April 16, 2020

VIA ELECTRONIC FILING

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

Re: Ex Parte Presentation, ViaSat, Inc. Petition for Declaratory Ruling Granting Access for a Non-U.S. Licensed Non-Geostationary Orbit Satellite Network, IBFS File Nos. SAT-PDR-20161115-00120 and SAT-APL-20180927-00076 (Call Sign S2985)

Dear Ms. Dortch:


During the meetings, we discussed the Draft Order\(^1\) that would grant ViaSat, Inc. ("ViaSat") market access for its proposed non-geostationary orbit ("NGSO") fixed-satellite service ("FSS") constellation of 20 satellites in several spectrum bands, including those

shared with Upper Microwave Flexible Use Service ("UMFUS") operations. We noted that the Commission has long recognized the critical role that wireless broadband plays in keeping Americans connected, enabling employment opportunities, and promoting public safety. Mobile operators have spent billions of dollars on high-band spectrum to ensure that we can meet the growing demand for mobile connectivity, and the UMFUS bands are uniquely positioned to help us meet that demand.

We explained that the Draft Order accurately portrays the rights and obligations of UMFUS and satellite operations. However, that understanding is not carried into the “Ordering Clauses” in paragraphs 50-52. To recognize the investments made by wireless providers in these bands and those to be made in the future, we requested that the Commission replace one existing clause, based on language found in other Market Access Orders, and to slightly modify one other clause in paragraph 51, in a manner consistent with the similar condition in paragraph 51.o. Specifically, we requested:

That the Commission replace the existing paragraph 51.h with the following text: “Transmissions in the 27.5-28.35 GHz (Earth-to-space) frequency band are secondary with respect to Upper Microwave Flexible Use Service (UMFUS) operations, except for FSS operations associated with earth stations authorized pursuant to 47 CFR § 25.136.”

That the Commission modify paragraph 51.j to add the underlined language: “Operations in the 37.5-40.0 GHz band must provide interference protection and are unprotected with respect to the non-federal fixed and mobile services, except as authorized pursuant to 47 CFR § 25.136.”

In addition, we discussed the portion of the Draft Order that declines to grant ViaSat the authority to operate satellite-to-satellite communication links between its lower orbit Medium Earth Orbit ("MEO") satellites and higher orbit Geostationary Orbit ("GSO") satellites. We discussed that the Draft Order notes that another administration, such as the Netherlands where ViaSat’s NGSO satellites are licensed, may allow this service. Of particular interest to wireless providers is ViaSat’s requested use of transmissions from MEO to GSO in

2 Those include the 17.8-18.6 GHz, 18.8-19.3 GHz, 19.7-20.2 GHz and 37.5-42.0 GHz bands (space-to-Earth); and 27.5-29.1 GHz, 29.5-30.0 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz bands (Earth-to-space).
the 27.5-29.1 GHz band. ViaSat notes that the spectrum for the satellite-to-satellite communication links would be used in the same direction of transmission as other FSS communications relative to GSO satellites.

Also, during the calls we discussed concerns, also expressed by Hughes Network Systems, LLC\(^3\) with regard to the use of satellite-to-satellite communication links in FSS allocations and the lack of technical analysis to ensure protection of existing operations in the 28 GHz band. This issue is under active study at the International Telecommunication Union for the 2023 World Radiocommunication Conference ("WRC-23"), where there is ongoing debate about the nature of these services and the interference risk they pose to other operations, including terrestrial deployments. The Draft Order recognizes in paragraphs 21-23 the interference potential to other space operations. However, the Draft Order does not consider any potential risk to terrestrial operations, which would need to be studied before allocation changes are made to enable these types of space-to-space operations in the FSS. We encourage the Commission to take this issue under consideration as the development plans for NGSO constellations vary from operator to operator.

We requested that the Commission amend paragraph 50 to state that ViaSat's petition is denied in part insofar as it requests authorization for satellite-to-satellite communication links, which is consistent with the discussion of that request in the draft.\(^4\) We also requested that the Commission include an additional clause affirming not only that these satellite-to-satellite operations must protect terrestrial operations, but that they also must not claim protection from terrestrial operations and must comply with any Radio Regulations provisions adopted at WRC-23 to ensure the protection of terrestrial services. Moreover, we explained that we continue to have concerns about the potential to use satellite-to-satellite communications under an FSS allocation, and request that the specific direction of the FSS allocation (e.g., Earth-to-space) be mandated should a future allocation change be warranted. Our specific proposals are set out below:

\(^3\) Letter from Jennifer A. Manner, Hughes Network Systems, LLC, to Marlene H. Dortch, Secretary, FCC, File Nos. SAT-PDR-20161115-00120 & SAT-APL-20180927-00076 (Feb. 11, 2019).

\(^4\) Paragraph 14 states that the Commission is "not . . . granting access for proposed satellite-to-satellite communications" and paragraph 21 states that the Commission "is not including in this market access any authority for satellite-to-satellite communications." But the ordering clause in paragraph 50 states only that the application is "GRANTED IN PART" and "DISMISSED as MOOT IN PART." The dismissal as moot in part is a reference to two waivers that are addressed in paragraphs 44 and 45. Paragraph 50 does not indicate that the application is also denied in part.
That the Commission modify paragraph 50 to add the underlined language: “Accordingly, IT IS ORDERED that the Petition for Declaratory Ruling filed by ViaSat, Inc., as amended, and accepted for filing IS GRANTED IN PART, DENIED IN PART and DISMISSED as MOOT IN PART, as set forth in this Order and Declaratory Ruling, pursuant to section 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. § 303(r) and section 25.137(c) of the Federal Communications Commission’s rules, 47 CFR § 25.137(c).”

That the Commission modify paragraph 52.f to add the underlined language: “If authorized by another administration, satellite-to-satellite transmissions in the 27.5-28.6 GHz and 29.5-30.0 GHz bands cannot begin until ViaSat submits a modification to its Petition showing that off-axis power flux density levels at the GSO are no greater than those that would be produced by an earth-based antenna operating in compliance with the off-axis EIRP density limits contained in section 25.218(i)(1)-(4).”

That the Commission modify paragraph 52.h to add the underlined language: “ViaSat must protect any terrestrial operations in the frequency bands used for transmissions from its MEO satellites to a GSO space station. ViaSat satellite-to-satellite operations shall not claim protection from terrestrial operations and shall comply with any applicable Radio Regulations provisions adopted at WRC-23 to ensure they do not cause any interference per link, or in aggregate, to terrestrial licensees.”

That the Commission add the following condition as paragraph 52.i: “If authorized by another administration, satellite-to-satellite transmissions in any given band must be used in the same relative direction as the FSS allocation in the band (e.g., Earth-to-space or space-to-Earth).”

The Commission showed tremendous leadership in the Spectrum Frontiers proceedings in recognizing the potential the millimeter wave bands hold for 5G services. The framework the Commission created has fostered a vibrant, competitive marketplace that enables the use of millimeter wave spectrum for both satellite and terrestrial broadband communications. CTIA looks forward to working with the Commission to help further these critical goals.

Pursuant to Section 1.1206 of the Commission’s rules, this notice is being filed electronically in the above-captioned proceedings. Please do not hesitate to contact the undersigned with any questions.
Sincerely,

/s/ Jennifer L. Oberhausen  
Jennifer L. Oberhausen  
Director, Regulatory Affairs

cc: Erin McGrath  
William Davenport  
Jennifer Gilsenan  
Jose Albuquerque  
Karl Kensinger  
Alan Thomas  
Jay Whaley  
Alyssa Roberts  
Kal Krautkramer