

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
O3b STA to operate Vernon prior to launch (May 2013) *E100088*

1. Applicant

<b>Name:</b>	O3b Limited	<b>Phone Number:</b>	202 478 7183
<b>DBA Name:</b>		<b>Fax Number:</b>	
<b>Street:</b>	1129 20th St., NW, Suite 1000	<b>E-Mail:</b>	joslyn.read@o3bnetworks.com
<b>City:</b>	Washington	<b>State:</b>	
<b>Country:</b>	USA	<b>Zipcode:</b>	-
<b>Attention:</b>	Ms Joslyn Read		


*45 days "with conditions"*

File # *SES-STA-20130522-00441*

Call Sign *E100088* Grant Date *06/03/2013*  
(or other identifier)

Term Dates  
From *06/04/2013* To: *07/18/2013*

Approved: *M. E. Read*




**GRANTED**  
International Bureau

O3b Limited  
E100088  
SES-STA-20130522-00441  
Special Temporary Authority

O3b limited (O3b) is granted, under the following conditions, Special Temporary Authority for 45 days, from June 4, 2012 to July 18, 2012 to test its Vernon, Texas earth station as described in its application.

- 1) E100088, shall not cause harmful interference to, and shall not claim protection from, interference caused to it by any other lawfully operating station and it shall cease transmission(s) immediately upon notice of such interference.
- 2) Grant of this authorization is without prejudice to any determination that the Commission may make regarding pending O3b application, IBFS File Nos. SES-LIC-20130124-00089.
- 3) Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at O3b's risk.
- 4) This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately.

*45 days*      *"with conditions"*

 <b>GRANTED</b> International Bureau	File # <u>SES-STA-20130522-00441</u>
	Call Sign <u>E100088</u> Grant Date <u>06/03/2013</u> (or other identifier)
	Term Dates From <u>06/04/2013</u> To: <u>07/18/2013</u>
	Approved: <u>Paul E. Blay</u>

**2. Contact**

**Name:** Joseph A. Godles      **Phone Number:** 202-429-4900  
**Company:** Goldberg Godles Wiener & Wright LLP      **Fax Number:** 202-429-4912  
**Street:** 1229 19th St., NW      **E-Mail:** jgodles@g2w2.com  
**City:** Washington      **State:** DC  
**Country:** USA      **Zipcode:** 20036      -2413  
**Attention:**      **Relationship:** Legal Counsel

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number SESLIC2013012400089 or Submission ID

4a. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity     Noncommercial educational licensee

Other (please explain):

4b. Fee Classification    CGX – Fixed Satellite Transmit/Receive Earth Station

5. Type Request

Use Prior to Grant       Change Station Location       Other

6. Requested Use Prior Date  
06/04/2013

7. City Vernon	8. Latitude (dd mm ss.s h) 34 13 4.73 N
9. State TX	10. Longitude (dd mm ss.s h) 99 23 46.53 W
11. Please supply any need attachments. Attachment 1: STA Attachment 2: Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) Applicant herein seeks Special Temporary Authority to permit it to conduct on-site testing and integration of the earth station in Vernon, Texas for which it has sought a Commission license.	
13. By checking Yes, the undersigned certifies that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of &quot;party to the application&quot;; for these purposes.  Yes <input checked="" type="radio"/> No <input type="radio"/>	
14. Name of Person Signing Joslyn Read	15. Title of Person Signing Vice-President, Regulatory Affairs
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

**FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to [PRA@fcc.gov](mailto:PRA@fcc.gov). PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

## 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").<sup>1</sup> 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.<sup>2</sup> 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.<sup>3</sup> 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.

---

<sup>1</sup> *See* FCC File No. SES-LIC-20130124-00089.

<sup>2</sup> *See* FCC File Nos. SES-STA-20120529-00490, SES-STA-20120529-00491.

<sup>3</sup> 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:

<b>Downlink Frequency</b>	<b>Ka-Band Plan</b>
17.8-18.3 GHz	FS
18.3-18.6 GHz	GSO FSS down
18.8-19.3 GHz	NGSO FSS down
<b>Uplink Frequency</b>	<b>Ka-Band Plan</b>
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.<sup>4</sup> 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.<sup>5</sup> 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.

---

<sup>4</sup> See Vernon Application, Form 312, items E59-60.

<sup>5</sup> 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.<sup>6</sup>

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.

---

<sup>6</sup> 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.