

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 2 and 25 of the	)	IB Docket No. 17-95
Commission's Rules to Facilitate the Use of	)	
Earth Stations in Motion Communicating with	)	
Geostationary Orbit Space Stations in	)	
Frequency Bands Allocated to the Fixed		
Satellite Service		

**COMMENTS OF INMARSAT**

Inmarsat Inc. ("Inmarsat") hereby responds to the Federal Communications Commission ("FCC" or "Commission") Further Notice of Proposed Rulemaking seeking comment on proposals to expand the frequencies available to Earth Stations in Motion ("ESIMs") communicating with geostationary-satellite orbit ("GSO") satellites operating in the fixed-satellite service ("FSS").<sup>1</sup>

As a leading innovator and proponent of the use of ESIMs in aeronautical, maritime, and land-based applications, Inmarsat appreciates this opportunity to provide comments on the Commission's Further Notice. The Commission's ESIM Order and Further Notice was an important step in normalizing the use of this technology and promoting its efficient and orderly use. As the Commission correctly notes in the Order, ESIMs enable the delivery of robust, high speed broadband services "to mobile platforms that often cannot be served using other communications technologies."<sup>2</sup> In the Order the Commission simplified its ESIM rules and

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<sup>1</sup> Amendment of Parts 2 and 25 of the Commission's Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service, *Report and Order and Further Notice of Proposed Rulemaking*, 33 FCC Rcd 9327 (2018) ("ESIM Order and Further Notice").

<sup>2</sup> *Id.* ¶ 2.

expanded the frequencies available for these solutions. In the Further Notice, the Commission seeks comment on further expanding the frequencies available to ESIMs communicating with GSO FSS satellite networks.

Inmarsat supports the Commission's proposals to increase the frequencies available for ESIM operations with GSO FSS systems. Specifically, Inmarsat believes the Commission should permit ESIM operations in the 17.8-18.3 GHz, 18.8-19.3 GHz, 19.3-19.4 GHz, 19.6-19.7 GHz, and 28.6-29.1 GHz frequency bands. Experience with ESIMs to date has shown that FSS system operators deploying ESIMs are very capable of designing and managing their ESIM systems in a responsible way that is able to manage interference while expanding the utility and value of satellite spectrum. In particular, as the Commission observes, introducing ESIMs into frequencies where FSS terminals already are permitted for blanket licensing "should not introduce a material change to the interference environment created or to the protection required."<sup>3</sup>

The record in this proceeding demonstrates that ESIM operators have the skill, experience, and incentive to effectively avoid causing interference to other systems.<sup>4</sup> Similarly, there are straightforward methods to manage potential interference from other services where FSS earth stations are not entitled to protection. In the case of widely deployed Fixed Services ("FS"), for example, ESIM operators can design their systems to avoid interference by switching to other frequencies in the areas where interference might be received. Among the methods that might be deployed to manage this interference could be the use of a database of FS transmitter

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<sup>3</sup> *Id.* ¶ 91.

<sup>4</sup> *See, e.g.*, Letter from Suzanne Malloy, *et al.*, to Marlene H. Dortch, Secretary, Federal Communications Commission at n.1, IB Docket No. 17-95 (April 3, 2018) (citing filings related to ESIM operations in frequencies shared with NGSO MSS Feeder Link operations).

data , or interference detection functionality built into the networks and ESIM terminals. With the implementation of such methods there should not be any noticeable impact on ESIM customers due to interference from FS operations.

Inmarsat also supports the Commission's suggestion that ESIMs might operate in the 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) frequency bands on an unprotected, non-interference basis with respect to NGSO FSS satellite systems. Techniques for managing interference between FSS systems are well understood. As the Commission noted, introduction of ESIMs into FSS spectrum does not materially change these interference scenarios. GSO FSS operators in these frequencies bands are already subject to a requirement that their operations shall not cause harmful interference to, or claim protection from, NGSO FSS systems. Allowing GSO FSS ESIMs to operate in the band on the same basis is a sensible extension of the existing regulatory framework that will enable further responsible development and innovation in these bands.

For these reasons, Inmarsat supports the Commission's proposals in the Further Notice, and recommends that it proceed with expanding the frequencies available for the of ESIMs in GSO FSS systems.

Respectfully submitted,

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