Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
APEX TECHNOLOGY, INC.	)	ELS File No. 1370-EX-CN-2023
	)	
Application for Experimental Authority to Launch and Operate a Non-Geostationary Orbit Satellite in the Space Operation Service and Space Research Service	)	

APPLICATION

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October 23, 2023 (updated)

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APPLICATION

Apex Technology, Inc. ("Apex")[1] requests authority to launch and operate one non-geostationary orbit ("NGSO") experimental satellite, Apex Aries 1, for five years under the FCC Part 5 experimental licensing framework.[2] During this mission, Apex will test satellite functionality. The requested licensing issue date is December 15, 2023 given current launch service provider requirements for the Transporter-10 mission.[3]

I. BACKGROUND

Apex is developing a satellite bus platform and introducing it to the market with its first satellite, Apex Aries 1. This platform will help prove the technology and provide customer confidence in its functionality. The Apex Aries 1 mission will demonstrate functionality for each subsystem and validate satellite performance (*e.g.*, communications, data handling, high accuracy pointing control, etc.).

[1] Apex is a Los Angeles, CA-based company incorporated in Delaware.

[2] *See* 47 C.F.R. § 5.1 *et seq.*

[3] Different licensing issue deadlines may appear in Transporter-10 mission applications at the Commission given staggered integration deadlines for each launch aggregator.

I. MISSION DETAILS

A. Space Segment

Apex Aries 1 is a small satellite built by Apex. It will use commercial-off-the-shelf components. Apex Aries 1 carries cameras for solar array deployment and tumbling verification.

B. Ground Segment

The ground station provider has obtained or is in the process of obtaining the necessary authorizations for communications to and from Apex Aries 1. The sites that will service Apex Aries 1 appear in the Technical Annex.

C. Launch Schedule and Orbital Information

Apex Aries 1 will launch on board a SpaceX Falcon 9 rideshare in Q1 2024 between 525 (+/- 20 km) altitude at a 97.6-degree sun-synchronous inclination with a currently estimated LTDN of 13:00 + 60 minutes.

D. Mission Concept of Operations

The Apex Aries 1 satellite will serve one key mission objective. The goal is to demonstrate the functionality of the Apex-built spacecraft platform, including each subsystem, and validate performance of the satellite (*e.g.*, communications, data handling, high accuracy pointing control, etc.). Communications with the spacecraft are necessary during these demonstrations and functional checkouts. In turn, Apex will collect data to validate its spacecraft design and performance for existing and future customers.

Apex requests a five-year license term because the anticipated operational lifetime of Apex Aries 1 will exceed the standard two-year experimental license term.[4] A 5-year term enables Apex to fully test and collect data that will inform technology development.

II. OTHER MATTERS

A. NOAA Remote Sensing Licensing

The National Oceanic and Atmospheric Administration ("NOAA") requires a license to operate a remote sensing system.[5] Apex received a no license determination and attaches the correspondence to this application.

B. ITU Requirements

When issuing experimental authority, the Commission submits advance publication information ("API") to the International Telecommunication Union ("ITU"). In concert with this application, Apex submits the ITU API and, in an attachment, unconditionally accepts all associated cost recovery responsibilities.

III. CONCLUSION

Apex Aries 1 advances satellite design functionality capabilities. Authorizing this mission, therefore, would serve the public interest.

[4] *See* 47 C.F.R. § 5.71(a)(1) (requiring justification for an experimental license term of more than 2 years).

[5] *See generally* 15 C.F.R. § 960.

Respectfully submitted,

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