Document WRC-23-IRW-22/21-E
Part 1
30 November 2022
English only

ITUEvents

2nd ITU Inter-regional Workshop on WRC-23 Preparation

29 November – 1 December 2022
Geneva, Switzerland

www.itu.int/go/ITU-R/wrc-23-irwsp-22
#ITUWRC

Satellite regulatory issues-session 8
/
WRC-23 agenda item7
Topics A, B,C, G and J

Georges KWIZERA
CPM Chapter 4 co-rapporteur

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	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: • **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

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

APT Preliminary Views:

- APT Members support the development of the definition of tolerances of non-geostationary-satellite orbit (non-GSO) space stations in the FSS, BSS and MSS. APT Members support the development of these tolerances in the context of ITU regulatory procedures such as bringing into use (BIU) and the milestone-based approach.

- APT Members are of the view that the development of the definition of tolerances of non-geostationary-satellite orbit (non-GSO) space stations in the FSS, BSS and MSS, should be limited to the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane, to account for potential differences between the notified and deployed orbital characteristics.

- APT Members are also of the view that appropriate regulatory consequences/measures should be developed taking into account the operational aspects of the non-GSO space stations in the FSS, BSS and MSS, if the operations are beyond the specified allowable tolerances. These regulatory measures should not have retroactive application. Moreover, necessary transitional measures for application of the decision of WRC-23 may need to be developed.

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

◆ Topics for discussion:

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

ASMG Preliminary positions WRC 23

WG-4

7A) Tolerances for certain orbital characteristics of non-GSO space stations in the FSS, BSS, and MSS

- Support studies on acceptable tolerances for the following orbital characteristics:
- The inclination of the orbital plane,
- The altitude of the apogee of the space station,
- The altitude of the perigee of the space station and
- The argument of the perigee of the orbital plane
- The development of tolerances under this topic will be limited to the FSS, BSS and MSS systems.
- Develop regulatory measures to determine tolerances with respect to orbital characteristics, provided granting flexibility for satellite operators to manage their satellites, and prevent non-compliance with the reported orbital characteristics

AI 7 Topic A Tolerances for certain orbital characteristics of non-GSO space stations in the FSS, BSS, and MSS	***APM23-3 agreed:*** <u>*Part 1: Common position:*</u> **1)** **Support** studies on identifying acceptable tolerances for the following orbital characteristics: for the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane; **1)** **Agree** that: i. The development of tolerances under this topic should be limited to the fixed-satellite service, the broadcasting-satellite service and the mobile-satellite service. ii. Specific regulatory measures for tolerances ought to be taken in order to avoid collision with another non-geostationary space station. Tolerances for the orbital characteristics should on one hand provide flexibility of satellite operators to manoeuvre their satellites without wasting too much fuel on the other hand provide no room for abuse to go out of the notified orbital characteristics; iii. Special cases in the orbiting phase should be taken into account and that regulatory procedures should clearly define this. iv. Appropriate regulatory provisions ought to be developed for frequency assignments to non-GSO space stations that do not maintain or exceed the orbital tolerances and the effects that will result from these exceedances on the file submitted to the ITU. <u>*Part 2: Way forward*</u> ***Request ATU administrations to:*** **1.** **Contribute to** the studies on this topic and actively participate in discussions. **1.** **Support** to adapt Appropriate regulatory measures for frequency assignments to non-GSO space stations if the operations are beyond the specified allowable tolerances.

CEPT Coordinator:
Anna MARKLUND (S)

Coordination team:
Samuel BLONDEAU (LUX)

CEPT ECC
Electronic Communications Committee

WRC-23 Agenda item 7, Topic A

Tolerances for non-GSO orbital characteristics

Preliminary CEPT position

CEPT supports the development of the definition of tolerances limited to the four orbital characteristics of non-GSO space stations in FSS, BSS and MSS identifying a "notified orbital plane".

CEPT does not support the development of tolerances under this Topic for the orbital characteristics of non-GSO space stations whose frequency assignments belong to services other than the FSS, BSS and MSS.

CEPT supports the development of these tolerances in the context of ITU regulatory procedures such as BIU and the milestone-based approach. In the absence of such tolerances, it is unclear whether the requirements of Resolution **35 (WRC-19)** are met.

To avoid collision with another non-GSO space station or to permit reorganization of satellites in an orbit-plane after a launch of new non-GSO space stations, CEPT supports specific regulatory measures to temporary exceed the defined tolerances if final tolerances definition could not address such operational requirements.

