

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

In the Matter of)	
)	
Application of Viasat, Inc. to Modify)	IBFS File No. SAT-MOD-20190617-00047
Market Access Grant and for)	Call Sign S2917
Extension or Waiver of Milestone)	
Date)	

CONSOLIDATED RESPONSE AND OPPOSITION OF VIASAT, INC.

Viasat, Inc. (“Viasat”) responds to the comments of Inmarsat, Inc. (“Inmarsat”) and O3b Limited (“O3b”), and the comments and petition to hold in abeyance of Iridium Constellation LLC (“Iridium”), filed in connection with Viasat’s application to extend the launch and operate milestone for its U.S. market access grant for VIASAT-3 (89W) and to revise certain technical specifications to reflect the final design of the satellite (the “Application”).¹

Notably, no party has filed a petition to deny, and none of the submissions noted above offers any valid reason why the Application should not be granted promptly. To the contrary, the unprecedented capabilities of the ViaSat-3-class satellite design and the advanced stage of construction and substantial investments that Viasat has made to date are undeniable, constitute unique circumstances, and amply satisfy the standard for a milestone extension or waiver. In addition, Viasat demonstrated in the Application its ability to operate compatibly with NGSO MSS feeder links by avoiding co-frequency, co-polarized operations in the vicinity of those feeder link facilities. Iridium and O3b fail to raise any significant issues regarding that analysis or show that Viasat could not operate compatibly with their NGSO MSS operations.

¹ Comments of Inmarsat, File No. SAT-MOD-20190617-0047, Call Sign S2917 (Sept. 9, 2019) (“Inmarsat Comments”); Comments of O3b, File No. SAT-MOD-20190617-0047, Call Sign S2917 (Sept. 9, 2019) (“O3b Comments”); Comments and Petition to Hold in Abeyance of Iridium, File No. SAT-MOD-20190617-0047, Call Sign S2917 (Sept. 9, 2019) (“Iridium Comments”). Inmarsat also comments on Viasat’s application seeking a U.S. license for VIASAT-89US in the 19.7-20.2 GHz and 29.5-30 GHz frequencies. Viasat is separately submitting a response in that application proceeding addressing that portion of Inmarsat’s comments. *See* File No. SAT-LOA-20190617-00048, Call Sign S3050.

I. STRONG PUBLIC INTEREST CONSIDERATIONS SUPPORT AN EXTENSION OR WAIVER OF THE MILESTONE CONDITION, CONSISTENT WITH COMMISSION PRECEDENT

The Application describes at length—and no commenting party disputes—the overwhelming public interest benefits that the VIASAT-3 (89W) satellite will bring to the public. The satellite’s unprecedented capabilities and advanced technology will enable it to meet critical needs for ubiquitous access to greater speeds and throughput in order to satisfy growing consumer demand. As Viasat detailed in the Application, the VIASAT-3 (89W) satellite will be capable of providing over 1 Terabit per second of capacity, far outpacing the best-performing broadband satellites in operation today, and offering over four times the throughput of Viasat’s current-generation satellite, ViaSat-2. Technological advances in the new design will leverage this unparalleled level of capacity to further improve the bandwidth economics of satellite-delivered broadband services. Among other advantages, the ability to satisfy localized demand in the satellite’s coverage areas is enabled by the ability to allocate capacity dynamically. Critically, these technological advances will advance important Commission goals, including bridging the digital divide for consumers in unserved and underserved areas, and providing highly-secure communications over an American designed, built and operated network. These are revolutionary advancements that will make satellite broadband service more available, more secure, and more cost-effective than ever before.

Since the inception of the ViaSat-3 satellite design, Viasat has proceeded diligently to implement a satellite at 88.9° W.L. As of the filing of the Application, Viasat had expended well over 80 percent of the total cost of developing and manufacturing its first ViaSat-3 satellite. The satellite bus has been constructed and is in advanced integration and testing stages, and long-lead-time items and other components have been acquired and are available for integration and completion of the satellite upon completion of the payload construction. In addition, Viasat has secured launch contracts for the satellite. Despite this substantial progress and significant investment, unforeseen construction delays have extended the schedule for completion, and Viasat now expects to launch and commence operations by December 31, 2021. Thus, Viasat has reasonably requested an extension or waiver of its launch and operate milestone.

