GSOA
GLOBAL SATELLITE OPERATORS ASSOCIATION

Agenda Item
1.15

WRC-23 Agenda Item 1.15

Overview

The use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed satellite service globally, in accordance with Resolution 172 (WRC-19).

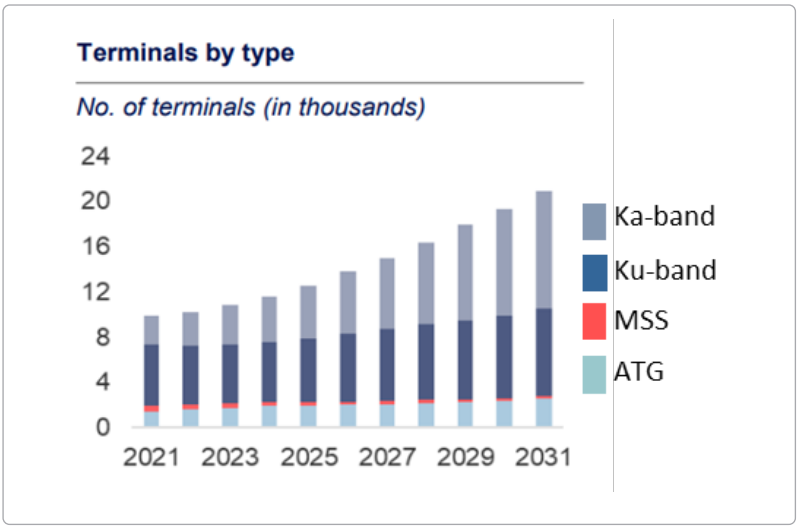
Allocation to services		
REGION 1	REGION 2	REGION 3
12.75-13.25 GHz	FIXED FIXED-SATELLITE (Earth-to-Space) 5.441 MOBILE Space research (deep space) (space-to-Earth)	

The frequency band 12.75-13.25 GHz is planned to be used globally in conjunction with the 14.0-14.5 GHz frequency band to provide additional uplink capacity in the Ku band IFC.

A worldwide harmonized approach for A-ESIM and M-ESIM would benefit administrations, industries, and consumers.

Background

IFC data consumption is on a steep rise and subscribers expect more value. In 2021, approximately 9,900 aircraft were actively providing IFC services through over 120 airlines. This number is expected to surpass 20,900 aircraft by 2031 representing 58% IFC penetration. The high demand for in-flight and maritime connectivity can be partially satisfied by additional capacity obtained by allowing operation of ESIM communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space).



People are accustomed to being connected, even on the move, and their appetite for data is increasing.

Key Points - Status of Agenda Item 1.15

Method A

No changes to the Radio Regulations and suppression of Resolution 172 (WRC-19).

Method B

Add a new footnote in RR Article 5 that refers to a new WRC Resolution with technical, operational and regulatory conditions for the operation of A-ESIM and M-ESIM communicating with GSO space stations in the fixed-satellite service in the frequency band 12.75 13.25 GHz (Earth-to-space) while ensuring protection of allocated services inter alia protection of terrestrial services with both a minimum distance from the low-water mark and maximum e.i.r.p. density towards the horizon for M-ESIM, and pfd mask for A-ESIM and consequential suppression of Resolution 172 (WRC-19).

- The draft new Resolution [A115] (WRC-23) contains technical, regulatory and operational conditions for operation of A-ESIM and M-ESIM.
- Regarding the protection of existing services, including the Appendix 30B Plan, the following measures are included in the Resolution:
  - Appendix 30B GSO networks (Annex 1): A regulatory procedure to be followed by administration and the BR, including examinations to protect the Plan.
  - Terrestrial services (Annex 2): A PFD mask at Earth's surface for A-ESIM and a minimum distance to the low-water mark and maximum e.i.r.p. density towards horizon for M-ESIM.
  - Non-GSO systems (Annex 3): Off-axis and on-axis e.i.r.p. limits for A-ESIM.
  - The process and responsibility to resolve any possible interference issues resulting from operations of A-ESIM or M-ESIM.
- There are still areas in the draft new Resolution [A115] (WRC-23) which contains options and will need to be further discussed and resolved in CPM23-2.

GSOA Recommendation

- **Supports Method B:**
  Technical, operational and regulatory measures to ensure protection of existing services in the band as contained in the draft new Resolution [A115] (WRC-23) and its Annexes.
- **Supports resolving the remaining open issues and finalizing the Draft New Resolution [A115] (WRC-23) in CPM23-2.**

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