CEPT supports the development of appropriate regulatory consequences for frequency assignments to non-GSO space stations that do not maintain these to-be-developed orbital tolerances.

Preliminary Views

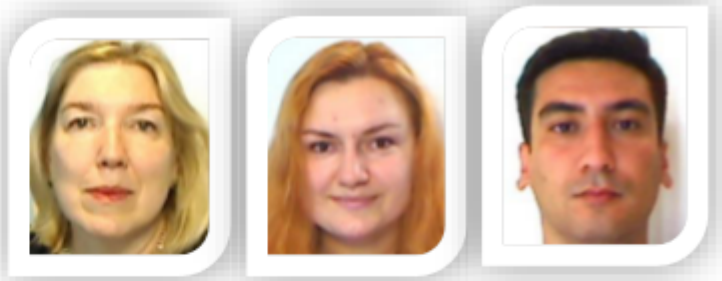
Topic A: Tolerances for certain characteristics of the notified orbital planes for non-GSO systems space stations of the FSS, BSS, and MSS.

- Some Administrations support the study into the need for such tolerances, and are of the view that the study of tolerances for the characteristics of notified orbital planes for non-GSO FSS, BSS and MSS systems should be limited to the four parameters identified in the minutes of the Plenary of WRC-19: inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane. Depending upon the results of these studies, allowable differences between the orbital characteristics of the notified orbital plane, as defined in No. 11.44C.1, and the actual deployed orbital plane of a non-GSO space station could be determined.

- An Administration is also of the view that the above-mentioned four parameters, identified in the minutes of the plenary of WRC-19, are the only orbital parameters that could be considered in any application of Nos. **11.44C.2**, **11.44D.2**, **13.6** or any other relevant existing provisions of the Radio Regulations.

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems



Natalia Stenanova Olga Dashkevich Agzam.Tajibayev

Topic A – Tolerances for non-GSO orbital characteristics

Only FSS, MSS or BSS. Only satellite systems with the altitude of the apogee below 15 000 km should be considered.

Tolerances for the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane shall depend on the type of orbit of the space station.

The regulatory mechanisms for temporarily excess of the established tolerances need to be developed in order to meet the operational requirements of non-GSO systems. **No specific Method**

Questions/comments from the audience?

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 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.

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

◆ APT Preliminary Views:

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

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

Topics for discussion:

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

ASMG Preliminary positions WRC 23

WG-4

7B) NON-GSO system post milestone Reporting

- Support developing Resolution 35 (WRC-19) to replace resolves 19 to ensure that the content of the MIFR for non-GSO systems closely aligns with what is actually deployed in space
- Allow the deployed satellites to be reduced by a percentage of the number of satellites recorded in the MIFR for a specified period (to be determined) without affecting the MIFR entries, bearing in mind that this percentage depends on the total number of satellites in the system, taking into account that flexibility should be granted to allow operational requirements of Non-GSO systems when the mile-stone approach is duly established while no overruns allowed
- Support the developing regulatory provisions to handle frequency assignments of Non-GSO satellites that do not comply with these procedures to be developed under this topic.

AI 7 Topic B Post-milestone reporting procedure for non-GSO systems	***APM23-3 agreed to:*** <u>*Part 1: Common position:*</u> **1. Support** changes to Resolution 35 (WRC-19) to remove resolves 19 and adoption of changes to RR Article 11 and a new resolution to capture the post-milestone procedure for systems subject to Resolution 35 (WRC-19) in order to ensure that the real number of deployed non-GSO satellite system in the space is reflected in the MIFR taking into consideration the complexity of the operation of Non-GSO systems. **2. Support** that the development of the post-milestone procedures for Non-GSO satellite to cover the mandate of the WRC-19 Plenary session was only limited to frequency assignments to non-GSO systems in specific bands and services(FSS/MSS/BSS) subject to Resolution 35 (WRC-19). **3. Encourage** that the operational features of non-GSO systems with a small number of satellites need to be further taken into account. **4. Support** a regulatory solution aligning the post milestone procedures in this new Resolution with No. **11.49** and Resolution **35 (WRC-19).** **5. Consider** the application of only No. 13.6 by the BR insufficient as a solution for this Topic. <u>*Part 2: Way forward*</u> ***Request ATU administrations to:*** **1. Support** the development of appropriate regulatory consequences for frequency assignments to non-GSO space stations that do not respect the future post-milestone procedures. **2. Consider** when developing the post-milestone reporting procedures, some operational flexibility which is necessary for the maintenance of the non-GSO system in the FSS, BSS and MSS, may need to be duly considered without allowing any abuse.

