

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
New Spectrum Satellite, Ltd)	File No. SAT-PDR-20170726-00111
)	Call Sign S3019
Petition for Declaratory Ruling Seeking U.S.)	
Market Access for the New Satellite Spectrum, Ltd.)	
Non-Geostationary Satellite System)	

PETITION TO DISMISS OR DEFER OF SES AMERICOM, INC. AND O3B LIMITED

SES Americom, Inc. (“SES Americom”) and O3b Limited (“O3b,” and collectively, “SES”) request that the Commission dismiss, or at a minimum, defer consideration of, the above-referenced request by New Satellite Spectrum, Ltd. (“NSS”) for U.S. market access for its proposed non-geostationary satellite orbit (“NGSO”) system.¹ SES has a direct interest in the NSS Application because NSS seeks authority for an NGSO system (the “NSS System”) that will operate in portions of the Ku- and Ka-band spectrum currently used by SES geostationary orbit (“GSO”) satellites and by the O3b NGSO constellation, and the proposed NSS satellites would also transit through O3b’s orbital altitude.

Defects in the NSS Application require the Commission to dismiss it, as NSS has not satisfied the core requirements for a market access request. In particular, NSS has wholly failed to demonstrate how it will protect the O3b constellation’s spectrum use or orbital flight path – in fact, the application makes no mention of O3b’s existing, Commission-authorized operations at all. These omissions are fatal to the NSS Application – the Commission cannot permit a new applicant to endanger existing services by the O3b network to U.S. users. At a minimum, the

¹ New Satellite Spectrum, Ltd., Call Sign S3019, File No. SAT-PDR-20170726-00111 (the “NSS Application”).

Commission must defer any further consideration of the NSS Application until such time as NSS supplies additional information to remedy the multiple deficiencies in its pending request.

INTRODUCTION

In recent years, the Commission has undertaken great effort and dedicated a tremendous amount of time and resources to crafting rules and policy that will allow the U.S. to benefit from current and next-generation NGSO satellite constellations. Notably, the Commission has emphasized the importance of ensuring that NGSO processing round applicants have the regulatory certainty and access to spectrum necessary to justify the expenses associated with deploying these satellite systems.²

The NSS Application directly conflicts with these Commission objectives. NSS seeks U.S. market access for a new NGSO constellation that would employ frequency bands used by in-orbit NGSO and GSO systems, including those operated by SES, and which are authorized for use by a number of future NGSO and GSO spacecraft as well. But NSS has not supplied a sufficient showing of its ability to co-exist with these systems. In particular, the NSS Application is devoid of any analysis regarding how NSS will protect either the existing O3b Ka-band operations or those of other Commission-sanctioned NGSO Fixed-Satellite Service (“FSS”) networks.

The NSS Application is defective in two major ways. First, NSS proposes a non-conforming use of the 17.8-18.3 GHz band but has not adequately demonstrated that it can successfully operate in this band on an unprotected basis and without causing interference to O3b or other NGSO or GSO FSS networks authorized to use this spectrum. Second, NSS has failed to

² *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 (2017) (“NGSO Order”) at 7829, ¶ 61.

show how it will manage the physical operations of its satellites to limit the potential for collisions with O3b spacecraft. These flaws render the NSS Application incomplete and ineligible for grant.

At the very least, the Commission must suspend further processing of the NSS Application pending submission of additional information. Specifically, the Commission should mandate that NSS supply a concrete analysis of its compatibility with conforming FSS operations in the 17.8-18.3 GHz spectrum and NSS's ability to mitigate any collision threat to the O3b constellation.

I. BECAUSE NSS HAS NOT DEMONSTRATED HOW IT WILL PROTECT O3B OR OTHER FSS SYSTEMS, ITS APPLICATION MUST BE DISMISSED

The Commission's rules require the dismissal of any application that fails to provide required informational showings.³ Because NSS has not shown how the NSS System could operate without causing harmful interference to O3b or other authorized FSS networks or how it would manage the positioning of its spacecraft to avoid the O3b NGSO constellation, its application should be dismissed as defective.

