

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

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Application of)	
VIASAT, INC.)	
For a License to Operate VIASAT-89US)	File No. SAT-LOA-20190617-00048
in the 19.7-20.2 GHz and 29.5-30.0 GHz)	
Frequency Bands at 88.9° W.L.)	
To Modify Access Grant and for Extension)	File No. SAT-MOD-20190617-00047
or Waiver of Milestone Date)	
_____)	

COMMENTS OF INMARSAT, INC.

Inmarsat, Inc. (“Inmarsat”) submits these comments in response to the two interrelated applications of Viasat, Inc. (“Viasat”) referenced above. The first application seeks a Commission license for a portion of the Ka-band payload on the Viasat-3 satellite at the 88.9° W.L. orbital location.¹ The second application seeks market access for the remainder of the Ka-band payload on that spacecraft (which would be licensed by the United Kingdom) as well as a more than thirty-month extension of the milestone on its existing market access authorization, from June 18, 2019 to December 31, 2021.²

Viasat-3 has very different technical characteristics than the Ka-band payload on the Galaxy 28 spacecraft Viasat currently operates at the 89° W.L. location, and also diverges from the USASAT-31S network filing with the International Telecommunication Union (“ITU”) under

¹ See Application for Space Station License, IBFS File No. SAT-LOA-20190617-00048 (filed June 17, 2019) (“Viasat License Application”).

² See Application for Modification of Market Access Grant and for Extension or Waiver of Milestone Date, IBFS File No. SAT-MOD-20190617-00047 (filed June 17, 2019) (“Viasat Modification Application”).

which Viasat claims it will operate. Any grant of these applications must include appropriate conditions to ensure that Viasat-3 does not change the existing interference environment in a way that would afford Viasat greater flexibility than is justified under the existing filing while also placing an undue anticompetitive burden on other Ka-band satellite systems.

In addition, Viasat has already had more than five years to deploy its satellite, and now seeks to extend that period half-again. This is not some near miss – it is 50% of the original deployment period. The Commission should not lightly allow any operator to hold on to an authorization for so long without deploying its system.

BACKGROUND

Inmarsat is the world leader in global, mobile satellite communications. It owns and operates the world's best global portfolio of satellite networks, offering a wide range of satellite communications solutions to customers at sea, on land and in the air utilizing L- and Ka-band spectrum. Of particular relevance in this proceeding, Inmarsat is the beneficiary of an ITU filing for a Ka-band satellite at the 87° W.L. orbital location. Accordingly, Inmarsat has a significant interest in Viasat's applications and the potential impact that Viasat-3's proposed operations may have on satellite systems operating nearby.

In 2014, the Commission authorized Viasat to acquire from Intelsat the Ka-band payload (operating in the 19.7-20.2 GHz and 29.5-30.0 GHz bands) on the U.S.-licensed Galaxy-28 satellite at 89° W.L.³ That same year, the Commission also granted Viasat's request for market access to serve the United States from 88.9° W.L. using the 18.3-19.3 GHz and 19.7-20.2 GHz bands for downlinks and the 28.1-29.1 GHz and 29.5-30 GHz bands for uplinks on a primary basis

³ See Grant Stamp, IBFS File No. SAT-ASG-20130515-00070 (Apr. 8, 2014).

from a satellite that will operate under authority of the United Kingdom.⁴ The market access grant required Viasat to launch and operate a satellite by June 18, 2019 and is subject to an escalating \$3 million bond.

In July 2015, Viasat submitted a satellite construction contract with Boeing for Viasat-3 class satellites, presumably consistent with the launch and operate milestone in its license.⁵ In August 2017, Viasat announced that it had completed Critical Design Review of the Viasat-3 class satellite, and that “ViaSat and Boeing are now moving forward with building, integrating and testing the first two satellites.”⁶ Just one year later, however, Viasat was already announcing that its satellite would not begin providing service until 2020.⁷ Yet Viasat waited until one day before its launch and operate milestone was to expire and the \$3 million bond forfeited before filing the applications under consideration here, including the request for a milestone extension – slipping even further, to the end of 2021.

Viasat now requests a U.S. license for the portion of the payload on the Viasat-3 spacecraft (which Viasat refers to as “Viasat-89US”) that will replace the Ka-band payload on Galaxy 28, and modification of its U.S. market access authorization to cover the remainder of the Viasat-3 Ka-band payload operating under a license issued by the United Kingdom (which Viasat refers to

⁴ See IBFS File Nos. SAT-LOI-20140204-00013 and SAT-AMD-20140218-00023 (granted June 18, 2014); as modified by File No. SAT-MOD-20150618-00037 (granted Oct. 21, 2015), as reissued on Mar. 23, 2017.

