

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Intelsat Inflight Licenses LLC) File No. SES-LIC-20201006-01096
) Call Sign: E202171
Application for Blanket License to Operate)
Ka-Band Transmit/Receive Earth Stations)
Aboard Aircraft)

PETITION TO DEFER OF O3B LIMITED

O3b Limited (“O3b”) submits these comments on the above referenced application in which Intelsat Inflight Licenses LLC (“Intelsat”) seeks blanket authority to operate earth stations aboard aircraft (“ESAA”) terminals with geostationary orbit (“GSO”), Fixed-Satellite Service (“FSS”) spacecraft in the 28.6-29.1 GHz and 18.8-19.3 GHz frequency bands.¹ O3b has a direct interest in the Intelsat Application because O3b operates an NGSO Ka-band network authorized to serve the United States that relies on this spectrum.²

Non-geostationary orbit (“NGSO”) satellite systems have primary status in the 28.6-29.1 GHz and 18.8-19.3 GHz bands (together, the “NGSO Primary Bands”). The Commission has made clear time and time again its intent to preserve and protect NGSO FSS operations in the NGSO Primary Bands.³ In 2020, the Commission adopted the ESIMs

¹ Intelsat Inflight Licenses LLC, File No. SES-LIC-20201006-01096 (the “Intelsat Application”).

² See *O3b Limited*, Order and Declaratory Ruling, FCC 18-70 (rel. June 6, 2018).

³ “Priority of NGSO FSS systems in [the NGSO Primary Bands] is critical to their growth and operation.” See *Amendment of Parts 2 and 25 of the Commission’s Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed-Satellite Service*, Second Report and Order in IB Docket No. 17-95

Order, finding that it is possible for ESIMs to communicate with GSO FSS satellites in the 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) bands without causing interference to NGSO FSS systems “with a high degree of coordination among operators,” or if “the operators coordinate their operations.”⁴ In its application, Intelsat fails to establish how the proposed operations will protect O3b’s current and future NGSO constellation from harmful interference, or that Intelsat’s proposed ESAA terminals will be able to operate successfully notwithstanding interference from primary NGSO networks. Intelsat’s mere promise to “limit the transmit power from the ESAA terminal to maintain compliance with the FCC masks or other coordinated limits ...[including] the non-GSO mask in §25.218(i)(2)” does not satisfy the Commission’s clear standard.⁵

The concerns O3b raises pertaining to the Intelsat Application are not new. In 2019, O3b raised similar concerns regarding Hughes Network Systems, LLC’s (“HNS”) request for authority to use the 18.8-19.3 GHz and 28.6-29.1 GHz bands.⁶ Unlike the Intelsat Application, HNS described the need to avoid in-line events with NGSO networks and to implement coordination mechanisms to avoid causing harmful interference to authorized NGSO FSS operations in the NGSO Primary Bands.⁷ Similarly, O3b raised concerns

and Report and Order in IB Docket No. 18-315 and Further Notice of Proposed Rulemaking, 35 FCC Rcd 5137 (2020) (“ESIMs Order”) at ¶ 19; *see also 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, 32 FCC Rcd 7809, ¶ 14 (2017) (“[P]reserving the 18.8-19.3 GHz and 28.6-29.1 GHz bands for more intensive use by burgeoning NGSO FSS systems will serve the public interest”).

⁴ ESIMs Order at ¶ 17.

⁵ *See* Intelsat Application, Annex 4 at 3.

⁶ *See* Comments of O3b, File No. SAT-MOD-20190212-00011, filed April 15, 2019 at 2.

