

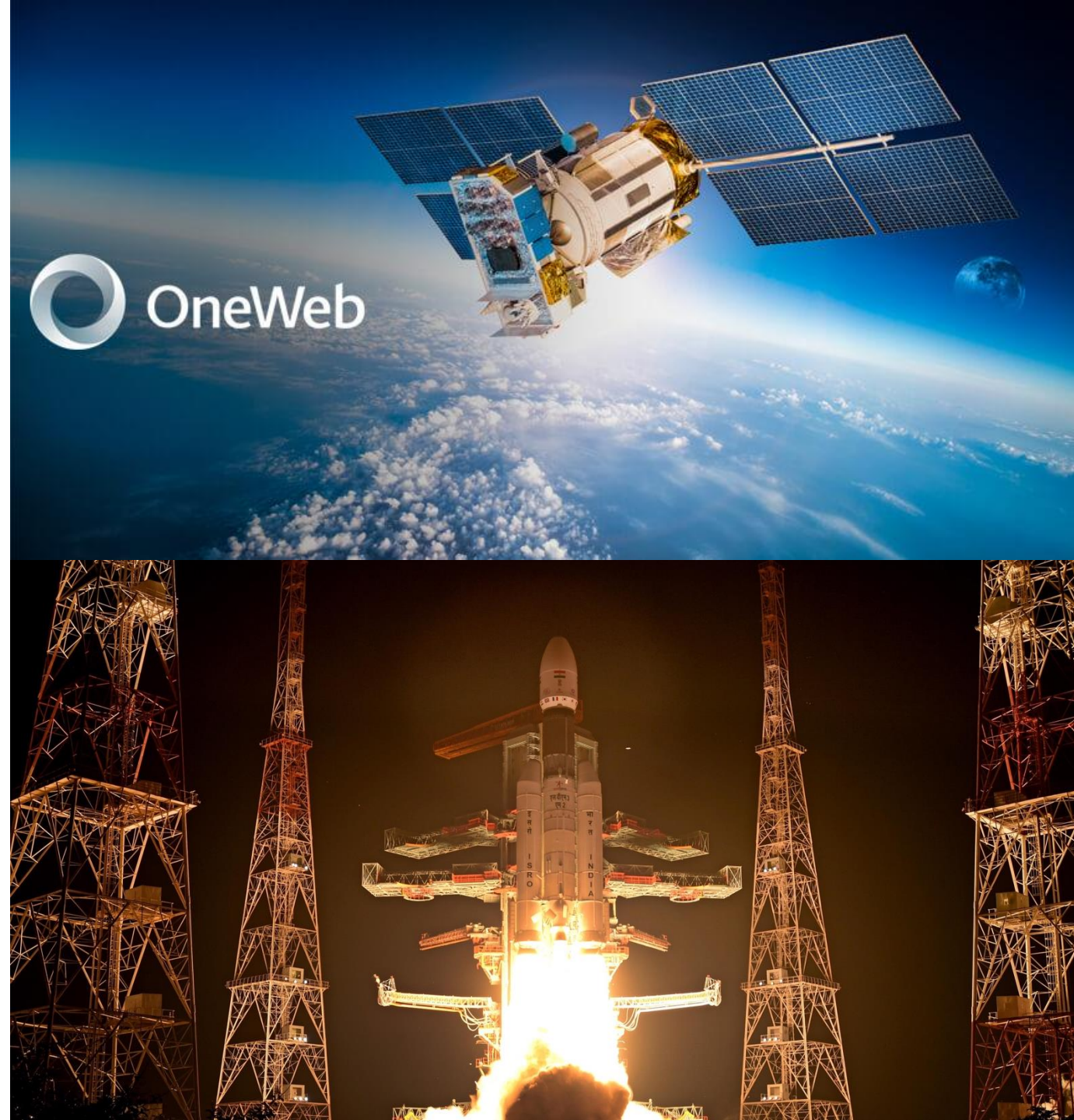
India Space Policy Conference 2025 (ISPC-25)