⁵ See Letter from John P. Janka to Marlene H. Dortch, IBFS File No. SAT-LOI-20140204-00013, et al. (July 6, 2015). At the time, this submission was necessary to satisfy the first milestone in Viasat’s market access authorization.

⁶ See Kendall Russell, *ViaSat, Boeing Begin Full Construction of Viasat 3 Satellites*, VIA SATELLITE (Sept. 25, 2017), <https://www.satellitetoday.com/innovation/2017/09/25/viasat-boeing-begin-full-construction-viasat-3-satellites/>.

⁷ See Press Release, Viasat Inc., *Viasat, Boeing Enter Next Phase of ViaSat-3 Satellite Integration* (Aug. 30, 2018), <https://www.viasat.com/news/viasat-boeing-enter-next-phase-viasat-3-satellite-integration>.

as “Viasat-3 (89W)”). In addition, Viasat requests an extension of the milestone on its existing market access authorization of more than thirty months, from June 18, 2019 to December 31, 2021.

DISCUSSION

I. THE COMMISSION SHOULD CONDITION ANY LICENSE GRANTED TO VIASAT TO ENSURE THAT ITS UPLINK OPERATIONS DO NOT UNDULY LIMIT OTHER SATELLITE OPERATORS

Viasat-89US has very different technical characteristics than the Ka-band payload on Galaxy 28 that it is replacing. Many of those differences may not affect satellite systems operating at nearby orbital locations, but at least one such difference has the potential to impose significant limitations on other operators. Specifically, the receive antennas on Viasat-3 have much higher G/T than do those on Galaxy 28 – apparently to enable the use of very small earth station antennas. This is not consistent with the ITU network filing it claims to operate under. If other operators are required to protect these much more sensitive antennas, Viasat could effectively sterilize a portion of the orbital arc. Any license granted in this proceeding must be conditioned to avoid this result.

Viasat claims that it will operate the Viasat-89US payload under the ITU registration of the USASAT-31S satellite network.⁸ Yet a review of that network filing demonstrates that the proposed satellite will deviate significantly from the registered characteristics. For example, the highest G/T for any Ka-band receive beam in that filing is 23.2 dB/K. The Ka-band payload on Galaxy 28 operated with a maximum G/T of 12 dB/K,⁹ well within the envelope of the ITU filing. The proposed Viasat-89US, by contrast, would operate with a maximum G/T of 30.9 dB/K.

⁸ See Viasat License Application at 3.

⁹ See Application for Modification of Authorization, IBFS File No. SAT-MOD-19991102-00106, Appendix A at A32. The satellite was originally known as Telstar-8 before Intelsat purchased it in the Loral bankruptcy proceeding.

This has real world consequences for satellites operating at adjacent orbital locations. The much higher G/T proposed for Viasat-89US suggests that this new satellite would be far more sensitive to uplink interference than anticipated under the filed parameters in USASAT-31S and the actual operations of Galaxy 28. If other operators were required to protect that greater sensitivity, earth stations communicating with satellites at adjacent orbital locations would have to operate at much lower power levels or with much higher gain and better sidelobe performance, which would add cost to their deployments and potentially rule out certain smaller antennas.

Moreover, the G/T of the USASAT-31S filing corresponds to a minimum earth station antenna diameter of approximately 45 cm. However, in its current application, Viasat proposes a minimum antenna diameter of approximately 30 cm. Viasat's use of such small antennas is not entitled to protection under ITU rules. Moreover, it will likely conflict with the Commission's two-degree spacing rules as well. First, their uplink transmission characteristics will have to surpass the antenna performance requirements of Section 25.209 in order to avoid causing interference to satellites at adjacent orbital locations. Second, they will likely receive interference from adjacent satellites operating consistent with the two-degree spacing limits.

