

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of	)	
	)	
Theia Holdings A, Inc.	)	SAT-AMD-20170301-00029
	)	Call Sign S2986
Application for Authority to Launch and	)	
Operate a Non-Geostationary Satellite Orbit	)	
System in the Fixed-Satellite Service, Mobile-	)	
Satellite Service, and Earth Exploration	)	
Satellite Service	)	

**CONSOLIDATED REPLY COMMENTS**

Theia Holdings A, Inc. (“Theia”) hereby submits this Consolidated Reply Comments in response to the comments filed by Hughes Network Systems, LLC (“Hughes”), SES S.A. and O3b Limited (together “O3b”), Space Exploration Holdings, LLC (“SpaceX”), Telesat Canada (“Telesat”), and ViaSat, Inc. (“ViaSat”) (collectively, such filings the “Comments”) with respect to the above-referenced amendment application.<sup>1</sup> In the amendment application, Theia seeks authority to add V-band frequencies to its underlying application<sup>2</sup> for a global remote sensing and satellite communications system in order to enhance the performance and flexibility of its proposed system.<sup>3</sup>

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<sup>1</sup> Comments of Hughes Network Systems, LLC (July 17, 2017) (“Hughes Comments”); Comments of SES/O3b (July 17, 2017) (“O3b Comments”); Comments of Space Exploration Holdings, LLC (July 17, 2017) (“SpaceX Comments”); Comments of Telesat Canada (July 17, 2017) (“Telesat Comments”); Comments of ViaSat, Inc. (July 17, 2017) (“ViaSat Comments”).

<sup>2</sup> See Application of Theia Holdings A, Inc., File No. SAT-LOA-20161115-00121 (filed Nov. 15, 2016).

<sup>3</sup> See Application of Theia Holdings A, Inc., File No. SAT-AMD-20170301-00029 (filed March 1, 2017) (“Amendment Application”); see also Public Notice, Report No. SAT-01245 (June 16, 2017).

No commenter requests that the amendment application be denied. Instead, the commenters raise interference and spectrum sharing issues applicable generally to all parties with V-band spectrum interests.<sup>4</sup> Such issues are more appropriately addressed in rulemaking proceedings, as the commenters concede.<sup>5</sup> Theia does not object to grant of its amended application subject to a condition requiring compliance with technical standards adopted in an appropriate FCC rulemaking proceeding.<sup>6</sup> Such action would be consistent with the Commission's recent decision granting OneWeb's market access request prior to the resolution of related spectrum sharing and interference issues in a pending rulemaking proceeding.<sup>7</sup>

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<sup>4</sup> See, e.g., SpaceX Comments at 1 (“[I]t is time for the Commission to set expectations for spectrum sharing among all users of the band.”); Telesat Comments at 2 (the purpose of Telesat’s comments are to address the “potential for the satellites systems to interfere with Telesat’s planned V-band NGSO operations and the need to condition grant . . . on the development of appropriate V-band spectrum sharing rules”); Hughes Comments at 2 (“Hughes urges the Commission to take action to ensure meaningful spectrum sharing between future GSO and NGSO operations.”).

<sup>5</sup> See, e.g., Hughes Comments at 2 (“[T]he Commission should condition any grant of the Applications upon compliance with any applicable EPFD or technical limits that may be adopted by the Commission or ITU in the future.”); ViaSat at 8 (“[G]rant of an Application [should] be explicitly conditioned upon outcome of the pending NGSO rulemaking proceeding, and any future proceeding that may specifically address V-band NGSO operations or sharing issues.”); Telesat Comments at 3 (“Grants of the above-captioned applications/petitions should be conditioned on the outcome of the expanded or new proceeding.”).

<sup>6</sup> As explained in the amendment application, coordination in the V-band frequencies between and among GSO systems and NGSO systems can be readily accomplished. See Amendment Application, Technical Narrative, at 17-18. For GSO-NGSO interference, the primary interference avoidance mechanism anticipated is GSO-arc avoidance. For NGSO-NGSO interference, the procedures in the Commission’s rules for the avoidance of in-line interference can be applied, as supported by O3b. See O3b Comments at 5-6 (“[T]he Commission should also consider including V-band spectrum in Section 25.261 in order to facilitate NGSO-to-NGSO sharing in V-band frequencies.”). Theia reserves the right to contribute to, or oppose, rules which may be adopted in a rulemaking proceeding.

<sup>7</sup> See, e.g., *In the Matter of WorldVu’s Satellite Limited, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, FCC 17-77 ¶ 5 (June 23, 2017) (deferring matters of general applicability to ongoing or

Accordingly, there is no basis to delay processing of this amendment application,<sup>8</sup> and Theia asks that the FCC act expeditiously.<sup>9</sup>

Respectfully submitted,

/s/ Joseph D. Fagnoli

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Dated: August 1, 2017

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potential future rulemaking proceedings and concluding that granting market access request prior to the conclusion of any such proceeding was not premature).

<sup>8</sup> With respect to SpaceX's question regarding Theia's waiver request of the PFD limits specified in 47 C.F.R. § 25.208(r)(1) (*see* SpaceX Comments at 15-16), Theia reiterates that it seeks authority to exceed the PFD limits specified in 25.208(r)(1) during limited periods of operation during rain fades. *See* Amendment Application, Technical Narrative, at 21. During such periods, Theia will meet the worst-case PFD limits specified in 25.208(r)(2).

<sup>9</sup> Theia's underlying license application remains pending. *Cut-Off Established for Additional NGSO-Like Satellite Applications or Petitions for Operations in the 12.75-13.25 GHz, 13.85-14.0 GHz, 18.6-18.8 GHz, 19.3-20.2 GHz, and 29.1-29.5 GHz Bands*, Public Notice, 3 FCC Rcd 4180 (IB May 26, 2017).

## Technical Certification

I, Joseph D. Fagnoli, hereby certify that I am the technically qualified person responsible for the preparation of the technical information contained in the above Consolidated Reply Comments, that I am familiar with Part 25 of the Commission's Rules (47 C.F.R. Part 25), and that I have either prepared or reviewed the technical information submitted in this filing and found it to be complete and accurate to the best of my knowledge and belief.

/s/Joseph D. Fagnoli  
Joseph D. Fagnoli  
Chief Technology Officer  
Theia Holdings A, Inc.

August 1, 2017

## CERTIFICATE OF SERVICE

I, Joseph D. Fagnoli, hereby certify that on August 1, 2017, a true and correct copy of this Consolidated Reply Comments was sent by United States mail, first-class postage prepaid, to the following:

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