

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
O3b Limited) File No. SAT-AMD-20171109-00154
) Call Sign: S2935
Amendment to Pending Applications for)
U.S. Market Access for the)
O3b Medium Earth Orbit Satellite System)

**O3B LIMITED OPPOSITION TO PETITION TO DENY
OR REMOVE FROM PROCESSING ROUND**

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SUMMARY

The Commission should expeditiously grant O3b's pending applications to expand its NGSO network and dismiss or deny Iridium's objections to O3b's most recent amendment. That amendment made minor changes to O3b's prior proposals for operations in Ka-band frequencies, including adding an MSS designation in the 19.7-20.2 GHz and 29.5-30 GHz bands and specifying use of the 29.1-29.5 GHz and 19.3-19.7 GHz bands for MSS feeder links. Iridium's only legitimate interest arises because it uses a limited portion of the MSS feeder link bands, 29.1-29.3 GHz and 19.4-19.6 GHz. O3b has committed to coordinate with Iridium as required to ensure effective sharing of this spectrum. Iridium does not question the effectiveness of these measures or demonstrate that it would be harmed by O3b's proposed operations. As a result, Iridium's attempt to block O3b's access to underutilized feeder link spectrum must be rejected.

The Commission can readily dismiss the arguments in the remainder of Iridium's petition on both procedural and substantive grounds. Iridium has no standing to object to O3b's planned use of the 19.7-20.2 GHz and 29.5-30 GHz bands that Iridium does not utilize or to challenge the status of O3b's filings in NGSO processing rounds in which Iridium is not participating.

In any event, Iridium's claims on these matters are without merit. O3b's proposed MSS operations in the 19.7-20.2 GHz and 29.5-30 GHz bands comply with U.S. and international allocations and are wholly consistent with other authorized uses of those frequencies. As a result, the Commission should authorize O3b's proposed use, including granting any needed waiver of the Ka-band plan.

Moreover, contrary to Iridium's arguments, changing the designation of O3b's planned feeder link operations does not change their operational characteristics or render them any more interfering. Thus, the O3b amendment is minor within the terms of Section 25.116 and does not disqualify O3b's applications from inclusion in the pending NGSO processing rounds.

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O3b Limited (“O3b”) opposes the Petition to Deny or Remove From Processing Round filed by Iridium Constellation LLC¹ with respect to the above-referenced O3b Amendment.² The O3b Amendment made minor changes to pending O3b applications for expansion of the O3b satellite network,³ including adding a mobile-satellite service (“MSS”) designation to O3b’s requested use of the 19.7-20.2 GHz and 29.5-30.0 GHz bands and aligning O3b’s requested use of the 29.1-29.5 GHz and 19.3-19.7 GHz bands to specify the operation of MSS feeder links.⁴ O3b demonstrated that these changes would not increase the potential for interference to other

¹ Iridium Constellation, LLC, Petition to Deny or Remove from Processing Round, IBFS File No. SAT-AMD-20171109-00154 (filed Dec. 26, 2017) (“Iridium Petition”).

² O3b Limited, Call Sign S2935, IBFS File No. SAT-AMD-20171109-00154 (filed Nov. 15, 2017) (the “O3b Amendment”).

³ See Modification Application of O3b Limited, Call Sign S2935, IBFS File No. SAT-MOD-20160624-00060 (June 24, 2016); Amendment of O3b Limited, Call Sign S2935, IBFS File No. SAT-AMD-20161115-00116 (filed Nov. 15, 2016) (the “November 2016 O3b Amendment”); and Amendment of O3b Limited, Call Sign S2935, IBFS File No. SAT-AMD-20170301-00026 (filed March 1, 2017) (collectively, the “Pending O3b Applications”).

⁴ O3b Amendment, Narrative at 5.

authorized frequency users and would serve the public interest.⁵ Under these circumstances, O3b observed that the amendment qualifies as minor and does not affect the status of the Pending O3b Applications with respect to applicable processing round cut-off dates.⁶

The Iridium Petition presents no valid objections to the O3b Amendment and should be denied. As discussed below, Iridium's only legitimate interest in the frequency bands addressed in the O3b Amendment relates to Iridium's use of the 29.1-29.3 GHz and 19.4-19.6 GHz band segments for feeder links for the Iridium MSS system. O3b has shown that it will protect Iridium's operations in these frequencies and has committed to complying with all Commission requirements for coordination with Iridium.

