

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Theia Holdings A, Inc.) File No. SAT-LOA-20161115-00121
)
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)

PETITION TO DENY

In the above-captioned “Application,” Theia Holdings A, Inc. (“Theia”) seeks a license for a planned non-geostationary satellite orbit (“NGSO”) satellite system.¹

Telesat Canada (“Telesat”) files this Petition to Deny for the reasons set out below.

The frequencies proposed by Theia for its operations overlap with the following frequency bands Innovation, Science and Economic Development Canada (“ISED”) has authorized Telesat Canada (“Telesat”) to use for its NGSO network: 17.8-18.6 GHz, 18.8-19.3 GHz, and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30.0 GHz (Earth-to-space) frequency bands.²

Theia’s NGSO system would interfere with Telesat’s NGSO operations because the two systems would operate in overlapping geographical areas on overlapping Ka-

¹ See *Public Notice, Applications Accepted For Filing, 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*, DA 17-524, File No. SAT-LOI-20161115-00121 (May 26, 2017).

² Telesat Approvals in Principle, ISED file 3150-1 (557203 AT) dated June 26, 2015, and ISED file 3150-1 (565832 SS) dated June 26, 2015, for the 27.5 – 29.1, 29.5 – 30, 17.8 – 19.3, and 19.7 – 20.2 GHz bands.

band frequencies. Theia itself acknowledges that in-line interference events will occur between its NGSO system and other NGSO systems.³ Because Theia's NGSO system would interfere with Telesat's NGSO operations, Telesat hereby opposes Theia's Application.⁴

When coordination agreements with other NGSO operators cannot be reached, Theia proposes to fall back upon the default procedures the Commission is reexamining in its rulemaking.⁵ Under these procedures, affected NGSO operators would divide their spectrum equally during in-line interference events.⁶

As demonstrated by Telesat in its filings in connection with the Commission's pending *NGSO NPRM*, however, these mechanisms are unworkable.⁷ No single avoidance angle will address in-line interference events. For any specific interference level, there will be a wide variety of angles that vary based on the ever-changing relative positions of satellites and ground terminals. Relying on these default procedures, therefore, would expose Telesat's operations to harmful interference.

³ See Theia Application, Technical Narrative, at 53-54.

⁴ Telesat is filing this Petition to Deny to preserve its rights. Telesat recognizes that the Commission is still developing rules to address constellations of NGSO-like satellites and has stated that applicants will be given an opportunity to amend their filings to conform to the new requirements. *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, 31 FCC Rcd 13651 (2016) ("*NGSO NPRM*"). Telesat also recognizes that if Theia's application is granted before the Commission's rulemaking is completed, the application likely will be conditioned on the outcome of the rulemaking, as was done with OneWeb's application. See *WorldVu Satellites Limited, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, IBFS File No. SAT-LOI-20160428-00041 (rel. June 23, 2017) ("*OneWeb Grant*"), at ¶¶ 12 and 26. If the rules the Commission adopts or a future Theia amendment resolve Telesat's interference concerns, it will withdraw its objection.

⁵ See Theia Application, Technical Narrative, at 53-54.

⁶ See 47 C.F.R. § 25.261(c).

⁷ See *Comments of Telesat Canada, NGSO NPRM*, at 6-15 (Feb. 27, 2017); *Reply Comments of Telesat Canada, NGSO NPRM*, at 4-12.

In addition, Theia's Application is silent on the subject of ITU priority. Theia states only it is "finalizing NGSO satellite system Advanced Publication and Request for Coordination filings for submission to the International Telecommunication Union ("ITU")."⁸ Theia offers no recognition that the Canadian ITU filings that are associated with Telesat's NGSO system have date priority over future filings to be associated with Theia's system.⁹

In granting OneWeb's NGSO application, the Commission recognized that "[c]ompliance with ITU coordination procedures is a requirement of the ITU Radio Regulations, which hold the force of treaty to which the United States is a party," and that "[s]uch compliance is a typical condition of both U.S. space station licenses and grants of U.S. market access."¹⁰ Based on this requirement, and in response to concerns raised by Telesat, the Commission conditioned the grant of OneWeb's NGSO application on compliance with ITU requirements.¹¹ The same considerations apply here, and so the same condition should apply to any grant of Theia's Application.

In view of the potential for Theia's system to interfere with Telesat's NGSO operations, Theia's Application should not be granted in its present form. At a minimum, any grant should be conditioned on the outcome of the NGSO rulemaking, as the Commission did in granting OneWeb's NGSO application.¹² Finally, in

⁸ Theia Application, Legal Narrative, at 19.

⁹ See COMMSTELLATION network published as CR/C/3313 and CR/C/3313 MOD-2, and CANPOL-2 network published as CR/C/3474 MOD-1.

¹⁰ *OneWeb Grant*, n. 35.

¹¹ *OneWeb Grant*, ¶ 23(a).

¹² *OneWeb Grant*, ¶¶ 12 and 26.

recognition of U.S. treaty obligations, any grant should be conditioned on compliance with ITU requirements.

Respectfully submitted,

TELESAT CANADA

/s/
Elisabeth Neasmith
Director, Spectrum Management and Development
1601 Telesat Court
Ottawa, Ontario
Canada, K1B 5P4
(613) 748-0123

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CERTIFICATE OF SERVICE

I hereby certify that on this 26th day of June, 2017, a copy of the foregoing
Petition to Deny was sent by electronic mail to the following:

Jennifer Richter
jrichter@akingump.com

/s/
Katia Carty