In effect, the deviations in Viasat's proposed system from the USASAT-31S registration seem intended to give Viasat flexibility to take advantage of smaller terminals than were initially contemplated under the filing, while simultaneously using the filed parameters (which Viasat-89US will not match) to prevent competing operators from doing the same. This anticompetitive result should not be permitted. If the Commission grants Viasat's applications, it must make clear that Viasat will not be able to operate its system in a manner inconsistent with, or insist on protections of its system that are inconsistent with, its ITU network filing or the two-degree spacing regime. Otherwise, Viasat would unilaterally impose undue restrictions on other operators at

adjacent orbital locations that are inconsistent with both its international rights and the Commission's policies for efficient spectrum use. To be clear, Inmarsat's concern relates solely to the uplink operations on the proposed satellite, and would not affect Viasat's downlink transmissions to consumers.

Lastly, Galaxy 28 provides service only over the continental United States ("CONUS"). As a replacement, Viasat-89US should enjoy the same international status under the USASAT-31S filing that Galaxy 28 does. In other words, the Commission should make clear that Viasat's operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands fall under the U.S. filing to the extent they fall within CONUS, but that operations outside CONUS must be conducted under the auspices of another ITU network filing. By doing so, the Commission will ensure that settled expectations are honored and Viasat is not able to achieve more favorable international status through regulatory gamesmanship.

II. THE COMMISSION SHOULD REQUIRE ADDITIONAL INFORMATION TO JUSTIFY VIASAT'S REQUEST FOR A THIRTY-MONTH MILESTONE EXTENSION

Under Section 25.161 of the Commission's rules, a station authorization shall be automatically terminated without further notice to the licensee upon failure to meet the milestone in Section 25.164(a) by placing a functioning space station in orbit.¹⁰ One day before the five-year deadline for deployment of its promised satellite was to expire, Viasat filed a request to extend its milestone by another two-and-a-half years. This is no small miss, but rather a request to continue to hold onto its claim to a valuable full-CONUS orbital location for years without actually deploying the satellite required under the Commission's rules. According to Viasat's application,

¹⁰ 47 C.F.R. § 25.161(a)(1).

it requires another 15 months to complete construction, nearly nine months thereafter for launch, and a full seven additional months to become operational.¹¹

Section 25.117(e) provides that a milestone extension will be granted only when the additional time is required due to unforeseeable circumstances beyond the applicant's control, or there are unique and overriding public interest concerns that justify an extension.¹² As the Commission has explained, “[r]equiring licensees to make and fulfill realistic construction and launch commitments prevents increasingly scarce orbital resources from being warehoused by licensees. Such warehousing could hinder the availability of services to the public at the earliest possible date by blocking entry by other entities willing and able to proceed immediately with the construction and launch of their satellite systems.”¹³ In this case, Viasat requests more than two additional years to launch and operate its satellite, yet its application raises questions about the timeline of its efforts to date. Before granting such a substantial extension, the Commission should require more information to justify Viasat's request.

Viasat cites unexpected delays experienced with one of its vendors as a basis for granting an extension.¹⁴ Relevant portions of this argument have been redacted, so it is not entirely clear what vendor and component are involved. However, there is no indication that Viasat provided any information on when those delays first arose or what caused them. This is important because, as the Commission has made clear, “decisions to incorporate additional technological capabilities into a satellite are business decisions within the control of the licensee, and therefore cannot justify

¹¹ See Viasat Modification Application at 10.

¹² See 47 C.F.R. § 25.117(e).

¹³ *PanAmSat Licensee Corp.*, 16 FCC Rcd. 11534, ¶ 12 (2001).

¹⁴ See Viasat Modification Application at 9-10, 14.

a milestone extension.”¹⁵ Thus, if the delays were the result of changes Viasat requested from its vendor, they would provide no basis for an extension.

The timeline for Viasat’s construction efforts, and the timing of its extension request, raise questions of their own about its ability and intention to comply with the launch and operate milestone even in the absence of the issue with this unnamed vendor. For example, under its June 2015 contract with Boeing, Viasat is responsible for building the satellite payload and integrating it into a Boeing-provided payload module, which is then to be returned to Boeing for integration into its 702 satellite platform. Presumably, the contract was designed to meet the June 2019 launch and operate milestone. Yet according to its own press release, Viasat entered into a launch contract in February 2016 under which its first Viasat-3 class satellite would be launched “by late 2019/early 2020”¹⁶ – i.e., after the milestone deadline. Similarly, according to a joint press release issued in December 2016, the companies completed Preliminary Design Review for the first two Viasat-3 class satellites in November 2016, and Boeing was on schedule to deliver flight hardware “to arrive in Viasat’s Tempe, Arizona satellite integration facility in late 2017.”¹⁷ Yet Boeing did not actually deliver the payload module until August 2018¹⁸ – close to a year later, and less than a year before the satellite was required to be launched and operational. Nevertheless, Viasat filed its extension request just one day before the expiration of its milestone. Considering Viasat’s candid recognition that it would not launch until after June 18, 2019 with virtually everybody but

¹⁵ *PanAmSat*, ¶ 13.