The remaining arguments in the Iridium Petition concern O3b's request to add an MSS designation in the 19.7-20.2 GHz and 29.5-30.0 GHz bands and the status of the Pending O3b Applications in the Commission's NGSO processing rounds. Given that Iridium does not use or propose to use the 19.7-20.2 GHz and 29.5-30.0 GHz bands and is not a participant in the current processing rounds, Iridium has no conceivable interest in these matters. Because the Iridium Petition fails to present any evidence that Iridium would be injured by grant of the O3b Amendment, the filing does not meet the minimum requirements of the Communications Act and Commission rules.⁷

⁵ *Id.*

⁶ *See id.* at 8-9; 47 C.F.R. § 25.116(b) and (c).

⁷ *See* 47 U.S.C. § 309(d)(1) (a petition to deny must "contain specific allegations of fact sufficient to show that the petitioner is a party in interest and that a grant of the application would be prima facie inconsistent with" the public interest, convenience and necessity); 47 C.F.R. § 25.154(a)(4) (same).

To establish standing as a party in interest, a petitioner must allege facts sufficient to demonstrate that grant of the application would cause the petitioner to suffer a direct injury. *See, e.g., Northstar Wireless, LLC, SNR Wireless LicenseCo, LLC, Applications for New Licenses in the 1695-1710 MHz, and 1755-1780 MHz and 2155-2180 MHz Bands*, Memorandum Opinion and

Authorizing O3b to serve the U.S. market using the frequencies described in the Pending O3b Applications as amended will serve the public interest by permitting more intensive use of spectrum and allowing O3b to further expand its proven technology and services in response to customer requirements, employing more advanced technology and with lower costs to customers. The Commission should therefore deny Iridium's Petition and grant the O3b Amendment.

I. O3B'S COMMITMENT TO PROTECTING IRIDIUM'S FEEDER LINKS ADDRESSES IRIDIUM'S SOLE INTEREST IN THE O3B AMENDMENT

The statement of interest included in the Iridium Petition makes clear that the only aspect of the O3b Amendment that could possibly affect Iridium is O3b's proposal to use the 29.1-29.5 GHz and 19.3-19.7 GHz bands, which encompass the 200 MHz segments used by Iridium for feeder links, 29.1-29.3 GHz and 19.4-19.6 GHz.⁸ O3b has recognized Iridium's rights in this spectrum and included in its original request to use these bands a specific description of how it would "rely on geographic separation of earth stations and angular separation between the O3b

Order, 30 FCC Rcd 8887, 8904-05 ¶¶ 38-41 & n. 148 (2015) ("Northstar Wireless MO&O"), *citing Petition for Reconsideration of Various Auction 87 Public Notices, et al.*, Memorandum Opinion and Order, 27 FCC Rcd 4374, 4382 ¶ 21 (WTB MD & ASAD 2012); *AT&T Wireless PCS, Inc.*, Order, 15 FCC Rcd 4587, 4588 ¶ 3 (WTB CWD 2000), *citing Sierra Club v. Morton*, 405 U.S. 727, 73 (1972); *Lawrence N. Brandt*, Memorandum Opinion and Order, 3 FCC Rcd 4082 (CCB DFD 1988).

⁸ Iridium Petition at 3-4. O3b notes that the Iridium Petition is internally inconsistent with respect to the feeder link frequencies Iridium uses, as there is a subsequent statement indicating that:

Iridium's feeder link transmissions are limited to *100 MHz* of spectrum in each direction that it shares with GSO FSS systems and terrestrial stations. All traffic carried on the Iridium system must be routed via this *100 MHz* through a limited number of gateway earth stations in the United States and other countries.

