

**O3b Networks**  
**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.**

O3b Limited (“O3b”) is a satellite operator with a unique non-geostationary orbit (“NGSO”) satellite system<sup>1</sup> that operates in a medium earth orbit 8,062 km above the earth. O3b is a wholly-owned subsidiary of SES S.A. (“SES”). SES operates a fleet of over 50 geostationary orbit (“GSO”) commercial satellites.

O3b Limited (O3b) is seeking an experimental special temporary authority to test and demonstrate the capabilities of a new class of satellite antenna, the GetSat Millisat terminal, which will eventually support communications on mobile platforms, including aeronautical and maritime services. The GetSat Millisat terminal has the potential to deliver high-throughput, low-latency satellite capacity to mobile platforms, particularly small mobile platforms such as UAVs, and is being developed to help enable critical applications for the U.S. Government.

O3b is requesting special temporary authority to conduct **on-the-ground** tests of the GetSat Millisat for fixed and short-range mobile operations at a potential customer testing facility in Aberdeen, MD. The new terminal will communicate with O3b’s Ka-band NGSO satellite constellation.

**(3) Time and Date of Proposed Operation**

O3b requests temporary authority for 6 months, from March 24, 2020 through September 23, 2020.

O3b will operate the terminals at a customer’s testing facility in Aberdeen, MD in both fixed and mobile mode. All mobile operations will be conducted within a 1-mile radius of the designated coordinates (39° 29' 33.65" N, 76° 8' 56.47" W). O3b seeks to operate one GetSat Millisat terminal at the facility which will communicate with O3b’s NGSO system.

O3b will notify any U.S. authorized co-channel Ka-band satellite operators at least one week prior to any transmit testing, and provide emergency contact information. Although operations will only take place in

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<sup>1</sup> 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, Call Sign S2935, File No. SAT-AMD-20171109-00154 (granted June 4, 2018) (“O3b Market Access Grant”).

NGSO-primary bands, O3b certifies that its operations in Aberdeen will meet the EPFD levels in Table 22-2 of Article 22, Section II, and Resolution 76 of the ITU Radio Regulations in order to protect secondary GSO operations in the band.

O3b certifies that its proposed operations will comply with all existing or future coordination agreements between O3b and other satellite operators and will abide by all the terms and conditions of the O3b Market Access Grant.

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

The transmitting stations will operate in fixed and mobile.

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

O3b will operate the terminals at a potential U.S. government customer testing facility in Aberdeen, MD, within a 1-mile radius of the designated coordinates on the application listed below:

39° 29' 33.65" N, 76° 8' 56.47" W

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

The maximum transmitted EIRP will be 49.3 dBW.

**(7) Emission Designator**

6M00G7D

**(8) 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 overall height of the antenna above ground level is 2 meters.

**O3b Networks**  
**Application for Experimental License Annex A**

- I. Is a directional antenna (other than radar) used? Yes
  - a. If yes, provide the following information
    - i. Width of the beam in degrees at the half power point: Az=1.3 degrees and El= 2.2 degrees
    - ii. Orientation in horizontal plane (degrees): Azimuth from 167.9 – 134.9 degrees
    - iii. Orientation in vertical plane (degrees): Elevation from 27.6 – 16.3 degrees