

WRC-27 Agenda items 1.1, 1.2, 1.3, and 1.5

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Agenda item 1.1: A-ESIM and M-ESIM communicating with FSS space stations in the frequency band 47.2-50.2 GHz and 50.4-51.4 GHz

- Aeronautical and maritime ESIMs communicating with GSO and Non-GSO satellite networks/systems
- FS and MS is primary in the bands, HAPS in 47.2- 47.5 GHz, 47.9-48.2 GHz, IMT in 47.2- 48.2 GHz in several countries and RAS in band 48.94 - 49.04 GHz
- EESS passive, SRS passive and RAS in adjacent bands
- Currently, a Method is under consideration that proposed a new RR footnote and two separate draft new WRC Resolutions – for ESIMs communicating with GSO and Non-GSO space stations.
- PFD limits on Earth Surface from A-ESIM and separation distance for M-ESIM
- Further discussions are required for RAS in adjacent band and GSO networks from Non-GSO ESIMs.

During APG27-2, we have supported the development of technical and regulatory provisions for use of these bands by ESIMs – protection of EESS passive and SRS passive – development of ITU-R Recommendation on NCMC capabilities, and validation of assumptions contained in Resolution 769 & 770.

The National Study Group 4 / National Working Party 4A-1 will deliberate on this issue and consider contribution for submission to the upcoming WP 4A meeting.

Agenda item 1.2: Revisions of sharing conditions in the frequency band 13.75-14 GHz to allow use of smaller ES antenna

- No. **5.502** and **5.503** provides the sharing conditions for protection of RLS/RNS and SRS in the frequency band 13.75-14 GHz respectively.
- Currently, 03 Methods are under consideration in Working Party 4A:
 - Method A : NOC
 - Method B: Modification to footnotes RR Nos. **5.502** and **5.503**
 - Method B1: separation distance X Km to protect RLS, suppress the existing PFD limits and No. **5.503**.
 - Method B2: Modification to footnotes RR Nos. **5.502**, **5.503** – no antenna size limitation for GSO FSS ES.
 - Method C: Modification of footnotes RR Nos. **5.502**, **5.503** removing technical limits

We have submitted contributions to WP 4A providing studies that shows sharing with smaller antenna sizes is possible for GSO networks. During APG27-2, we supported the ongoing ITU-R studies for revision of sharing conditions.

The National Study Group 4 / National Working Party 4A-1 will deliberate on the submission of future contributions related to this item

Agenda item 1.3: Gateway earth stations communicating with Non-GSO systems in the FSS(E-s)

- WRC-19 allocated the frequency band 51.4-52.4 GHz to the FSS (Earth-to-space) on a primary basis - limiting the use to gateways ES of GSO networks.
- The in-band and adjacent band services include: FS, MS, FSS, EESS(passive), RAS, SRS(passive), MSS (secondary)
- Currently, 03 Methods are under consideration in Working Party 4A:
 - Method A : Add 51.4-52.4 GHz band in Table **22-2** to include epcf limits
 - Method B: Allow use of the 51.4-52.4 GHz band by gateway ES communicating with non-GSO FSS space stations - extend the provisions of Nos. **22.5L** and **22.5M**, and associated Resolutions to this new allocation.
 - Method C: Allow use of the 51.4-52.4 GHz band by gateway ES communicating with non-GSO FSS space stations - modified provisions based on **22.5L** and **22.5M** for this new allocation.
 - The NOC method also needs to be included.

We have submitted contributions to WP 4A supporting epcf limits for this new allocation.

During APG27-2, we supported the development of technical conditions and regulatory provisions for use of this band by Non-GSO FSS Gateway ES and EPCF framework for protection of GSO FSS gateway links.

The National Study Group 4 / National Working Party 4A-1 will deliberate on the submission of future contributions related to this item.

Agenda item 1.5: Unauthorized operations of Non-GSO earth stations in the FSS & MSS

Resolves 1: regulatory measures to limit the unauthorized operations of non-GSO FSS and MSS earth stations in the Earth-to-space direction

Resolves 2: Exclusion from the service area, without adversely affecting the provision of service in the rest of the service area of the non-GSO satellite system

Existing provisions to prevent unauthorized use: No. **18.1**, Resolution **22 (Rev. WRC-23)** and Resolution **25 (Rev. WRC-23)** - Still unauthorized use reported to RRB

Currently, 04 Methods are under consideration in Working Party 4A:

- Method A : NOC
- Method B: A draft new WRC Resolution to address *resolves 1 - resolves 2* to be addressed through geo-location capabilities of ES and remote-deactivation.
- Method C: A draft new WRC Resolution. Options and Alternatives for *resolves 2*:
 - *Options w.r.to* explicit agreement for inclusion of a territory in the service area
 - *Alternatives w.r.to* provisions for later inclusion in the service area
- Method D:
 - Option 1: Amendments to Article **18**, Resolution **22 (Rev. WRC-23)** and Resolution **25 (Rev. WRC-23)**
 - Option 2: Amendment to Resolution **22 (Rev. WRC-23)**

We submitted contribution to WP 4A proposing a method to resolve this agenda item. The proposal is largely incorporated in the Method B. Further contributions to upcoming meeting may be considered based on the discussions in the National Study Group 4 / National Working Party 4A-2

THANK YOU