Id. at 6 (emphasis added). O3b assumes that these references to 100 MHz feeder link segments are erroneous.

satellites and Iridium satellites” to ensure Iridium’s authorized operations are protected.⁹ O3b made clear it would take special steps to protect the Iridium Telemetry, Tracking and Command frequencies, as well as committing to coordinating directly with Iridium to ensure that O3b’s operations would be compatible with the Iridium system.¹⁰

The O3b Amendment reiterated that:

O3b has designed its NGSO System to ensure that its NGSO MSS feeder link uplink operations can share the 29.25-29.5 GHz band with GSO FSS and NGSO MSS systems that have been authorized for operation in this band. . . . O3b has designed its system to comply with the feeder link earth station siting and coordination requirements of Sections 25.257 and 25.258 of the Commission’s rules.¹¹

The Iridium Petition does not even mention – much less challenge – O3b’s showing on this point. Instead, Iridium alleges that it “may need to add gateway earth station locations”¹² to support its next-generation system and claims that allowing O3b access to the frequencies used by Iridium “unquestionably would complicate Iridium efforts to add gateway earth stations.”¹³

In other words, Iridium is asking the Commission to deny O3b’s request to use spectrum not based on a concrete, identified interference risk but simply to avoid placing any constraint on Iridium’s ability to site future earth stations that it “may” – or may not – need. And the Iridium Petition specifically asks the Commission to deny O3b access not just to the 29.1-29.3 GHz and

⁹ See November 2016 O3b Amendment, Technical Annex at 22.

¹⁰ *Id.* at 23.

¹¹ O3b Amendment at 5.

¹² Iridium Petition at 6.

¹³ *Id.* at 7.

19.4-19.6 GHz band segments used for Iridium feeder links, but to the entire 29.1-29.5 GHz and 19.3-19.7 GHz bands.¹⁴

The Commission must reject Iridium’s attempt to interpose itself as a gatekeeper for NGSO MSS feeder link spectrum. O3b’s proposed operations would serve the public interest and ensure more intensive use of the 29.1-29.5 GHz and 19.3-19.7 GHz frequencies, which the Commission has recognized are currently underutilized.¹⁵ Moreover, O3b has made clear that it will comply with the feeder link earth station siting and coordination requirements of Sections 25.257 and 25.258 of the Commission’s rules, and is committed to coordinating its feeder link earth station operations with Iridium and any other operators. To the extent that Iridium has concerns about the impact of future feeder link sites proposed by O3b, it will have the opportunity to raise those issues as part of coordination discussions as well as in the licensing process for the O3b earth stations.¹⁶ Thus, Iridium states no reasonable grounds to deny O3b’s ability to use the 29.1-29.5 GHz and 19.3-19.7 GHz bands for feeder link operations.

II. IRIDIUM’S REMAINING ARGUMENTS ARE BASELESS

The Commission need not address the remaining claims in the Iridium Petition, as none of the other matters discussed in the document have any possible effect on Iridium. Because

¹⁴ *Id.* at 5.

¹⁵ *See Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking (rel. Sept. 27, 2017) (the “NGSO Order”) at ¶ 17. Indeed, in order to allow greater use of this spectrum, the Commission revised the allocations in these bands to permit additional GSO FSS and NGSO FSS operations. *See id.* at ¶¶ 19-21.

¹⁶ In fact, the precedent that Iridium cites regarding the Commission’s commitment to considering the “aggregate effect on Iridium” of operations in the MSS feeder link bands involved an application by Inmarsat for a new earth station. Iridium Petition at 6 & nn. 7-8, citing *Inmarsat Mobile Networks, Inc., Application to Operate a Fixed-Satellite Service Gateway Earth Station Facility in Lino Lakes, Minnesota with the Inmarsat-5 F2 Space Station*, Order and Authorization and Declaratory Ruling, 30 FCC Rcd 2770 (IB and OET 2015).

Iridium neither uses nor is seeking to use the 19.7-20.2 GHz and 29.5-30.0 GHz bands, O3b's proposal to add an MSS designation in that spectrum is in no way relevant to Iridium's operations. Similarly, Iridium is not a processing round participant and therefore does not have a legitimate interest in whether the O3b Amendment is viewed as major or minor under the processing round rules. Consistent with Commission precedent, these claims in the Iridium Petition can simply be dismissed for lack of standing.¹⁷

Even if the Commission does consider these portions of the Iridium Petition, there is no merit to the Iridium claims. O3b's proposed operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands are consistent with Commission policies. Moreover, O3b has demonstrated that its amendment qualifies as minor under Section 25.116.

