SES Government Solutions, Inc. ("SES-GS")
Application for Experimental Special Temporary Authority

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

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(2) Description of why an STA is needed.

SES Government Solutions, Inc. ("SES-GS"), a wholly owned subsidiary of SES S.A. and an affiliate of O3b Limited ("O3b"), provides satellite solutions to U.S. government customers to meet mission critical needs. SES-GS seeks an experimental special temporary authority ("STA") in order to test and demonstrate a terminal communicating with the O3b Ka-band non-geostationary orbit ("NGSO") satellite system.[2]

Specifically, SES-GS requests STA to test and demonstrate the capabilities of a new class of satellite antenna, the GetSat Millisat W terminal, which can support communications on fixed and mobile platforms, including aeronautical and maritime services. SES-GS seeks to demonstrate and assess the use of these antennas to support various applications including disaster response, Intelligence, Surveillance and Reconnaissance technologies, and other applications designed to support U.S. government and non-governmental organizations.

SES-GS proposes to conduct on-the-ground tests of the GetSat Millisat W terminal for fixed operations at a location in San Jose, California. The antenna will communicate with the O3b Ka-band NGSO satellite constellation, transmitting in the 28.363-28.388 GHz frequencies and receiving in the 18.563-18.588 GHz frequencies.

SES-GS has initiated the process of coordinating the transmit frequencies with terrestrial operators.

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[1] Given the ongoing COVID-19 pandemic, SES-GS requests that all correspondence be sent electronically, as physical mail to this address may not be checked regularly.

[2] The FCC has granted market access to the current O3b 20 satellite constellation and authorized the expansion of the constellation to up to 42 satellites. *See O3b Limited*, Order and Declaratory Ruling, 33 FCC Rcd 5508 (2018).

SES-GS certifies pursuant to Sections 25.115(f)(1) and 25.146(a)(2) of the Commission's rules that the operations proposed herein will comply with the equivalent power flux-density ("EPFD") levels in Article 22, Section II, and Resolution 76 of the ITU Radio Regulations to protect geostationary orbit ("GSO") satellites. O3b was previously granted an experimental license for the GetSat Millisat-class terminal, and its application included data demonstrating that the terminal's operations are compliant with the Article 22 EPFD uplink limits,[3] and SES-GS incorporates that showing by reference herein. SES-GS also will not claim protection from interference from GSO FSS networks.

(3) Time and Date of Proposed Operation

SES-GS requests expedited processing to allow testing to begin as early as 24 April 2022; with this start date, testing should be complete by 15 May 2022. The timing is driven by the need to support U.S. government requirements for fixed applications. Specifically, the demonstration will allow assessment of the antenna's capability to operate with the O3b network to provide data relay services that will allow mitigation of a national level, high priority threat scenario.

(4) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable).

The transmitting antenna will operate as a fixed satellite earth station.

(5) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation.

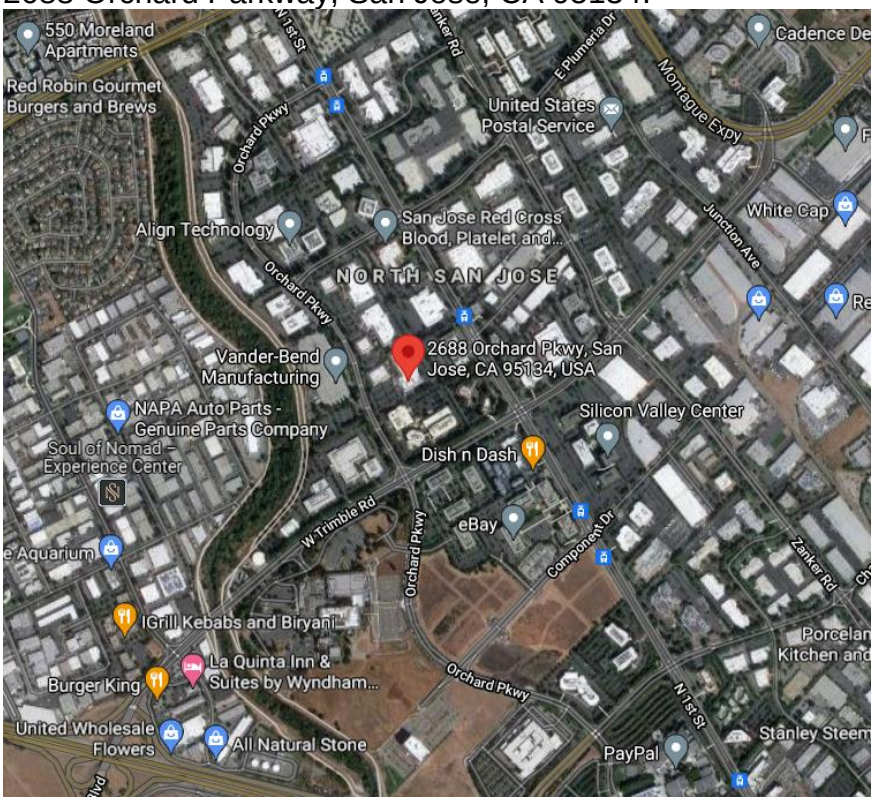
SES-GS will operate the terminal at the location (specified below) in San Jose, CA, in fixed mode. All operations will be conducted at designated coordinates listed below:

1. Fixed testing at 37° 23' 28" N 121° 55' 51" W

A map of the site is provided below.

[3] O3b Limited, Call Sign WL2XNQ, File No. 0008-EX-CN-2021, Annex B, granted Feb. 19, 2021.

2688 Orchard Parkway, San Jose, CA 95134:



(6) Transmit equipment to be used, including name of manufacturer, model, and number of units.

GetSat Millisat W, 1 unit.

(7) Maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

The transmitted power is 25 Watts. The peak ERP is 48.2 dBW.

For all operations, SES-GS will comply with the radiofrequency radiation exposure limits in 47 C.F.R. § 1.1310 and apply the measures recommended in the FCC's OET Bulletin 65 to ensure compliance.

(8) Emission Designator

25M0G7D

(9) Overall height of antenna of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The antenna's overall height is less than 0.15 meters.

(10) Directional Antenna Characteristics

Width of the antenna beam in degrees at the half-power point	Az=1.3º and El=2.25°
Orientation of the antenna in the horizontal plane	Tracking from 140.3° to 176.5° (True)
Orientation of the antenna in the vertical plane	Tracking from 21.2° to 30.5°