Given the substantial progress and extensive investments that Viasat has made toward the construction of the satellite and its launch, Viasat has demonstrated beyond any doubt that it is committed to implementing this satellite and delivering the extraordinary public interest benefits noted above and in the Application. Moreover, as detailed in the Application, Viasat's request is entirely consistent with Commission precedent granting milestone extensions in cases where, as here, the applicant has made substantial efforts toward actual implementation.² The Commission has consistently found in such cases that substantial progress in construction, coupled with very significant financial investments, provided tangible evidence that a promised satellite network in fact would in fact be deployed.³ Viasat's outlay of well over 80 percent of the costs of the satellite as of the date of the Application is more than sufficient under this precedent. In addition, Viasat's extensive efforts to resolve construction issues that have caused delays, and Viasat's contractual commitments with its satellite manufacturer for two additional satellites of the same design, further evince Viasat's commitment to the ViaSat-3 program. Furthermore, Viasat has volunteered to increase by 25 percent the bond that is now in place, in order to further secure its performance.

II. COMMENTERS' CLAIMS ARE UNAVAILING

Each of Inmarsat, O3b, and Iridium quibbles with various aspects of Viasat's Application, and selectively quotes from Commission precedent, but none of their observations is persuasive or warrants denial or deferral of the Application.

A. The Decisions Cited by O3b and Inmarsat Are Inapplicable to this Case

O3b's and Inmarsat's claims that Viasat has not satisfied the standard for a milestone extension or waiver⁴ do not bear scrutiny. Both O3b and Inmarsat ignore the Commission precedent discussed above and in the Application, in which the Commission has granted milestone extensions or waivers where applicants have demonstrated an intention to actually

² See Application at 12-13 (collecting cases).

³ See, e.g., *Hughes Communications Galaxy, Inc.*, 5 FCC Rcd 3423 ¶ 11 (1990) ("*Hughes Order*"); *AT&T Co.*, 5 FCC Rcd 5590 ¶¶ 16-17 (1990) ("*AT&T Order*").

⁴ See O3b Comments at 1-2; Inmarsat Comments at 9.

implement a satellite network. Instead, O3b and Inmarsat invent standards that they claim the Application does not meet. For instance, O3b suggests that Viasat's outlay of more than 80 percent of the satellite construction costs is somehow "not persuasive" because the Commission has granted milestone extensions in cases where the applicant had expended more than 90 percent.⁵ But that logic simply does not follow; the fact that 90 percent was *sufficient* in some cases does not mean it is *necessary* in every case. As discussed above and detailed in the Application, Viasat's extraordinary efforts and advanced stage of construction demonstrate beyond any doubt its intent to proceed with deployment of this spacecraft.

Further, O3b and Inmarsat rely only on cases in which the Commission denied a request for an extension because the applicant had not made any meaningful progress toward constructing the satellite,⁶ and did not even satisfy the initial requirement to enter into a non-contingent satellite manufacturing contract (under then-applicable interim milestones).⁷ These cases are inapposite because those applicants failed to make any type of investment or progress toward construction while they awaited resolution of unresolved contingencies. The public interest benefits of the ViaSat-3 satellite design, coupled with the significant progress and investment that Viasat has made to date in implementing the system, present very different circumstances.

⁵ O3b Comments at 6 & n.19 (citing cases where applicants identified construction contract payments in the range of 91.4% and 97%). Notably, O3b does not suggest what percentage between 80 and 91 would be deemed sufficient to meet its purported standard.

⁶ See O3b Comments at 5; Inmarsat Comments at 7-9.

⁷ See *PanAmSat Licensee Corp.*, 15 FCC Rcd 18720 ¶ 9 (2000) (denying extension of deadline to enter into a non-contingent satellite manufacturing contract); *PanAmSat Licensee Corp.*, 16 FCC Rcd 11534 ¶ 22 (2001) (denying petition for review of International Bureau decision cancelling license, emphasizing the lack of a construction contract); *Columbia Communications Corporation*, 15 FCC Rcd 15566 ¶ 11 (2000) (denying a request to toll milestone deadlines where the applicant asserted that it could not proceed with construction until it knew whether the Commission would grant its modification application seeking to add frequencies); *Motorola, Inc.*, 17 FCC Rcd 16543 ¶ 20 (2002) (denying an extension of the contract execution milestone where the applicant was unwilling to sign a construction contract until after the Commission approved an assignment of the license).

