

The RCC Administrations do not oppose the deletion of the following limitations:

• Limitation А3а (No assignments in the Region 1 & 3 List outside specific allowable portions of the orbital arc between 37.2°W and 10°E) provided the existing protection criteria from Annex 1 to RR Appendix 30 are maintained for implemented frequency assignments with an antenna diameter of 40 and 45 cm;

• Limitation A3b (Max. e.i.r.p. of 56 dBW for assignments in the Regions 1 & 3 List at specific allowable portions of the orbital arc between 37.2°W and 10°E),

• Limitation A3c (Max. power flux density of -138 dB(W/(m2∙27 MHz)) at any point in Region 2 by assignments in List located at 4°W and 9°E),

The RCC Administrations support maintaining the following limitation (Pacific Region):

• Limitation A2c (No modification in the Region 2 Plan in the frequency band 12.2-12.7 GHz further west than 175.2°W).

The RCC Administrations do not oppose maintaining the limitation B associated with the concept of the space stations grouping which the Region 2 Plan is based on.

In case of deletion of appropriate limitations, the RCC Administrations support the application of the specific procedure (see AI 1.4, CPM Report Chapter 3) during a limited period of time within which the priority right to submit applications for new orbital positions is provided to the administrations of Regions 1 & 3, national assignments of which have a negative equivalent protection margin on the downlink.

The RCC Administrations consider that the proposals on revisions of criteria and provisions of Appendix 30 (Rev. WRC-15), other than of Annex 7, are beyond the scope of the studies in accordance with Resolution 557 (WRC-15).

**7.1.4** **ASMG -** [Document WRC-19-IRWSP-18/18](https://www.itu.int/md/R15-2NDWRC19PREPWORK-C-0018/en) **within APG19-4/INP-09(Rev.1)**

ASMG Preliminary Position:

• Support no change to Annex 7 limitations

• Support no change Annex 1 to 4 of Appendix 30 as it is outside the scope of 1.4.

**7.1.5** **ATU -** [Document WRC-19-IRWSP-18/6](https://www.itu.int/md/R15-2NDWRC19PREPWORK-C-0006/en) **within APG19-4/INP-09(Rev.1)**

ATU Preliminary Position are as follows:

1. Method C, which include the new Resolution [B14-PRIORITY] (WRC-19) which was proposed by African countries to give priority to Administrations with very bad reference situation in the Appendix 30, 30A (below -10 dB) to submit their filings for a period of 90 days, should WRC-19 approve the removal of the limitations.

2. Support, as a matter of principle, the removal of limits in Annex 7 if the countries with very bad reference situation are given first opportunity to improve their allotted satellite networks in Appendix 30.

3. Support the study of each limitation under Annex 7 to Appendix 30; these studies seek to explore ways of allowing better utilization of the orbit spectrum resource.

**7.2. International Organisations**

**7.2.1 ICAO**

No view on this agenda item has been received from ICAO.

**7.2.2 WMO**

No view on this agenda item has been received from WMO.

**7.2.3 IARU**

No view on this agenda item has been received from IARU

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