A. NSS Failed to Show that its Non-Conforming Use of the 17.8-18.3 GHz Band Would Protect Incumbent O3b Operations and Other FSS Systems in the Band

The NSS Application's proposal to use the 17.8-18.3 GHz frequencies for uplinks from gateway earth stations to its planned NGSO fleet⁴ conflicts with the U.S. Table of Allocations and the Commission's Ka-band plan. In last year's NGSO Order, the Commission added a new FSS allocation for GSO and NGSO networks in this band segment on a secondary basis to

³ 47 C.F.R. § 25.112(a)(1).

⁴ NSS Application, Narrative at viii, 27.

terrestrial fixed service operations, but specified that FSS use was to be in the space-to-Earth direction.⁵

The NSS Application did not mention the non-conforming status of its proposed use of the 17.8-18.3 GHz band nor provide any explanation of how NSS would share this spectrum with O3b and other authorized users. NSS argued that it could not provide any meaningful NGSO-to-NGSO sharing analysis, alleging that “given the uncertainty as to how many or which of the proposed systems will be authorized and launched, any attempt to speculate on the details of such sharing would be premature at this point in time.”⁶ That excuse clearly does not apply to O3b, however, which has an operating system that uses the 17.8-18.3 GHz frequencies today.⁷

A letter from the International Bureau staff highlighted the issue of NSS’s proposed non-conforming spectrum use, instructing NSS to clarify whether it was seeking U.S. market access for uplinks using the 17.8-18.3 GHz band and requiring that:

If NSS seeks a waiver of the U.S. Table of Frequency Allocations it must provide justification for such a waiver, demonstrate good cause, and must further clarify how it will avoid interference to both terrestrial and space-to-Earth FSS operations in the band.⁸

The NSS response to the IB Letter on this point does not come close to satisfying this mandate. Instead, NSS merely asserted that “no interference is expected to and from other licensed systems operating in the Space-to-Earth direction” and that NSS would “as needed,

⁵ NGSO Order, 32 FCC Rcd at 7840, 7850. The change to the U.S. Table of Allocations is codified in 47 C.F.R. § 2.106.

⁶ NSS Application, Narrative at 72.

⁷ See generally *O3b Limited*, Order and Declaratory Ruling, FCC-18-70 (rel. June 6, 2018) at ¶ 2.

⁸ Letter from Jose P. Albuquerque, Chief, Satellite Division, International Bureau, to David Castiel, Virtual Geosatellite LLC, Call Sign S3019, File No. SAT-PDR-20170726-00111, dated June 14, 2018 (“IB Letter”) at 3.

employ sites furnishing adequate separation and terrain shielding from any known or projected sites using this band in a downlink direction.” These statements are patently inadequate. As a non-conforming user, NSS would be required to protect not only “known or projected sites” but *any* future FSS downlink earth stations using this spectrum. Yet NSS does not explain how it would successfully operate its gateway uplinks given these constraints. Nor does NSS address its ability to withstand interference from existing and future NGSO and GSO FSS satellites using this band segment on a conforming basis for downlink transmissions.

Commission decisions make clear that waivers of the Table of Allocations can be granted when the applicant demonstrates that there is little potential for interference into any service authorized under the U.S. Table of Frequency Allocations and when the non-conforming operator accepts any interference from authorized services.⁹ NSS has done neither, failing to provide any substantive showing that the potential for interference to O3b and other authorized users is limited or to acknowledge the requirement that it accept interference from authorized FSS operations in the band. Because NSS has ignored the dictates of the IB Letter and the requirements of Commission precedent, its application must be dismissed.