Preparing for ITU WRC-27

24/07/2025

Company Overview

- Global Communications satellite company
- Ku-band and Ka-band spectrum
- LEO constellation, 1200 km altitude
- +600 satellites already in operation
- Commercial Service already started
- Low latency
- Small, high-performance user terminals
- Sept 2023: Merged with Eutelsat to become Eutelsat Group, global leader in space communications and the first combined LEO and GEO operator



Satellite Issues: preparing for ITU WRC-27

- **Agenda item 1.2:** Small Antennas 13.75-14 GHz band
- **Agenda item 1.5:** Unauthorized earth station transmissions & Service area for NGSO



FSS 13.75-14 GHz WRC-27 Agenda Item 1.2

*1.2 to consider possible revisions of sharing conditions in the frequency band 13.75-14 GHz to allow the use of uplink fixed-satellite service earth stations with smaller antenna sizes, in accordance with Resolution **129 (WRC-23)**;*

Background & Current Situation:

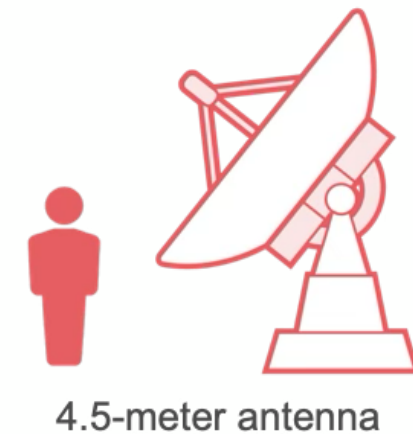
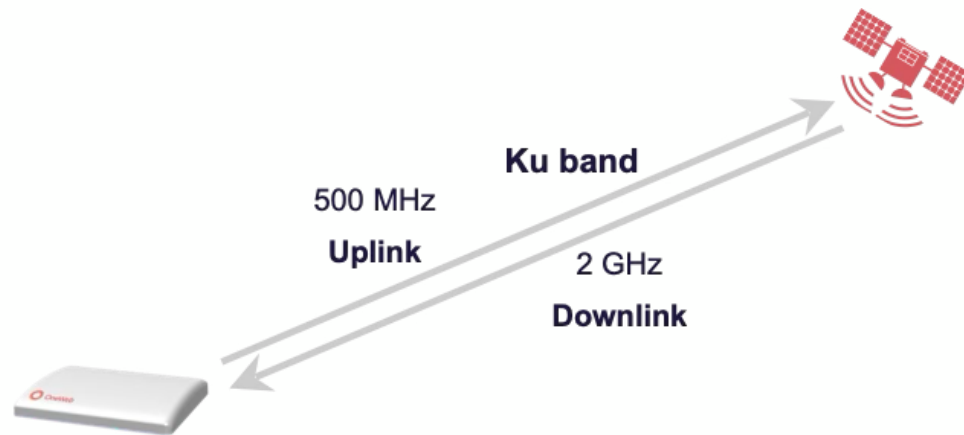
- **WARC-92:** Added an allocation to the FSS (Earth-to-space) in the 13.75-14 GHz band, with constraints associated to minimum antenna size.
- **WRC-03:** Introduced changes allowing smaller antennas (1.2 meters) for geostationary satellite (GSO) FSS networks with specific Power Flux-Density (PFD) and Effective Isotropic Radiated Power (EIRP) density limits.
- **WRC-23:** Future Agenda Item was supported by Regional Groups: multi-country proposal from APT countries (incl. **India**), ATU, and CITELE.
- **WRC-27:** Working Party 4A is studying possible changes to the minimum antenna size of NGSO & GSO FSS in 13.75-14 GHz and associated power limitations.