The same is true with respect to Inmarsat's and O3b's suggestion that Viasat's public interest showing is insufficient under Commission precedent.⁸ The AstroVision case that Inmarsat discusses⁹ is inapposite because AstroVision had made very little progress in constructing its remote sensing satellite network. In fact, AstroVision had invested less than *10 percent* of the estimated construction costs at the time the Commission ultimately issued its decision, and more than three years after the request was filed.¹⁰ As detailed above, the advances represented by the ViaSat-3-class design are revolutionary and simply are not the type of technical changes that "can be said by virtually every holder of space station authority."¹¹ The investment and progress that Viasat has made, and continues to make while this Application is pending, provide all the assurance necessary that the satellite will be deployed. The Commission thus can be confident that these circumstances are unique and fully consistent with its milestone policies.

B. O3b and Inmarsat Fail to Consider the Totality of the Circumstances

O3b and Inmarsat also focus myopically on extraneous details to suggest that the Commission requires more information before it can grant the requested milestone extension—and in doing so ignore the totality of the circumstances and the numerous factors that warrant grant of Viasat's requested milestone extension or waiver.

For instance, Inmarsat and O3b quibble with the timing of Viasat's filing,¹² but ignore the most recent case in which the Commission extended DIRECTV's launch and operate milestone based on a request filed right before the milestone deadline, and when it was apparent that DIRECTV had known nearly three years prior that it would not likely meet that milestone.¹³ The

⁸ See Inmarsat Comments at 9-10; O3b Comments at 7.

⁹ See Inmarsat Comments at 9.

¹⁰ See *AstroVision International, Inc.*, 22 FCC Rcd 2379 ¶ 15 (2007).

¹¹ O3b Comments at 7.

¹² See Inmarsat Comments at 6; O3b Comments at 5.

¹³ See *DIRECTV Enterprises, LLC*, 30 FCC Rcd 4796 ¶ 3 (2015) ("*DIRECTV Order*"); *DIRECTV Enterprises, LLC*, File No. SAT-MOD-20140624-00075, Call Sign S2712, Exhibit A at 3 (filed June 24, 2014) ("*DIRECTV Application*").

prior cases these commenters cite are readily distinguishable. The PanAmSat case did not turn on the timing of the applicant's filing, but rather on its unjustified reliance on "uncertainty" about a pending request for authority for inter-satellite links as the basis for not even entering into a satellite construction contract.¹⁴ In the Motorola case, the applicant waited until *after* the milestone deadline before asserting that the pendency of its license assignment application prevented it from entering into a construction contract.¹⁵

Moreover, Inmarsat and O3b ignore relevant precedent when they (i) focus on the extent to which any satellite design changes may have contributed to initial construction delays, irrespective of subsequent construction delays beyond the applicant's control, and (ii) wholly ignore Viasat's substantial investment and progress in deploying a satellite network, and the other compelling public interest considerations described in the Application. Indeed, the Commission affords substantial weight to actual construction efforts and investment, and typically declines to parse through which delays were or were not within the applicant's control.

Most notably, in the DIRECTV case, even after satisfying interim milestones in effect at that time, DIRECTV entered into a new construction contract midstream that had a completion date later than its final milestone date.¹⁶ Subsequent construction and launch issues further delayed completion. The Commission granted an extension based on the progress DIRECTV made at the time of the extension request and during the pendency of its that request. In doing so, the Commission rejected arguments that it should not grant an extension where the applicant had known about the likely inability to meet its launch and operate milestone *for three years*.¹⁷

O3b and Inmarsat do not fully discuss the cases that they cite in which the Commission *granted* extensions even though there may have been business decisions that contributed to the delays at issue. Specifically, each of the EarthWatch and ICO cases involved technical changes

¹⁴ See *PanAmSat*, 15 FCC Rcd at ¶ 11.

¹⁵ See *Motorola*, 17 FCC Rcd at ¶ 21.

¹⁶ See *DIRECTV Order* at ¶ 2; DIRECTV Application at 3.

