

ITUEvents

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#ITUWRC

**Satellite regulatory
issues**

**WRC-23 agenda item 7
Topics A to K**

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Agenda Item 7 overview

- to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution **86 (Rev.WRC-07)**, in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;
- Topics under Agenda Item 7 are classified in three main categories:
 - ☐ Topics related to NGSO: Topics **A, B, C, G, J**
 - ☐ Topics related to planned bands and equitable access to the satellite frequency spectrum: Topics **E, F, H, I and K**
 - ☐ A combination of Topics for which a consensus was reached at ITU-R: Topic **D**

Topics related to NGSO

Topics	Description
A	Tolerances for certain orbital characteristics of non-GSO space stations of the FSS, BSS or MSS
B	Non-GSO bringing into use post-milestone procedure
C	Protection of geostationary satellite networks in the mobile-satellite service operating in the 7/8 GHz and 20/30 GHz bands from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions
G	Revisions to Resolution 770 (WRC-19) to allow its implementation (single entry interference from NGSO to GSO FSS and BSS)
J	Modifications to Resolution 76 (Rev.WRC-15)- protection of GEO FSS&BSS from NGSO aggregate EPFD

Methods to satisfy Topic A

Method	Description
Method A1	NOC
Method A2	<p>A draft new WRC-23 Resolution on the implementation of tolerances for certain orbital characteristics of satellites of non-GSO FSS/BSS or MSS systems to be referred to in RR Nos. 11.44C.1, 11.49.2 and 11.51. with two options:</p> <ul style="list-style-type: none"> • Option A proposes to apply these tolerances, including temporary variation, for satellites of non-GSO FSS/BSS or MSS systems; • Option B proposes to apply these tolerances, including temporary variation, for satellites of non-GSO 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 non-GSO 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

Methods to satisfy Topic B

Two methods are proposed to satisfy the Topic:

- **Method B1:** No changes, to continue relying on 11.49 and 13.6
- **Method B2:** suppress *resolves* 19 of the Resolution 35 (WRC-19) and replace it with a new Resolution defining post-milestone procedures.
- **Two options for B2:**
 - ✓ **Option B2a)** proposes a single percentage of the system's satellites.
 - ✓ **Option B2b)** proposes a different number depending on the number of satellites in the non-GSO system.

Method to satisfy Topic C

Method	Description
Method C1	NOC
Method C2	<p>A new provision in RR Article 22 extends the application of the concept of provisions of RR No. 22.2 for the protection of GSO satellite networks operating in the mobile-satellite service in the frequency bands under consideration in this topic.</p> <p>Under this method, four implementation options are identified.</p> <ul style="list-style-type: none"> - Option C2A: RR22.2 is extended to GSO MSS by a new provision 22.2bis - Option C2B: No application of 9.21 for RR No. 5.461 Bands- to be reflect it under 22.2bis - Option C2C: No application of 9.21 for RR No. 5.461 Bands- to be reflect it under 5.461 - Option C2D: the application of RR No. 9.21 remains unchanged i.e., assignments to GSO, non-GSO and to terrestrial service continue to be relevant. Furthermore, it is indicated through a footnote to RR No. 22.2bis, that this provision applies to GSO MSS with respect to non-GSO systems only in case of a successful application of RR No. 9.21.
Method C3	the modification of RR No. 5.461 and the addition of two new footnotes in RR Article 5 extending the application of the concept of provisions of RR No. 22.2 for the protection for of GSO satellite networks operating in the mobile-satellite service in the frequency bands under consideration in this topic.

Method to satisfy Topic G

Method	Description
Method G1	NOC
Method G2	➤ Modify Res. 770 to allow its implementation
Method G3	➤ Remove Annex 2 from Resolution 770 (WRC-19) and move it to a new ITU-R Recommendation which would be incorporated by reference in Resolution 770 (WRC-19).

Method to satisfy Topic J

Method	Description
Method J1	NOC
Method J2	➤ Modify Resolution 76 (Rev.WRC-15) to introduce the concept of “consultation process/meetings” without technical consideration on epfd calculation
Method J3	➤ amend Resolution 76 (Rev.WRC-15), as appropriate, to make administrations able to comply with the aggregate epfd levels included in the same Resolution through a consultation process/meetings
Method J4	➤ Modify Resolution 76 (Rev.WRC-15) to introduce the concept of “consultation process/meetings” with other considerations such as criteria for participation at consultation meetings and technical procedures to be used among administrations during the consultations need further discussion
Method J5	➤ Modify Resolution 76 (Rev.WRC-15) to call for further study on a consultation process

Topics related to planned bands and equitable access

Topics	Description
E	RR Appendix 30B improved procedures for new Member States
F	Excluding uplink service area in RR Appendix 30A for Region 1 & 3 and RR Appendix 30B
H	Enhanced protection of RR Appendices 30/30A in Regions 1 and 3 and RR Appendix 30B (Implicit agreement & EPM degradation tolerance)
I	Special agreements under RR Appendix 30B (consensus achieved)
K	Modification to Resolution 553 (Rev.WRC-15) to remove certain restrictions that prevent administrations from taking effective advantage of the Resolution

Method to satisfy Topic E

Method	Description
Method E1	NOC
Method E2	Two options: <ul style="list-style-type: none">• Use the same coordination triggers in RR Appendix 30B Article 7 as those of Resolution 170 (WRC-19) in addition to Article 7 provisions• Provide a pointer in RR Appendix 30B Article 7 to Resolution 170 (WRC-19)
Method E3	Modification of Article 7 procedure to facilitate new ITU members by re-considering the priority between the Article 7 requests and the application of Article 6 for additional systems.

Method to satisfy Topic F

Method	Description
Method F1	NOC
Method F2	<ul style="list-style-type: none">➤ Allow Administrations to exclude its territory from the feeder-link service area of a satellite network of other administrations➤ Align coverage area and service area➤ Provisions to request existing satellite networks to accommodate the new satellite network on a national territory
Method F3	<ul style="list-style-type: none">➤ Allow Administrations to exclude its territory from the feeder-link service area of a satellite network of other administrations➤ relocation of test points
Method F4	<ul style="list-style-type: none">➤ Allow Administrations to exclude its territory from the feeder-link service area of a satellite network of other administrations➤ amend Annex 3 of RR Appendix 30A to include a definition of the feeder link coverage area.

Method to satisfy Topic H

Issue	Method
Implicit agreement	<ul style="list-style-type: none">➤ Method 1A: NOC➤ Method 1B: Remove implicit agreement in App 30,30A and 30B➤ Method 1C: temporary agreement
EPM degradation tolerance	<ul style="list-style-type: none">➤ Method H2A: NOC➤ Method H2B: adoption of EPM degradation tolerance of 0.25 dB instead of 0.45 dB

Topic D : Topics for which consensus was achieved in ITU-R

- **D1:** Modifications to Appendix 1 to Annex 4 of RR Appendix 30B- align changes in section 2 of Appendix 1 to Annex 4 of RR Appendix 30B and sections 1.1 and 1.2 of Annex 4 of RR Appendix 30B (10° and 9° to 7° and 6°)
- **D2:** New RR Appendix 4 parameters for Recommendation ITU-R S.1503 updates
- **D3 :** BR Reminders for BIU and BBIU (for RR Nos. **11.44B**, **11.44C**, **11.49** (**11.49.1** and **11.49.2**), RR Appendices **30/30A** §5.2.10 (20bis and 24bis) and RR Appendix **30B** §8.17 (14ter))

END.