FSS 13.75-14 GHz WRC-27 Agenda Item 1.2

- Currently Eutelsat Group uses the frequencies from **14** to **14.5 GHz** for its User Link **Uplink**: 500 MHz available
- For the Ku band **Downlink**: 2 GHz available



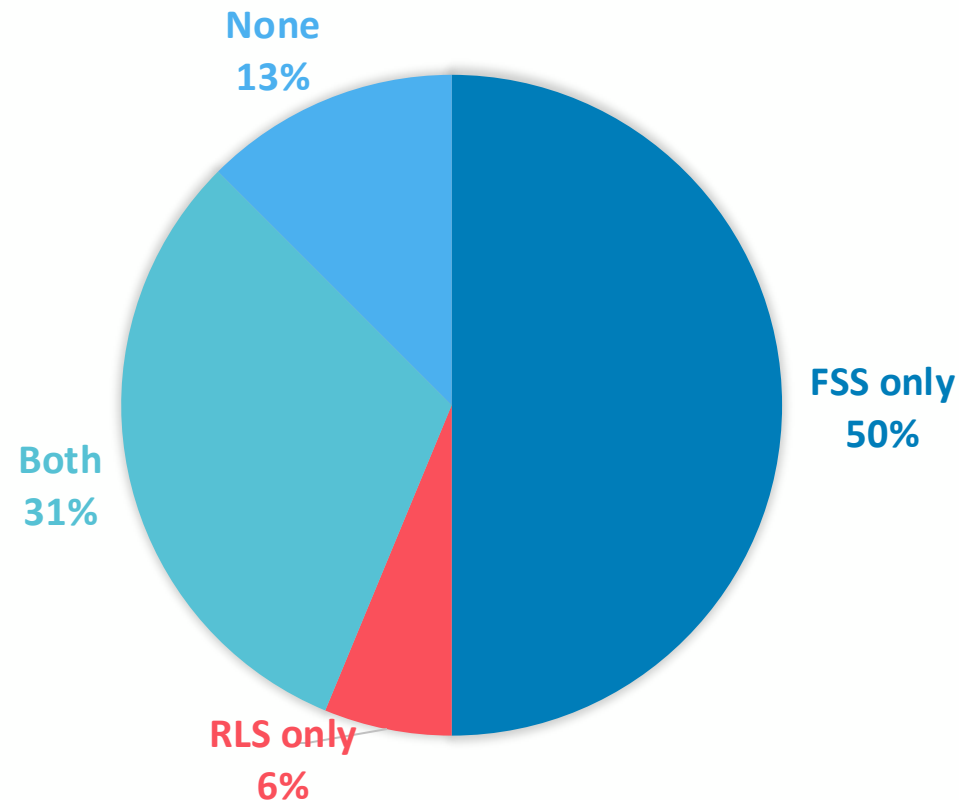
- The 13.75-14 GHz band is shared with **Radiolocation** on a primary basis, and **Space Research Service** on a secondary basis, imposing technical limitations to balance operational needs of existing services
- The current minimum size of the earth station antenna, 1.2m for GSO and 4.5m for NGSO, makes this band practically unusable by FSS.
- **Allowing the use of smaller antennas would increase uplink capacity by 50% and limit the risk of congestion**



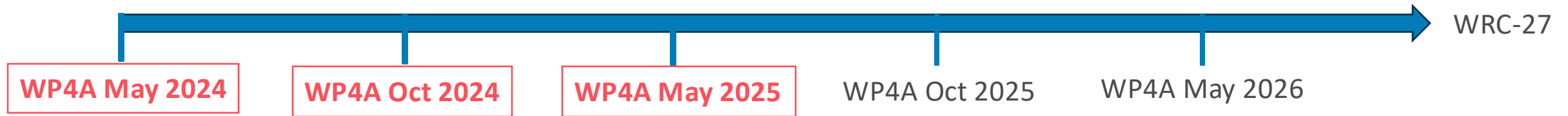
Agenda Item 1.2 Usage of the 13.75-14 GHz band in the Asia-Pacific