¹⁷ See *DIRECTV Order* at ¶ 7.

that are fairly characterized as a business decision.¹⁸ In each case, the Commission relied on actual satellite construction to waive the milestone deadlines, and determined that there was no need to address whether the reason for the extension was attributable to a business decision within the control of the applicant.¹⁹

Nor do O3b and Inmarsat dispute that Viasat's proposal to increase its performance bond through the remaining period until launch and the commencement of service evidences Viasat's commitment to launch and operate its ViaSat-3-class satellite.

C. Viasat Has Demonstrated That VIASAT-3 (89W) Will Operate Compatibly with NGSO MSS Feeder Links

In the Application, Viasat sought U.S. market access authority in the 19.4-19.6 GHz and 29.1-29.25 GHz band segments on a non-conforming basis, because the Commission's rules and band plan do not provide for GSO FSS operations within the primary FSS allocation in these bands. In support of this request, Viasat provided the technical details of the satellite relevant to its planned operations in these bands and an explanation of how the satellite could be operated in a manner compatible with NGSO MSS feeder link operations.²⁰ Viasat indicated that it would avoid co-frequency, co-polarized operations in the vicinity of an NGSO MSS feeder link station, and provided an analysis calculating a suitable angular offset to protect the operation of one particular Iridium facility. No one challenges the technical validity of that analysis.

¹⁸ *EarthWatch Incorporated*, 15 FCC Rcd 13594 ¶ 8 (2000) (granting a waiver to allow an extension where the Commission could not determine whether the need for additional time was a business decision within the control of the licensee); *ICO Satellite Services, G.P.*, 22 FCC Rcd 2229 ¶¶ 3, 15 (2007) (granting second extension of five months based on manufacturing delays, after granting a one-year extension on public interest grounds necessitated by a choice to deploy a GSO satellite in lieu of an NGSO system).

¹⁹ *See also, TerreStar Networks, Inc.*, 22 FCC Rcd 17698 ¶ 7 (2007) (finding that because TerreStar had demonstrated "a substantial and continuing commitment to satellite construction and system implementation . . . it is not necessary to determine whether the manufacturing difficulties that have occurred were a foreseeable outcome of TerreStar's decision to alter its satellite design."). Thus, there is no need for the Commission to determine whether any portion of the delays were the result of a business decision, as Inmarsat and O3b suggest. *See Inmarsat Comments at 9; O3b Comments at 5.*

²⁰ *See Application, Attachment A at 9-12.*

1. Response to Iridium

Without disputing the analysis that Viasat provided, Iridium suggests that the Commission should require Viasat to provide a further demonstration of how it would protect Iridium's NGSO MSS operations.²¹ Notably, Iridium fails to identify the locations of its feeder link operations that are within the service area of VIASAT-3 (89W) and thus could be affected. Yet Iridium levels the baseless claim that the Application somehow is "an attempt to bypass the Commission's processes."²²

With respect to Viasat's uplink operations in the 29.1-29.25 GHz band segment, the Application indicated:

"Applications for earth station antennas communicating with the VIASAT-3 (89W) payload and using the 29.1-29.25 GHz band segment within the U.S. will include an appropriate demonstration that the proposed operations, either have been coordinated with, or will otherwise be compatible with Iridium and will operate on a secondary basis." *See* Application, Attachment A at 12.

Iridium apparently agrees with this approach, in making the observation that the "adequacy of any such future demonstration cannot be assessed, of course, until Viasat actually files its earth station applications and makes a showing."²³ Indeed, Commission precedent supports authorizing satellite operations in an uplink band, and addressing specific earth stations and their associated operating parameters in the context of subsequent earth station applications.²⁴

With respect to Viasat's commitment to protect Iridium's downlinks in the 19.4-19.6 GHz band segment, Iridium does not contest the validity of the underlying analysis, or provide any information that would help in ensuring compatibility with its system. Rather, Iridium claims that Viasat's analysis is based on "a set of operational parameters it unilaterally has

²¹ Iridium Comments at 2-3.

²² *Id.* at 3.

