



WRC-27 Agenda Item 1.1

Use of the bands 47.2-50.2 GHz (E-s) and 50.4-51.4 GHz (E-s) by A-ESIMs and M-ESIMs

Overview

The Agenda Item invites studies on sharing and compatibility between A-ESIMs and M-ESIMs communicating with GSO and non-GSO networks in the FSS Q/V bands 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) and stations of primary services allocated in these frequency bands and in adjacent frequency bands, with the aim to develop the technical conditions and regulatory provisions for the use and operation of A-ESIMs and M-ESIMs, in accordance with Resolution **176 (Rev WRC-23)**.

Background

The Q/V band offers almost some contiguous 5 GHz of spectrum already available for the use by FSS uplink in the 3 Regions of the ITU-R Radio Regulations.

There has been a rapid increase in the demand of total throughput available for customers operating aircraft and vessels connectivity, to meet the corresponding increase of the demand for higher data transmission associated to usages such as social media, video, and streaming by passengers.

Although the latest development in technology, including GSO high throughput satellites (HTS), software defined satellites (SDS) and non-GSO LEO and MEO satellites along with innovation in antenna technologies, allow to increase the total throughput to be shared among ships and airplanes, the data rate per user in a ship remains limited compared to the data rate available through terrestrial networks. Consequently, opening the Q/V band for A-ESIMs and M-ESIMs communicating with GSO or non-GSO satellites would tremendously improve the connectivity of users in aircraft and vessels by allowing them to benefit from the latest innovations in services and technologies.

GSOA Position

GSOA supports studies aiming to develop a framework, including the technical conditions and regulatory provisions, for the use of the frequency bands 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) by A-ESIMs and M-ESIMs communicating with GSO and non-GSO networks, taking into account the protection of incumbent primary services in these frequency bands and adjacent bands.

Ensure consistency of ITU-R regulatory frameworks for ESIMs across the bands and support the development of the ITU-R Recommendation for the Network Control and Monitoring Centre (NCMC) for ESIM operations that would ensure control of ESIM transmissions without jeopardizing their development.