- AWG-34 has updated Report 58 a questionnaire on the band usage on APAC countries. 16 countries replied with current or planned national usage of the band.
- **India actively uses this band for FSS.**
- 81% of the countries informed that they use or plan to use FSS

13.75 - 14 GHZ BAND USAGE IN THE APT REGION



Agenda Item 1.2 status of work at ITU Working Party 4A



- **Aggregate studies:** India co-signed a contribution to the May 25 4A meeting (4A/483), showing no aggregate FSS impact into aeronautical RLS.
 - 4A/467 Annex 3 - Working document on WRC-27 agenda item 1.2 - Operational and technical limitations for FSS earth stations in the frequency band 13.75-14 GHz (Earth-to-space) – **7 parts**
- Looking ahead - next Oct25 4A meeting: impact from **multiple** GSO/NGSO systems into a maritime, aeronautical, or land radar receiver.

India proposed APG Preliminary View

To support ongoing ITU-R studies under Agenda Item 1.2, as it would lead to the efficient use of the 13.75-14 GHz band, alleviate congestion in the existing uplink Ku-band spectrum and balance the amount of available uplink and downlink spectrum resources for FSS in the Ku band.

Agenda item 1.5 Unauthorized use of NGSO earth stations transmissions

*Studies on development of regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS) and associated issues related to the service area of non-GSO FSS and MSS satellite systems, in accordance with Resolution **14 (WRC-23)***

- Resolves 1) studies on regulatory measures to limit the unauthorized operations of non-GSO FSS and MSS earth stations in the Earth-to-space direction in order to address and cease such operations, taking into account technical and operational aspects, as appropriate;
- Resolves 2) studies on regulatory measures, taking into account **recognizing c)** with regard to non-GSO FSS and MSS satellite systems, and the implementability of such measures, without adversely affecting the provision of service in the rest of the service area of the non-GSO satellite system,
 - **Recognizing c)** that Member States may wish to exclude its territory from the service area of the non- GSO satellite system

Agenda item 1.5 status of work at ITU Working Party 4A

*Studies on development of regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS) and associated issues related to the service area of non-GSO FSS and MSS satellite systems, in accordance with Resolution **14 (WRC-23)***

- Two documents came out of the WP4A May 2025 meeting:
 - Supporting material (TEMP/162 no CPM text) compiling all text received from contributions
 - Draft CPM text (TEMP/161) compiling all draft CPM text contributions
- CPM text contains three methods:
 - Method A – NOC
 - Method B – CPM text proposing actions based on the capabilities of the NCMC.
 - Method C – CPM text proposing actions with respect to resolves 1 and resolves 2

Agenda item 1.5 India APG Preliminary View

*Studies on development of regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS) and associated issues related to the service area of non-GSO FSS and MSS satellite systems, in accordance with Resolution **14 (WRC-23)***

India APG Preliminary View

- 1. Restrict unauthorized operation of earth stations:** The geolocation capabilities for earth stations can be used to restrict unauthorized operations of non-GSO FSS and MSS earth stations within the territory of an administration that has not granted authorization or a license for the operation of such earth stations on its national territory. This approach is already implemented in some non-GSO systems and can effectively prevent unauthorized use.
- 2. Remote de-activation of unauthorized non-GSO earth stations:** The capability of Network Control and Monitoring Centers (NCMCs) should be effectively utilized to remotely deactivate unauthorized earth stations.
- 3. Exclusion of territory from the service area:** can be effectively achieved through 1 and 2 above.
- 4.** The notifying administration(s) of an non-GSO system should ensure that any unauthorized up-linking attempts made from the territory of an administration, that has not authorized such operations (affected administration), is immediately ceased and affected administration is informed about such up-linking attempts within [15/X] days of its occurrence.



Thank you!

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