²³ *Id.*

²⁴ *See Teledesic Corporation*, 14 FCC Rcd 2261 ¶ 19 (1999) (issues regarding how earth stations would successfully operate on a secondary, non-interference basis should be resolved as part of future earth station applications).

assumed will protect Iridium’s feeder links” and that it does not address all of Iridium’s U.S. licensed earth stations.²⁵ Notably, Iridium fails to identify where its U.S. gateways are located, and does not provide the call signs of those facilities; nor does it identify which parameters underlying Viasat’s analysis Iridium believes are incorrect.

More fundamentally, Iridium ignores the basic principles by which Viasat will ensure compatibility with Iridium’s downlink operations: Viasat will avoid co-frequency co-polar operations with beam boresights centered with an azimuth and/or elevation of appropriate parameters to ensure suitable separation from Iridium’s gateways. Viasat has proposed such parameters with respect to Iridium’s Tempe gateway, and similar parameters can be identified with respect to Iridium’s other gateway locations within the coverage area of Viasat’s satellite, once Iridium identifies those facilities.

2. Response to O3b

As to O3b’s proposed NGSO MSS feeder link station in Hawaii, the same principles can readily be used to protect O3b’s NGSO system—both its satellite and earth station operations in Hawaii in the 19.4-19.6 GHz and 29.1-29.25 GHz band segments. In this respect, it bears noting that the 89° W.L. orbital location has an extremely low look angle toward Hawaii. Viasat’s preliminary analysis of possible in-line events between VIASAT-3 (89W) and O3b’s non-equatorial-plane satellites indicates that such occurrences are extremely unlikely because there would almost always be another more favorable O3b satellite in view of the Hawaii gateway that is not within line-of-sight of VIASAT-3 (89W). There are no possible in-line events for O3b’s equatorial-plane satellites. Viasat would be pleased to provide a complete analysis (either in ordinary course coordination discussions with O3b or a formal analysis to be submitted in this proceeding, as appropriate) based on additional information about the operational scenarios for O3b’s constellation.

²⁵ Iridium Comments at 5.

III. CONCLUSION

None of the commenting parties provides any valid reason why the Application should not be granted or why grant should be deferred. Viasat has amply demonstrated that the compelling public interest benefits of the advanced technology on the VIASAT-3 (89W) satellite and the significant amounts invested in its construction warrant an extension or waiver of Viasat's launch and operate milestone. Furthermore, Viasat has demonstrated that the satellite will operate compatibly with primary NGSO MSS feeder links. Therefore, Viasat respectfully requests that the Commission promptly process the Application to a grant.

Respectfully submitted,

Christopher Murphy
Associate General Counsel, Regulatory
Affairs
Daryl T. Hunter
Chief Technical Officer, Regulatory
Affairs
Viasat, Inc.
6155 El Camino Real
Carlsbad, CA 92009

/s/

John P. Janka
Matthew T. Murchison
Elizabeth R. Park
Latham & Watkins LLP
555 Eleventh Street, NW
Suite 1000
Washington, DC 20004
Tel: (202) 637-2200

Counsel for Viasat, Inc.

September 24, 2019

CERTIFICATE OF SERVICE

I, Bradley Bourne, hereby certify that on this 24th day of September 2019, I served a true copy of the foregoing Consolidated Response and Opposition of Viasat, Inc. via first-class mail upon the following:

Suzanne Mallory
Vice President, Regulatory Affairs
O3b Limited
1129 20th Street, NW, Suite 1000
Washington, DC 20036

Karis A. Hastings
SatCom Law LLC
1317 F Street, N.W., Suite 400
Washington, D.C. 20004

Counsel to O3b Limited

Donna Bethea-Murphy
Senior Vice President Global Regulatory
INMARSAT, INC.
1441 L Street, N.W.
Suite 610
Washington, DC 20005

Scott Blake Harris
William M. Wiltshire
Shiva Goel
HARRIS, WILTSHIRE & GRANNIS LLP
1919 M Street, N.W.
Suite 800
Washington, DC 20036

Counsel to Inmarsat

Maureen C. McLaughlin
Vice President Public Policy
Iridium Constellation LLC
1750 Tysons Boulevard
Suite 1400
McLean, VA 22102

Joseph A. Godles, Esq.
Goldberg Godles Wiener & Wright LLP
1025 Connecticut Ave., NW
Ste. 1000
Washington DC 20036

Counsel to Iridium Constellation LLC

/s/

Bradley Bourne