

Request for Special Temporary Authority

O3b Limited (“O3b”) hereby requests Special Temporary Authority (“STA”) for 45 days, beginning on June 4, 2013, to conduct on-site testing and integration of the gateway earth station in Vernon, Texas (the “Vernon Earth Station”), for which it has filed an application for a Commission license (the “Vernon Application”).¹ The Commission may grant an STA for up to 60 days without placing the request on public notice as long as the applicant “plans to file a request for regular authority for the service.” See 47 C.F.R. § 25.120(b)(3). O3b filed the Vernon Application on January 24, 2013, and that application remains pending at the Commission.

Public Interest Statement. This STA request is similar to STA requests that O3b filed and the Commission granted for testing and integration of O3b’s gateway earth station in Hawaii.² The requested STA will serve the public interest by permitting O3b to conduct antenna pattern verification, RF chain performance verification, as well as other tests of the Vernon Earth Station to establish performance standards and to resolve any issues in preparation for the launch of its NGSO Ka-band service.³ O3b hereby confirms that it will operate the Vernon Earth Station under its requested STA on a non-interference basis only and will cease operations immediately if alerted to any interference events.

Therefore, O3b respectfully requests that the Commission grant this STA request as expeditiously as possible, but in any event on or before June 4, 2013.

¹ See FCC File No. SES-LIC-20130124-00089.

² See FCC File Nos. SES-STA-20120529-00490, SES-STA-20120529-00491.

³ O3b recently provided notification that it has received launch and space operations authority from the administration of the United Kingdom. See Letter from Joseph A. Godles, Counsel to O3b Limited, to Marlene H. Dortch, Secretary, Federal Communications Commission (dated May 7, 2013), in File No. SES-LIC-20100723-00952.

Technical Parameters of Proposed Testing. O3b proposes to test its gateway antennas using the following range of transmit and receive frequencies:

Downlink Frequency	Ka-Band Plan
17.8-18.3 GHz	FS
18.3-18.6 GHz	GSO FSS down
18.8-19.3 GHz	NGSO FSS down
Uplink Frequency	Ka-Band Plan
27.6-28.35 GHz	LMDS fss (secondary)
28.35-28.4 GHz	GSO FSS up ngso fss up (secondary)
28.6-29.1 GHz	NGSO FSS up gso fss up (secondary)

O3b offers the following technical information concerning its proposed operations during the STA period (which is consistent with the information set forth in the Vernon Application where applicable):

1. Maximum Transmit EIRP: 92.17 dBW for all carriers, each antenna.
87.29 dBW for a single carrier.

2. Maximum Transmit EIRP Density: 72.13 dBW/4 kHz.

3. Avoidance of Harmful Interference into the Geostationary Arc during Transmission Tests: O3b's test procedures specify pointing the earth station to 90 degrees elevation, which provides 39.75 degrees of separation from the GSO arc, thereby protecting geostationary satellites.

4. Avoidance of Harmful Interference into Terrestrial Stations During Transmission Tests:

During testing, O3b will not transmit less than 5.1 degrees above the horizon, which in a worst case scenario would yield a maximum EIRP density towards the horizon of only 27.81 dBW/4kHz.⁴ Moreover, a Comsearch frequency coordination report filed with the Vernon Application demonstrates that O3b can transmit in the 28.35-28.4 GHz band without causing harmful interference to LMDS licensees.⁵ Accordingly, operation of the Vernon Earth Station in accordance with the requested STA will not pose a risk of interference to terrestrial stations.

5. Target Satellite for Receive Tests:

Receive testing of the O3b gateways will involve pointing the O3b gateway at the geostationary arc. Viasat-1 will be the primary target for testing the gateway receivers (but other satellites may be used as needed). Viasat also happens to be the vendor of the O3b gateway antennas. O3b claims no protection from interference during receive testing. To be clear, O3b gateways will not be transmitting when pointed at the geostationary arc during receive tests.

6. Protection of Other NGSO Ka-Band Satellite Networks.

O3b is not aware of any other NGSO satellites capable of receiving on O3b's transmit frequencies. O3b will operate on a non-interference basis during testing, and will therefore shut down transmissions in the event of any interference.

⁴ See Vernon Application, Form 312, items E59-60.

⁵ See Vernon Application, Legal Narrative, pp. 4-5.

7. O3b Contacts in the Event of Interference:

Primary: Gary Mattie
(720) 480-9371

Secondary: Brian Mathews
(303) 591-3247

Tertiary: Matt Lucero
(571) 239-3812

Waivers Requested. O3b respectfully requests all necessary waivers of the FCC's Ka-Band Plan, the U.S. Table of Allocations, and the Commission's rules for it to conduct transmission and receive tests of its Vernon Earth Station antennas. Waivers are warranted in the circumstances because they will enable O3b to verify the operation of its Vernon Earth Station antennas and will not cause harmful interference to any other lawfully authorized user of the spectrum.⁶

To summarize, all testing will be conducted on a non-conforming, non-protected, and non-harmful interference basis. Because the O3b NGSO system is not yet launched or operational, transmission tests will not be to any particular satellite. O3b's transmit tests will involve pointing the antennas at a 90 degree elevation, which provides more than 39 degrees of separation from the geostationary arc, thereby protecting any geostationary satellites. O3b is also not aware of any Ka-band NGSO satellites that could be affected during transmit testing, but will shut down in the event of any interference. O3b's receive testing will involve pointing its gateway antennas at a geostationary satellite (primarily ViaSat-1). O3b will claim no protection from interference during receive testing, and no transmissions will take place while O3b is pointed at the geostationary arc.

⁶ The Commission may waive a rule for good cause shown. 47 C.F.R. § 1.3. *See also WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990). A waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the rule. *See Northeast Cellular*, 897 F.2d at 1166. Generally, the Commission may grant a waiver of a rule if the relief requested would not undermine the policy objective of the rule and would otherwise serve the public interest. *See WAIT Radio*, 418 F.2d at 1157.