¹⁶ See Press Release, Viasat Inc., Arianespace to Launch Two Viasat High Capacity Satellites (Feb. 9, 2016), <https://www.viasat.com/news/arianespace-launch-two-viasat-high-capacity-satellites>.

¹⁷ See Press Release, Viasat Inc. and Boeing, Viasat, Boeing Complete Preliminary Design Review for Viasat-3 Satellites (Dec. 19, 2016), <https://www.viasat.com/news/viasat-boeing-complete-preliminary-design-review-viasat-3-satellites>.

¹⁸ See Press Release, Viasat Inc., Viasat, Boeing Enter Next Phase of ViaSat-3 Satellite Integration (Aug. 30, 2018), <http://investors.viasat.com/news-releases/news-release-details/viasat-boeing-enter-next-phase-viasat-3-satellite-integration>.

the Commission itself, the eleventh-hour filing strongly suggests that Viasat has been operating on the “misguided belief that the Commission would eventually act favorably on its extension request”¹⁹ – and not working diligently to address an unforeseen vendor issue that arose at the last minute.

Given these discrepancies and holes in the record, it is not at all clear that an issue with a single vendor was solely responsible for Viasat’s inability to comply with the milestone requirements of its authorization. The Commission should require Viasat to provide a full explanation of the timeline of events related to construction of its satellite. This should include not only whether there were any modifications to its contract with Boeing that delayed construction, but also whether there were any modifications required of the unnamed vendor that Viasat currently blames for delay. Only by investigating these issues can the Commission make a determination of whether any delay arose from factors outside of Viasat’s control, or instead was a result of its own business decisions.

Viasat also claims that the Commission should grant an extension based on the unique and overriding public interest benefits of its satellite. Specifically, Viasat asserts that “[t]he unprecedented capabilities of the ViaSat-3-class design promise extraordinary benefits that easily satisfy the standard for a milestone extension based on public interest grounds.”²⁰ Yet the Commission has rejected this line of reasoning in connection with past extension requests. For example, AstroVision argued that it should be granted a milestone extension because no other remote sensing system could replicate its ability to provide live, true-color, continuous, high resolution imagery, enabling users to detect life-threatening events with greater advanced

¹⁹ *PanAmSat Licensee Corp.*, 15 FCC Rcd. 18720, ¶ 11 (2000) (denying milestone extension where request was filed just days before expiration).

²⁰ Viasat Modification Application at 15.

warning.²¹ The Commission found such capabilities insufficient to warrant an extension. “While AstroVision's satellites may eventually have certain characteristics and capabilities not offered by other satellites, the vast majority of operating space stations can make a similar claim. Thus, permitting AstroVision to delay implementation of its system based on the ‘uniqueness’ of its system would allow it to encumber spectrum to the exclusion of other applicants seeking to implement their own ‘unique’ systems.”²² This same principle applies here as well, and should result in the rejection of Viasat’s public interest claim.

Viasat requests a 2.5-year extension of a 5-year milestone period. That is extraordinary. Indeed, although Viasat cites a number of cases in which the Commission granted milestone extensions, none of them involved an extension as long as the one requested here.²³ The longest was just over 12 months – compared to the thirty months requested by Viasat. At a minimum, if the Commission were to grant an extension, it should limit the additional time allowed to incentivize Viasat to launch and begin operations as expeditiously as possible.²⁴

²¹ See *AstroVision International, Inc.*, 22 FCC Rcd. 2379, ¶ 13 (IB 2007).

²² *Id.* ¶ 14.

²³ See Viasat Modification Application at 12-15, nn. 12-24.

²⁴ Compare *EarthWatch, Inc.*, 15 FCC Rcd. 13594, ¶ 12 (2000) (granting six-month extension for construction, but granting only an additional four months for launch rather than one year; company free to request further extension if justified by circumstances beyond its control).

Respectfully submitted,

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September 9, 2019

CERTIFICATE OF SERVICE

I hereby certify that, on this 9th day of September, 2019, a copy of the foregoing pleading was served via First Class mail upon:

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