CEPT Coordinator:
Anna MARKLUND (S)

Coordination team:
Samuel BLONDEAU (LUX)

CEPT ECC
Electronic Communications Committee

WRC-23 Agenda item 7, Topic B

Non-GSO BIU post-milestone procedure

Preliminary CEPT position

CEPT supports the adoption of a new Resolution to replace *resolves* 19 of Resolution **35 (WRC-19)** at WRC-23 suppressing *resolves* 19 of Resolution **35 (WRC-19)** and leaving the rest of the Resolution **35 (WRC-19)** as is otherwise.

CEPT supports a regulatory solution aligning the post milestone procedures in this new Resolution with No. **11.49** and Resolution **35 (WRC-19)** allowing some operational flexibilities:

- Possibility to operate a minimum [95%] of the number of satellites notified in the MIFR without regulatory impact.
- Possibility to operate less than [95%] of the number of satellites notified in the MIFR for a maximum period of 3 years without regulatory impact. (A suspension process analogue to the GSO case is proposed.)
- Considering the process to duly notify the Bureau based on similar regulatory mechanism as in No. **11.49**.

CEPT supports a reduction in the number of satellites notified in the MIFR if the deployed number of satellites falls below [95%] of that which was notified in the MIFR for a continuous period exceeding 3 years.

CEPT considers that the application of No. **13.6** by the BR is not an adequate solution for Topic B.

Preliminary Views

Topic B: Non-GSO bringing into use post-milestone procedure.

- An Administration is of the view that final post-milestone procedures should be developed at WRC-23 to replace resolves 19 of Resolution **35 (WRC-19).** It is also of the view that the development of new Resolution should also permit some temporary flexibilities on the real number of non-GSO satellites deployed compared to the number of satellites contained in the Master Register in order to allow some operational flexibility.

- An Administration is also of the view that additional provisions similar to No. **11.49** (suspension) are required in the RR in order to provide time to non-GSO satellite operators not operating in accordance with the characteristics of their recorded frequency assignments to make the proper adjustments.

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems


Natalia Stenanova


Olga Dashkevich


Agzam.Tajibayev

Topic B – Post-milestone procedure for non-GSO systems

The operational features of non-GSO systems with a small number of satellites need to be taken into account. The developed post-milestone procedure shall not impose additional restrictions on non-GSO satellite systems using highly elliptical orbit. **Method B2**

Questions/comments from the audience?

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

Method to satisfy Topic C

Method	Description
Method C1	NOC
Method C2	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. Under this method, four implementation options are identified. - Option C2A: RR22.2 is extended to GSO MSS by a new provision **22.2*bis*** - Option C2B: No application of 9.21 for RR No. 5.461 Bands- to be reflect it under **22.2*bis*** - 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. **22.2*bis***, 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.

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

APT Preliminary Views:

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

Alternative 1:

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

Alternative 2:

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

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

◆ Topics for discussion:

➢ Some APT Members considered two alternative approaches:

Alternative 1:

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

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

Alternative 2:

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

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

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

ASMG Preliminary positions WRC 23

WG-4

7C) Protection of geostationary satellite networks in the MSS operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions

- Support the inclusion of new or modified footnotes in the Table of Frequency Allocations to broaden the scope of application of the provisions of No. 22.2 of the Radio Regulations to provide protection for GSO networks operating in the mobile-satellite service in the frequency bands defined in 7/8 and 20/30 GHz from satellite system emissions Non-GSO operating in the same frequency bands and directions.

AI 7 Topic C Protection of geostationary satellite networks in the MSS operating in 7/8 & 20/30 GHz from emissions of the Non-Geostationary Satellite systems operating in the same frequency bands and identical directions	***APM23-3 agreed:*** <u>*Part 1: Common position:*</u> **Support** the proposed regulatory solution to protect GSO MSS networks from the emissions of non-GSO systems and networks operating in the same bands and identical directions: 1.7 250-7 375 MHz (space-to-Earth), 2.7 900-8 025 MHz (Earth-to-space), 3.20.2-21.2 GHz (space-to-Earth), and 4.30-31 GHz (Earth-to-space). <u>*Part 2: Way forward*</u> ***Request ATU administrations to:*** **Support** the studies on assessing the protection of GSO MSS operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems.

