

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

In the Matter of)	
)	IBFS File No. SAT-LOI-
WorldVu Satellites Limited d/b/a OneWeb)	20160428-00041
Petition for Declaratory Ruling Granting)	
Access to the U.S. Market for the OneWeb)	
System)	

REPLY COMMENTS OF LIGADO NETWORKS LLC

The comments filed in this proceeding reflect widespread agreement that the record does not yet provide an adequate basis for concluding that, if the Petition were granted, the Ku-Band operations of other satellite networks would be fully protected. Ligado Networks LLC (“Ligado”) submits these reply comments to support the view that these questions need to be addressed before the Commission could consider the above-referenced Petition for Declaratory Ruling (“Petition”) filed by WorldVu Satellites Limited d/b/a OneWeb (“OneWeb”).

OneWeb seeks U.S. market access for a non-geostationary-orbit (“NGSO”) satellite constellation that would use Ku-Band and Ka-Band frequencies. As the Commission knows, Ligado currently operates three geostationary orbit (“GSO”) spacecrafts. These satellites currently utilize significant portions of the Ku Band for feeder link operations.¹ In addition, Ligado may make similar use of the Ku Band to facilitate the operation of future satellite

¹ See *Mobile Satellite Ventures Subsidiary LLC Application for Authority to Launch and Operate an L-band Mobile-Satellite Service Satellite at 101° W.L.*, 20 FCC Rcd 9752 (2005) (authorizing operation of SkyTerra-1 spacecraft, including in Ku-Band frequencies).

networks serving the United States. For these reasons, Ligado has a keen interest in ensuring that any new NGSO systems authorized through this proceeding and the related processing round do not create an unacceptable risk of interference into GSO operations in the band generally, and Ligado's gateway operations specifically.

Several parties in the initial comments filed in response to the Petition correctly spotlight that OneWeb has not provided technical information sufficient to establish that its system could coexist with other existing and planned networks. For example, SES and O3b point out that the Petition does not adequately explain how OneWeb's proposed network would ensure compliance with applicable equivalent power flux density ("EPFD") limits designed to cabin the risk of harmful interference into the GSO arc, or provide sufficient data to allow third-party verification of OneWeb's claims with respect to such EPFD limits.²

Ligado shares these concerns, particularly given the potential impact the proposed OneWeb system could have on Ligado's operations. In this respect, the Petition does not include any specific discussion of how OneWeb would mitigate potential interference from its proposed system into GSO gateway operations, such as those conducted and planned by Ligado. Absent additional information addressing these key points, Ligado submits that the Commission lacks an adequate basis to determine whether grant of the Petition would serve the public interest.

Ligado also agrees with the comments of ViaSat that the Commission would need to evaluate not only OneWeb's proposed system, but also all of the other applications that have been or will be submitted in this processing round, to ensure Ku-Band systems have the

² See Comments of SES S.A. and O3b Limited, IBFS File No. SAT-LOI-20160428-00041, at 4-5 (Aug. 15, 2016).

protection they need.³ The Commission needs to use this comprehensive process in light of the decision by the Commission to initiate an NGSO-like satellite processing round and invite other parties to submit applications by November 15, 2016.⁴ Because the Petition seeks multiple waivers of Commission rules—including at least one intended to facilitate the Commission’s ability to evaluate whether an applicant complies with EFPD limits designed to cabin the risk of harmful interference into the GSO arc—prudence warrants this careful approach.⁵ Moreover, the risk increases if others in this processing round follow OneWeb’s path and seek similar waivers. In short, as ViaSat concludes, “OneWeb’s waiver requests cannot be considered in isolation.”⁶

NGSO systems operate in a complex spectrum environment and must coexist with GSO systems. The challenge of analyzing and managing that environment when dealing with a single NGSO system becomes impossible without complete information about each of the multiple NGSO networks that could be proposed in the Ku Band. Ligado therefore urges the Commission to: (i) require that each applicant in the current processing round, including OneWeb, describe how its proposed network would interact with all licensed Ku-Band GSO

³ See Comments of ViaSat, IBFS File No. SAT-LOI-20160428-00041, at 4-7 (Aug. 15, 2016) (“ViaSat Comments”).

⁴ See *Satellite Policy Branch Information; OneWeb Petition Accepted for Filing; IBFS File No. SAT-LOI-20160428-00041; Cut-Off Established for Additional NGSO-Like Satellite Applications or Petitions for Operations in the 10.7-12.7 GHz, 14.0-14.5 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, 27.5-28.35 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz Bands*, Public Notice, DA 16-804 (July 15, 2016) (“Public Notice”).

⁵ See ViaSat Comments at 6-8 (discussing OneWeb’s request for waiver of Section 25.146(a)).

⁶ *Id.* at 2.

networks; and (ii) provide interested parties the opportunity to comment on those showings after the close of the processing round.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Gerard J. Waldron, hereby certify that on this 1st day of September, 2016, I served a true copy of the foregoing Reply Comments of Ligado Networks LLC via first-class mail upon the following:

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