

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

In the Matter of )  
 )  
Viasat, Inc. ) IBFS File No. SES-LIC-20200811-00852  
 )  
Application for Blanket License to Operate Ka- )  
Band Very Small Aperture Terminals )

**COMMENTS OF KUIPER SYSTEMS LLC**

Kuiper Systems LLC, a wholly owned subsidiary of Amazon.com Services LLC (collectively, “Amazon”), requests that any grant of the Viasat, Inc. (“Viasat”) blanket license application for very small aperture terminals (“VSATs”) communicating with ViaSat-3, a geostationary orbit (“GSO”) fixed-satellite service (“FSS”) satellite in 18.8-19.3 GHz and 28.6-29.1 GHz (“NGSO FSS Primary Bands”),<sup>1</sup> include a condition requiring that, prior to commencing operations, Viasat either complete coordination with Amazon or demonstrate with sufficient technical detail that it will not cause harmful interference to Amazon’s Kuiper System. As explained below, this condition is necessary to safeguard the protections that both Viasat’s existing space station authorization and the FCC’s rules provide NGSO FSS systems in these bands—specifically, that Viasat not cause harmful interference to, or claim protection from, non-geostationary orbit (“NGSO”) FSS systems. Granting Viasat’s application with the requested condition would preserve the rights of NGSO FSS operators in the only Ka-band spectrum offering them primary status, while also providing GSO FSS operators like Viasat greater access to spectrum with which to expand their broadband offerings.

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<sup>1</sup> Viasat has requested authority to operate 1.8-meter and 2.4-meter VSATs on a blanket licensed basis in the NGSO FSS Primary Bands, among others. *See generally* Application, Viasat, Inc., IBFS File No. SES-LIC-20200811-00852 (filed Aug. 11, 2020).

The proposed condition aligns with FCC rules and precedent. Again, it is consistent with the table of allocations footnote for the NGSO FSS Primary Bands and related conditions in the ViaSat-3 space station authorization, both of which require that Viasat’s operations not cause harmful interference to, nor claim protection from, NGSO FSS systems in these bands.<sup>2</sup> It is also consistent with the conditions that the Commission has applied to other GSO earth station operators—including Viasat—when seeking to deploy in the NGSO FSS Primary Bands. Viasat’s blanket licenses for both fixed earth stations and earth stations in motion communicating with GSO FSS space stations provide a useful comparison. These licenses require that, if a new NGSO FSS system employs the NGSO FSS Primary Bands after Viasat begins operations in these bands, then Viasat must cease operation unless and until it coordinates operations with the new NGSO FSS operator or provides a detailed technical demonstration that the GSO FSS earth stations will not cause harmful interference to the new NGSO FSS system.<sup>3</sup>

Notwithstanding the protections described above, the threat of harmful interference to NGSO FSS systems posed by uncoordinated earth station deployments in the NGSO FSS Primary

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<sup>2</sup> See 47 C.F.R. § 2.106 at n.NG165 (“In the bands 18.8-19.3 GHz and 28.6-29.1 GHz, geostationary-satellite networks in the fixed-satellite service shall not cause harmful interference to, or claim protection from, non-geostationary-satellite systems in the fixed-satellite service.”); Stamp Grant, Viasat, Inc., IBFS File No. SAT-MOD-20150618-00037, at Conditions 5, 8 (reissued Mar. 23, 2017).

<sup>3</sup> See Stamp Grant, Viasat, Inc., IBFS File No. SES-LIC-20170401-00357, at Condition 90447 (granted Nov. 9, 2017) (“[N]o later than sixty days before the scheduled initial launch of each NGSO FSS satellite system licensed or granted market access in the United States to operate in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands, the licensee must either: (1) notify the Commission in writing when an agreement has been reached with the NGSO satellite system operator, or (2) seek and obtain the Commission’s approval of a modification of this license including detailed technical demonstrations of how the licensee will protect the NGSO FSS satellite system. If neither condition is met, the licensee must cease earth station operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands pursuant to this license until such time as compliance is demonstrated.”); see also Stamp Grant, Viasat, Inc., IBFS File No. SES-LIC-20190411-00503, at Condition 90257 (granted Nov. 15, 2019).

Bands warrants additional safeguards prior to Viasat commencing service. First, these bands are of heightened importance to NGSO FSS systems, because NGSO FSS operators must respect a GSO exclusion angle to comply with equivalent power-flux density limits in other portions of the Ka-band—often requiring NGSO FSS operators to rely on the NGSO FSS Primary Bands when operating toward the GSO arc. Further, advance coordination or showings of non-interference will ensure that Viasat adopts any mitigation techniques necessary to avoid harmful interference prior to commencing service. For example, GSO FSS earth station transmission paths may need to automatically maintain some angular separation from NGSO FSS satellite and earth station communication paths to preserve primary status for NGSO FSS systems in the NGSO FSS Primary Bands and ensure uninterrupted NGSO FSS service.

Aside from high-level assertions about protecting NGSO FSS systems, little in Viasat’s application addresses the threat posed by uncoordinated earth station deployments in the NGSO FSS Primary Bands. Viasat’s application lacks any technical demonstration of how Viasat’s VSAT operations will avoid causing harmful interference to Amazon’s Kuiper System, nor does it grapple with specific compatibility scenarios or submit supporting models and assumptions. At the same time, Amazon understands that Viasat stands ready to coordinate, and Amazon is optimistic that it can work with Viasat to address these concerns before Viasat commences service.

Granting Viasat’s application with the requested condition will address Amazon’s concerns, provide Viasat access to spectrum with which to expand its broadband offerings, and serve the public interest. As the Commission recently noted, the NGSO FSS Primary Bands are “critical to the[] growth”<sup>4</sup> of NGSO FSS systems and will be the subject of “intensive use” by

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<sup>4</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 et al.*, Second Report and Order *et al.*, 35 FCC Rcd 5137 ¶ 19 (2020).

Amazon's Kuiper System and other NGSO FSS licensees.<sup>5</sup> To further the public interest in fostering this growth, Amazon requests that any grant of Viasat's application requires that Viasat coordinate with Amazon prior to commencing service or demonstrate with sufficient technical detail that Amazon's Kuiper System will not encounter harmful interference in essential NGSO FSS spectrum.

Amazon looks forward to working with Viasat and the Commission to preserve NGSO FSS spectrum while still permitting GSO FSS operators to accelerate consumer access to satellite-broadband systems.<sup>6</sup>

Respectfully submitted,

/s/ Mariah Dodson Shuman

Mariah Dodson Shuman  
Corporate Counsel

Kuiper Systems LLC,  
an Amazon subsidiary

July 16, 2021

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<sup>5</sup> *Id.*; *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order et al., 32 FCC Rcd 7809 ¶ 14 (2017) (“*NGSO FSS Order*”).

<sup>6</sup> *See NGSO FSS Order* ¶ 14.

**CERTIFICATE OF SERVICE**

I, Mariah Dodson Shuman, hereby certify that on July 16, 2021, a true and correct copy of this pleading was served via First Class mail upon:

Daryl T. Hunter, P.E.  
6155 El Camino Real  
Carlsbad, CA 92009

*/s/ Mariah Dodson Shuman*  
Mariah Dodson Shuman