

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Facilitating the Communications of Earth Stations in)	IB Docket No. 18-315
Motion with Non-Geostationary Orbit Space Stations)	
)	

COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”)^{1/} submits these comments in response to the Notice of Proposed Rulemaking (“*NPRM*”)^{2/} in the above-referenced proceeding, in which the Commission proposes to extend its rules governing Earth Stations in Motion (“ESIM”) operations to cover communications with non-geostationary orbit (“NGSO”) satellites operating in the Fixed Satellite Service (“FSS”). Consistent with the Commission’s goal to make more spectrum available for terrestrial mobile broadband, the Commission should clarify that, if adopted, its proposals in this proceeding will not expand use of ESIM operations in the 3.7-4.2 GHz band.

The Commission seeks comment on allowing ESIMs to communicate with NGSO FSS systems in several Ku- and Ka-bands, in which the Commission’s rules already allow ESIMs to communicate with geostationary orbit (“GSO”) FSS space stations.^{3/} T-Mobile takes no position on the proposed rule changes governing ESIMs in those bands. However, it notes that in seeking comment on the possible effects of ESIM-to-NGSO FSS space station communications on

^{1/} T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

^{2/} *Facilitating the Communications of Earth Stations in Motion with Non-Geostationary Orbit Space Stations*, Notice of Proposed Rulemaking, FCC 18-160 (rel. Nov. 16, 2018) (“*NPRM*”).

^{3/} *See NPRM* ¶¶ 9-10.

existing or future services, the Commission highlights its “open proceeding exploring additional uses of ‘mid-band spectrum’” which it states “include[es] bands considered for ESIM communication with NGSO FSS systems.”^{4/} In offering that observation, the Commission refers to the now-superseded *Mid-Band NOI*,^{5/} in which it sought comment on bands between 3.7 and 24 GHz that could be made available for terrestrial mobile broadband, and which includes bands at issue in the *NPRM*.

The *NPRM* reference is potentially troublesome for two reasons. *First*, it does not acknowledge that the Commission has moved beyond asking about potential use of the 3.7-4.2 GHz band – it has now proposed rules that would permit terrestrial use in that band in a manner that would be inconsistent with additional satellite use of the spectrum.^{6/} *Second*, and even more problematic, the Commission’s inquiry appears to ignore current limitations and past statements regarding use of the band for terrestrial operations.

In particular, while existing rules permit different forms of ESIM use across several bands, use of the 3.7-4.2 GHz band is limited to one type of ESIM – Earth Stations on Vessels (“ESVs”), and then only with GSO constellations. The Commission has appropriately not proposed to expand ESIM use of the 3.7-4.2 GHz band beyond ESVs or to NGSO constellations. This is consistent with the Commission’s position that any future ESIM use will be subject to use of the band for terrestrial operations.^{7/}

^{4/} *NPRM* ¶ 23.

^{5/} See *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd 6373 (2017) (“*Mid-Band NOI*”).

^{6/} See *Expanding Flexible Use of the 3.7 to 4.2 GHz Band, et al.*, Order and Notice of Proposed Rulemaking, 33 FCC Rcd 6915 (2018) (“*3.7-4.2 GHz NPRM*”).

^{7/} See *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*

The Commission’s recent actions have confirmed its intention to limit future satellite use of the 3.7-4.2 GHz band. Indeed, the Commission’s focus in the 3.7-4.2 GHz band proceeding has correctly been on clearing satellite users *out* of the spectrum. It has, for example, frozen further satellite use of the band while it considers permitting terrestrial mobile use.^{8/} The Commission should therefore clarify that it is not proposing to expand ESIM use in the C-band, either to other forms of ESIMs beyond ESVs or to communications with NGSO constellations.

The Commission should similarly clarify that its proposed change to the definition of ESV is not intended to expand ESV use to NGSO constellations. In particular, the current definition of ESV states that ESVs are stations that receive from and transmit to “geostationary-orbit Fixed-Satellite Service space stations.”^{9/} The *NPRM* would eliminate the reference to “geostationary orbit,” suggesting that ESVs could receive from any NGSO or GSO space station – including NGSO stations transmitting in the 3.7-4.2 GHz band. That result does not appear to be what the Commission intended, based on the recent Commission statements in the *ESIM Report and Order* and the *3.7-4.2 GHz NPRM* noted above. Proposed rule section 25.202(a)(10)(ii) does not list the 3.7-4.2 GHz band as among the frequency bands with which NGSO constellations may communicate with ESIMs (including ESVs). Nevertheless, in the interest of clarity, the Commission should confirm that the proposed change to the ESV definition is not intended to permit use of the 3.7-4.2 GHz band with NGSO constellations.

Allocated to the Fixed-Satellite Service, Report and Order and Further Notice of Proposed Rulemaking, FCC 18-138, n.110 (rel. Sept. 27, 2018) (“*ESIM Report and Order*”).

^{8/} See *Temporary Freeze on Applications for New of Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band; 90 Day Window to File Applications for Earth Stations Currently Operating in the 3.7-4.2 GHz Band*, Public Notice, DA 18-398 (rel. Apr. 19, 2018).

^{9/} 47 CFR § 25.103.

Respectfully submitted,

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