B. NSS Has Failed to Demonstrate that the Flight Path of the NSS System Will Protect O3b’s Orbit

NSS disregards the existence of the authorized O3b fleet at other critical points in its application as well. NSS claims to have evaluated the probability of a collision with known and relevant NGSO constellations, defined as: “those operating within the same altitude regime as the Virtual Geo satellites.”¹⁰ This analysis, however, makes no mention of O3b, despite the fact

⁹ See, e.g., *contactMEO Communications, LLC*, Order and Authorization, 21 FCC Rcd 4035, 4044 (IB 2006); see also 47 C.F.R. § 1.3.

¹⁰ NSS Application, Narrative at 97.

that the O3b constellation's altitude of 8,062 kilometers is well within the range NSS has provided for its planned orbit, which has a perigee of 1650 kilometers and an apogee of 26,190 kilometers.¹¹ In contrast, NSS expressly discusses a number of NGSO systems in low-Earth orbits that "operate below the minimum altitude for Virtual Geo satellites and are therefore of no factor, since Virtual Geo satellites never go there."¹²

The Commission cannot sanction NSS's abject failure to perform the required due diligence with respect to the crucial matter of safeguarding the O3b orbit and preventing orbital debris. Instead, this omission presents a second, independent basis for the Commission to dismiss the NSS Application.

II. AT A MINIMUM THE COMMISSION MUST REQUIRE NSS TO SUBMIT SUPPLEMENTAL INFORMATION TO DEMONSTRATE HOW THE NSS SYSTEM WILL PROTECT O3B AND OTHER FSS OPERATIONS

If the Commission declines to dismiss the NSS Application outright, it must at least suspend processing of the application until NSS has made supplemental showings to resolve the defects articulated above.

Specifically, NSS must be required to clearly and convincingly describe how the NSS System will protect the operations of O3b and other existing and future conforming FSS networks in the 17.8-18.3 GHz band and will successfully operate without protection from such authorized networks. This showing must take into account not only existing O3b gateways and earth stations but also future O3b deployments that will have priority access to this spectrum segment over any NSS operations in the band. NSS bears the burden of fully addressing both the

¹¹ *Id.*, Schedule S.

¹² *Id.*, Narrative at 99.

current and future ways that its operations might interfere with O3b and describing the measures NSS will take to prevent such interference and to redress it if it occurs.

NSS must also cure its failure to show whether its proposed operations pose a risk of collision with existing and future authorized O3b spacecraft. The Commission must defer the processing of this application until NSS provides a sufficient demonstration of its ability to safely avoid the O3b orbit. Deferral will not materially adversely affect NSS at this stage of its application and will help resolve the outstanding spectrum and orbital sharing issues raised by the NSS Application.

III. THE COMMISSION SHOULD NOT INITIATE A NEW PROCESSING ROUND FOR THE 13.8-13.85 GHz BAND

The public notice regarding the NSS Application states that the Commission has not determined whether to begin a new processing round for the 13.8-13.85 GHz band and is not inviting new applications for that band segment at this time.¹³ SES urges the Commission to forego beginning yet another NGSO processing round, particularly for such a limited amount of spectrum. The Commission is still completing its actions regarding previous NGSO filings in Ku-, Ka-, and V-band spectrum, and there is no indication of significant demand for access to the 13.8-13.85 GHz frequencies. Instead, any grant issued to NSS for the 13.8-13.85 GHz band should be conditioned on a requirement that NSS not preclude future NGSO entrants in this spectrum.

¹³ Satellite Policy Branch, Space Station Applications Accepted for Filing, Report No. SAT-01351 (Oct. 12, 2018).

IV. CONCLUSION

Because the NSS Application lacks critical information regarding how NSS would protect the operations of O3b and other FSS networks, the Commission should dismiss the application or at least defer further processing until NSS has cured these deficiencies.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of November, 2018, I caused a true and correct copy of the foregoing "Petition to Dismiss or Defer of SES Americom, Inc. and O3b Limited" to be sent by first class mail, postage prepaid, to the following:

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