A. O3b's Proposed MSS Operations in the 19.7-20.2 GHz and 29.5-30.0 GHz Bands Are Compatible with Other Uses of that Spectrum

The O3b Amendment adds an MSS designation to O3b's original proposal for fixed-satellite service ("FSS") use of the 19.7-20.2 GHz and 29.5-30.0 GHz bands. O3b explained in its filing that adding this service designation:

does not change the characteristics already described in O3b's applications for the FSS. The addition of the MSS designation will therefore not increase interference and will serve the public interest.¹⁸

Iridium, the only party to object to the O3b Amendment, argues that O3b's request to add an MSS designation to the 19.7-20.2 GHz and 29.5-30.0 GHz bands is inconsistent with the

¹⁷ See Northstar Wireless MO&O, 30 FCC Rcd at 8904-05, ¶¶ 38-41 (dismissing for lack of standing the Petitions to Deny of parties that did not participate in competitive bidding for licenses).

¹⁸ O3b Amendment, Narrative at 5.

Commission's Ka band plan, which permits only FSS operations in these frequency segments.¹⁹ Iridium, however, is unaffected by any change in O3b's planned use of the 19.7-20.2 GHz and 29.5-30.0 GHz bands as Iridium itself does not operate or seek to operate in that spectrum. Instead, Iridium's arguments with respect to the 19.7-20.2 GHz and 29.5-30.0 GHz bands are a pretext for challenging O3b's operations in the 29.1-29.3 GHz and 19.4-19.6 GHz frequencies Iridium uses for feeder links. As discussed above, Iridium's attempts to prevent O3b from using these feeder link bands are based on wholly speculative claims and are inconsistent with the public interest in robust spectrum use.

Iridium does not present any technical obstacle to O3b's proposed MSS operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands, and no party authorized to use these bands for FSS has raised a concern regarding O3b's planned MSS use. Adding an MSS designation in the 19.7-20.2 GHz and 29.5-30.0 GHz bands is fully consistent with the U.S. Table of Frequency Allocations and the corresponding international allocations table, each of which permits both FSS and MSS operations in these bands.²⁰ The O3b system relies on facilities in the United States to support its global operations and therefore must rely on access to spectrum that is harmonized internationally.

Moreover, the O3b proposal mirrors The Boeing Company's ("Boeing") application in this processing round, which seeks to provide NGSO MSS in these bands. Notably, Iridium did not oppose Boeing's application for an MSS designation in these same frequencies – instead Iridium simply argued that Boeing should be required to coordinate with Iridium in the 29.1-

¹⁹ Iridium Petition at 4.

²⁰ See 47 C.F.R. § 2.106.

29.3 GHz and 19.4-19.6 GHz feeder link bands.²¹ Again, O3b is also committed to coordinating with Iridium and has shown that its operations will be compatible with Iridium's feeder link operations.

In short, O3b's planned MSS operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands will adversely affect neither Iridium nor any party that uses that spectrum for FSS and will conform to domestic and international spectrum allocations. Under these circumstances, the Commission should permit the spectrum use proposed in the O3b Amendment, including granting any necessary waiver of the Ka-band plan. A waiver of the Ka-band plan is in the public interest because it will permit O3b to offer MSS service under the same technical framework as its previously proposed FSS operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands, without increasing the potential for interference. As O3b previously noted, its Amendment did not change the technical characteristics of the operations described in O3b's FSS applications, and the MSS designation will therefore not increase interference.

The Commission has allowed operations inconsistent with the Table of Allocations "when there is little potential for interference into any service authorized under the Table of Frequency Allocations and when the non-conforming operator accepts any interference from authorized services."²² Here, no waiver of the Table of Allocations is required, but the Commission can apply the same standard to waive the Ka-band plan designations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands as needed. O3b has already demonstrated that its initially proposed use of these spectrum segments for NGSO FSS will not interfere with authorized

²¹ Application for Authority to Launch and Operate a Ka-band Non-Geostationary Satellite Orbit System in the Fixed-Satellite Service and in the Mobile Satellite Service of The Boeing Company, IBFS File No. SAT-LOA-20161115-00109 (filed Nov. 15, 2016); Comments of Iridium Constellation, LLC, IBFS File No. SAT-LOA-20161115-00109 (filed June 26, 2017).

²² *The Boeing Company*, 16 FCC Rcd 22645 (IB & OET 2001) at 22651 & n.48 (citing cases).

geostationary operations in the frequencies and is committed to coordination with NGSO operations in accordance with Commission rules.²³ Because adding an MSS designation does not change the O3b system's planned operating characteristics, this showing is sufficient to warrant waiving the Ka-band plan if needed to allow O3b to use these bands for MSS.

