



September 2, 2020

**VIA IBFS AND ECFS**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

**Re: *Ex Parte* Notice, SAT-MOD-20200417-00037, SAT-MPL-20200526-00056,  
RM-11855, and RM-11861**

Dear Ms. Dortch:

On August 31 and September 1, 2020, representatives of Kuiper Systems LLC, a wholly owned subsidiary of Amazon.com Services LLC (collectively, “Amazon”), spoke by telephone with Federal Communications Commission (“FCC” or “Commission”) staff regarding the above-referenced proceedings. A list of participants at each meeting is attached. Amazon discussed non-geostationary satellite orbit (“NGSO”) fixed-satellite service (“FSS”) constellation modifications, the impacts of these proposed modifications, and the critical decisions the Commission must make on pending modification applications.

Amazon briefly discussed Viasat, Inc.’s (“Viasat”) application to modify its NGSO FSS system.<sup>1</sup> Amazon filed comments—outlining concerns with the increased interference Viasat’s modified system would cause—on August 31, 2020.<sup>2</sup>

Amazon primarily discussed the pending application of Space Exploration Holdings, LLC (“SpaceX”) to modify its proposed satellite system and the potential impact of its proposal on the satellite operating environment.<sup>3</sup> Amazon filed a petition to deny SpaceX’s Third Modification.<sup>4</sup>

---

<sup>1</sup> Application for Modification of Authorization for the Viasat NGSO Satellite System, File No. SAT-MPL-20200526-00056 (filed May 26, 2020).

<sup>2</sup> Comments of Kuiper Systems LLC, File No. SAT-MPL-20200526-00056 (filed August 31, 2020).

<sup>3</sup> Application for Modification of Authorization for the SpaceX NGSO Satellite System, IBFS File No. SAT-MOD20200417-00037 (filed Apr. 17, 2020) (“SpaceX Third Modification”).

<sup>4</sup> Petition to Deny and Comments of Kuiper Systems LLC, IBFS File No. SAT-MOD-20200417-00037 (filed July 13, 2020) (“Amazon Petition”).

As supported by the record and previously explained,<sup>5</sup> the significant risks to space safety posed by the Third Modification warrant its denial. Amazon's analysis shows that the overlap created by SpaceX's proposed redesign raises significant space safety risks. SpaceX proposes to move all of its satellites to altitudes ranging from 540 km to 570 km, with an orbital variation of +/- 30 km, which would put SpaceX satellites in the midst of the Kuiper System orbits. By comparison, the Kuiper System will be controlled to a much tighter +/- 9 km orbital variation. Despite the potential to increase the daily close approaches with the Kuiper System by more than an order of magnitude, SpaceX has declined to acknowledge potential solutions.

Even if the space safety risks are resolved, interference concerns evaluated under the FCC's *Teledesic* standard<sup>6</sup> require the Commission to include SpaceX's entire modified constellation in the NGSO FSS Processing Round initiated on March 24, 2020 (the "2020 Processing Round") to ensure that the public interest is served.<sup>7</sup> The Third Modification would expand SpaceX's Ka-band beam footprints by 50 to 150 times what is currently authorized, lower the minimum gateway elevation angle from 40 degrees to 25 degrees, and double the number of satellites linking to each of SpaceX's gateways. However, SpaceX insufficiently considers the impact to the NGSO FSS environment, including the impact to the Kuiper System. Amazon's analysis demonstrates that SpaceX's system redesign would significantly worsen the interference environment for other NGSO FSS operators.<sup>8</sup>

Despite SpaceX's suggestion otherwise, the Third Modification does not build upon its initial license and preceding two modifications. The Third Modification is an entire system redesign involving every SpaceX satellite, including satellites deployed in SpaceX's previously authorized 550 km orbit. The configuration bears little resemblance to the original constellation proposed by SpaceX. SpaceX filed the Third Modification three weeks after initiation of the 2020 Processing Round and nine months after Amazon's Kuiper System application. The record shows that it is against the public interest to grant the Third Modification and allow SpaceX to maintain its processing round status.<sup>9</sup> To do so would undermine the Commission's policy goals for NGSO FSS processing rounds, depriving other licensees and applicants of regulatory certainty and reasonable expectation regarding the operating environment.

---

<sup>5</sup> See Kuiper Systems LLC Ex Parte Notice, IBFS File No. SAT-MOD-20200417-00037 (filed Aug. 18, 2020).

<sup>6</sup> See *Teledesic LLC*, Order and Authorization, 14 FCC Rcd 2261 (IB 1999).

<sup>7</sup> See *Satellite Policy Branch Information, Cut-Off Established for Additional NGSO FSS Applications or Petitions for Operations in the 10.7-12.7 GHz, 12.75-13.25 GHz, 13.8-14.5 GHz, 17.7-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz Bands*, Public Notice, 35 FCC Rcd 2881 (IB 2020).

<sup>8</sup> Amazon Petition at 18-19, Figures 6-7 (analyzing in-line interference events of the Third Modification to the Kuiper System, O3b, OneWeb, and Telesat).

<sup>9</sup> See, e.g., Petition to Deny of Kepler Communications Inc., IBFS File No. SAT-MOD-20200417-00037 (filed July 13, 2020); Petition to Deny or Defer of SES Americom, Inc. and O3b Limited, IBFS File No. SAT-MOD-20200417-00037 (filed July 13, 2020); Petition to Deny or Defer of Viasat, Inc., IBFS File No. SAT-MOD-20200417-00037 (filed July 13, 2020).

Amazon also reiterated its positions of record on pending petitions for rulemakings to update Section 25.117 and Section 25.261 of the Commission's rules.

Please feel free to contact me with any questions regarding this submission.

Respectfully submitted,

*/s/ Mariah Dodson Shuman*

Mariah Dodson Shuman  
Corporate Counsel  
Kuiper Systems LLC,  
an Amazon subsidiary

**Attachment**Meetings Held August 31, 2020

<b>Commission Attendees</b>	<b>Amazon Attendees</b>
Erin McGrath	Julie Zoller Kalpak Gude Darren Achord Mariah Dodson Shuman

<b>Commission Attendees</b>	<b>Amazon Attendees</b>
William Davenport	Julie Zoller Kalpak Gude Darren Achord Mariah Dodson Shuman

<b>Commission Attendees</b>	<b>Amazon Attendees</b>
Sean Spivey	Julie Zoller Kalpak Gude Darren Achord Mariah Dodson Shuman

Meetings Held September 1, 2020

<b>Commission Attendees</b>	<b>Amazon Attendees</b>
Will Adams	Julie Zoller Kalpak Gude Darren Achord Mariah Dodson Shuman

<b>Commission Attendees</b>	<b>Amazon Attendees</b>
Umair Javed	Julie Zoller Kalpak Gude Darren Achord Mariah Dodson Shuman