CEPT Coordinator:
Anna MARKLUND (S)

Coordination team:
Thomas WEBER (D)

CEPT ECC
Electronic Communications Committee

WRC-23 Agenda item 7, Topic C

Protection of GSO MSS from non-GSO emissions in 7/8 and 20/30 GHz

Preliminary CEPT position

CEPT supports the identification and definition of criteria, extensions and addition of provisions in order to quantify the protection of GSO networks operating in the MSS from interference caused by non-GSO networks or systems operating in the same frequency bands 7250-7750 MHz (space-to-Earth), 7900-8025 MHz (Earth-to-space), 20.2-21.2 GHz (space-to-Earth) and 30-31 GHz (Earth-to-space) and in identical directions.

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems


Natalia Stenanova


Olga Dashkevich


Agzam.Tajibayev

Topic C – Protection of GSO MSS networks in 7/8 and 20/30 GHz

Support the development of technical and regulatory mechanisms for protecting GSO networks in the mobile satellite service operating in 7/8 and 20/30 GHz from emissions of non-GSO satellite systems operating in the same frequency bands and same direction, without limiting the use of existing GSO and non-GSO satellite networks/systems in MSS.

No specific Method

Questions/comments from the audience?

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

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).

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

APT Preliminary Views:

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

Topics for discussion:

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

- Based on the APT Preliminary View, Methods G2 or G3 could be supported

ASMG Preliminary positions WRC 23

WG-4

7G) Amendments to Res 770(WRC-19)

- Support amending Resolution 770, and follow the discussions on this subject to ensure that there is no impact on GSO systems

AI 7 Topic G: Revisions to Resolution 770 (WRC-19) (GSO PROTECTION FROM SINGLE ENTRY NON-GSO IN Q/V BANDS) to allow its implementation	***APM23-3 agreed to:*** <u>*Part 1: Common position:*</u> **Support** the modification of Resolution 770, with the need to follow up on the results of discussions on this agenda item to ensure that there is no impact on geostationary satellites. <u>*Part 2: Way forward*</u> ***Request ATU administrations to:*** **Actively participate** at the next WP4A meeting that will be held from 14-22 September 2022 and provide contributions.

CEPT Coordinator:
Anna MARKLUND (S)

CEPT ECC
Electronic Communications Committee

WRC-23 Agenda item 7, Topic G

*Resolution **770 (WRC-19)** GSO protection from single entry non-GSO in Q/V bands*

Preliminary CEPT position

CEPT supports Method 3 of the draft CPM text in ITU-R WP 4A in which Annex 2 of Resolution **770 (WRC-19)** is included in a ITU-R Recommendation.

7 - Satellite procedures

Improve regulatory procedures for Non-GSO and GSO satellite systems

Natalia Stenanova

Olga Dashkevich

Agzam.Tajibayev

Topic G – Revisions to Res. 770 (WRC-19) to allow its implementation

Support the revision of Resolution 770 (WRC-19) in accordance with the results of ITU-R studies in order to eliminate difficulties applying this resolution. **Method G2**

Questions/comments from the audience?

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

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

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

APT Preliminary Views:

- None at this stage.

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

Topics for discussion:

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

ASMG Preliminary positions WRC 23

WG-4

7J) MODs to Res 76 (Rev. WRC-15)

- Support the introduction of the concept of a “consultation/meeting process” with regards to evaluate the aggregate epfd produced by all Non-GSO satellite systems to reduce them

AI 7Topic J:

Modification to Resolution 76 (Rev. WRC-15).

APM23-3 agreed to:

Part 1: Common position:

Support the contents of Document 691 in modification of Resolution 76 (Rev. WRC-15).

Part 2: Way forward

Request ATU administrations to:

Actively participate in the drafting of the CPM text for this topic.

CEPT Coordinator:
Anna MARKLUND (S)

Coordination team:
Thomas WEBER (D)

CEPT ECC
Electronic Communications Committee

WRC-23 Agenda item 7, Topic J

*Modifications to Resolution **76 (Rev. WRC-15)***

Preliminary CEPT position

CEPT supports the modification of Resolution **76 (Rev.WRC-15)** to introduce the concept of "consultation process/meetings" and to clarify the non-GSO systems which are eligible to participate in the consultation meetings.

CEPT supports that the technical work, such as methodologies to be used to evaluate aggregate EPFD limit compliance, as well as the process and procedures for the consultation meeting, should be addressed in separate relevant documents such as in a new ITU-R Recommendation, in line with *invites* 1, 2 and 3 of Resolution **76 (Rev. WRC-15)**.

Questions/comments from the audience?

END OF SESSION 8