Finally, even if the Commission were to decide not to permit O3b to add an MSS designation for U.S. operations in the 19.7-20.2 GHz and 29.5-30.0 GHz bands, that should not control whether O3b receives authority to use the 29.1-29.5 GHz and 19.3-19.7 GHz bands, as MSS feeder links should not be dependent on a corresponding MSS designation in the United States. Like Iridium, O3b will use its U.S. earth stations to support international MSS operations. O3b operates a number of U.S. earth stations which receive and route traffic from MSS customer operations in Central America and the Caribbean. Thus, grant of Commission authority for O3b to use spectrum designated for MSS feeder links is consistent with the operational requirements of the global O3b network, regardless of whether the Commission also permits O3b to provide MSS in the 19.7-20.2 GHz and 29.5-30.0 GHz bands in the U.S. As discussed above, barring O3b's planned feeder link operations simply to avoid "complicating" Iridium's ability to add future earth stations that it may never need would be contrary to the public interest and to the Commission's commitment to robust and efficient use of spectrum.

B. The O3b Amendment Is Minor Under Section 25.116

As discussed in the O3b Amendment, the changes in frequency designations set forth in the amendment qualify as minor and should not affect the processing status of the Pending O3b Applications under Section 25.116 of the Commission's rules.²⁴ In particular, none of the

²³ See November 2016 O3b Amendment, Legal Narrative at 9; Technical Annex at 2-3 and 13-19.

²⁴ O3b Amendment, Narrative at 8-9.

changes set forth in the amendment comes within the categories described in Section 25.116(b), which provides that an amendment is major if it “increases the potential for interference,” “changes the proposed frequencies or orbital locations to be used,” “would convert the proposal into an action that may have a significant environmental effect,” or is otherwise determined to be substantial by the Commission.²⁵

Iridium ignores the discussion of this issue in the O3b Amendment and simply asserts that changing the designation from a non-conforming use to a primary use would somehow increase the potential for interference.²⁶ Again, however, the change in service designation and associated priority has no effect on the technical operating characteristics, which will remain exactly the same as previously described in the Pending O3b Applications. Iridium cites no precedent to support its novel claim that a simple change in operating rights should be viewed as equivalent to a change in operating characteristics that would increase the risk of harmful interference. Iridium’s attempt to equate these two very different concepts must be rejected. By any reasonable reading of the phrase, the frequency designation changes described in the O3b Amendment do not “increase[] the potential for interference” within the meaning of Section 25.116(b).

Moreover, even to the extent the Commission disagrees with O3b’s interpretation of the rule provisions, the O3b Amendment also includes a request for any necessary waiver of Section 25.116 to allow the Pending O3b Applications to retain their current status in the Commission’s processing rounds.²⁷ Specifically, O3b explained:

²⁵ 47 C.F.R. § 25.116(b).

²⁶ Iridium Petition at 8.

²⁷ O3b Amendment, Narrative at 8.

There is no reason that the changes specified herein should retroactively disqualify O3b from having its Ka-band spectrum requests considered as part of the Ku/Ka-band processing round or from having its V-band proposal considered as part of the V-band processing round. The changes described in this amendment do not significantly alter the characteristics of the operations O3b proposes as set forth in the Pending O3b Applications. Nor would allowing the Pending O3b Applications to maintain their status in the processing rounds prejudice any of the parties that filed applications in the processing rounds.²⁸

Iridium does not dispute O3b's showing that a waiver of Section 25.116(c) is warranted if necessary. Furthermore, as discussed above, Iridium is not even a processing round participant and therefore lacks standing to object to matters relating to the application of Commission rules intended to protect the applicants in a processing round. Under these circumstances, the Commission should conclude that the submission of the O3b Amendment does not alter the Pending O3b Applications' eligibility to be considered in the relevant processing rounds for Ka-band and V-band frequencies.

III. CONCLUSION

For the foregoing reasons, the Commission should deny the Iridium Petition and grant the Pending O3b Applications as revised and updated by the O3b Amendment.

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²⁸ *Id.*

CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of January, 2018, I caused to be served a true copy of the foregoing “O3B LIMITED OPPOSITION TO PETITION TO DENY OR REMOVE FROM PROCESSING ROUND” by first class mail, postage prepaid, upon the following:

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