⁷ Hughes Network Systems, LLC, File No. SAT-MOD-20190212-00011, Exhibit 1 at 2-3.

regarding ViaSat's application for authority to operate ESIMs using the 28.6-29.1 GHz and 18.8-19.3 GHz bands, communicating with GSO satellites.⁸ O3b's concerns were in regard to the technical showing that Viasat produced. Again, unlike the Intelsat Application, ViaSat supplied a technical analysis attempting to establish its capability to protect NGSO FSS operations.⁹

The Intelsat Application is devoid of technical analysis demonstrating the compatibility of the proposed operations with the existing and future O3b operations in the NGSO Primary Bands, and the Commission must not grant the Intelsat Application until Intelsat produces a satisfactory demonstration. Commission precedent requires evidence that Intelsat's proposal for secondary use of the NGSO Primary Bands is feasible.¹⁰ While Intelsat proposes to avoid interference with NGSO operators by limiting the transmit power of its transmissions, its proposal does not allow the Commission or NGSO operators to fully assess the risk of harmful interference that Intelsat's planned operations pose to current and future NGSO systems. In order to do so, Intelsat should provide NGSO stakeholders, including O3b, with a full technical demonstration that its ESAA terminals will protect O3b and other Ka-band NGSO constellations in the NGSO Primary Bands.

The Commission must continue its policy of maintaining NGSO Primary Bands, which are the only FSS frequencies in which NGSO systems have priority over GSO systems in the United States. NGSO systems need the certainty of anchor bands in which spectrum

⁸ See Petition to Defer of O3b Limited, File No. SES-LIC-20190411-00503, filed Aug. 23, 2019.

⁹ *Id.*, at 1-2; see also ViaSat, Inc., Call Sign E190201, File No. SES-LIC-20190411-00503, Exhibit A at 4, Technical Description at 7, Table 2.

¹⁰ See ESIMs Order at ¶ 18 ("Such co-existence will necessitate a high degree of coordination between the GSO and NGSO systems to ensure interference does not result to NGSO FSS operations and, when authorizing ESIMs to communicate with GSO FSS satellites in these bands, the secondary nature of such communications will need to be fully taken into account.").

access cannot be hindered by other services in order to provide uninterrupted services to its customers. In designing its system, O3b, and other NGSO systems, relied on having access to these frequencies on a primary basis, with protections from harmful interference from GSO operations. Response to the 2020 Ka-Band NGSO Processing Round indicates the strong interest in establishing new, and advancing current, NGSO systems. It is critical that the Commission require that prospective GSO users sufficiently demonstrate and ensure that their operations in the NGSO Primary Bands will adequately protect both existing and future NGSO operators from harmful interference.

In the instant case, Commission insistence on a robust compatibility showing that is verifiable by NGSO stakeholders is particularly important given that Intelsat is seeking a blanket license for numerous ESAA terminals that will operate in the NGSO Primary Bands. Grant of this application could heighten interference risks and magnify the difficulty of addressing interference events if they arise. Additionally, Intelsat and other prospective GSO users must show that their terminals can operate successfully in those instances in which access to the NGSO Primary Bands is not available. Intelsat should explain whether the spectrum outside the NGSO Primary Bands that will be available to its proposed terminals will be sufficient to sustain the planned operations if use of the NGSO bands must be terminated at any time to protect NGSO networks.¹¹

In short, the Intelsat Application fails to demonstrate that its proposed non-conforming use of the 18.8-19.3 GHz and 28.6-29.1 GHz bands will be compatible with

¹¹ See, e.g., Hughes Network Systems, LLC, Call Sign S2753, SAT-LOI-20091110-00119, Narrative at 10 (supporting request for access to the NGSO Primary Bands for the SPACEWAY 4 satellite by representing that there “will be sufficient additional spectrum on SPACEWAY 4 to allow Hughes to dynamically shift operations out of the NGSO spectrum for the duration of any in-line events”).

current and future NGSO use of these frequencies. The Commission should not further consider the Intelsat Application until these deficiencies are corrected.

Respectfully submitted,

O3B LIMITED

By: /s/ Suzanne Malloy

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February 12, 2021

AFFIDAVIT

1. I am Vice President, Regulatory for O3b Limited.
2. I have reviewed the foregoing Petition to Defer of O3b Limited. All statements made therein are true and correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.

By: /s/ Suzanne Malloy

Date: February 12, 2021

CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of February, 2021, I caused to be served a true and correct copy of the foregoing “Petition to Defer Of O3b Limited” on the following:

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/s/ _____
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