

STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
Gateway station, Phase II IOT, extension to 09-30-2010 (June 2010)

1. Applicant

<b>Name:</b>	TerreStar License Inc.	<b>Phone Number:</b>	703-483-7800
<b>DBA Name:</b>		<b>Fax Number:</b>	
<b>Street:</b>	12010 Sunset Hills Road	<b>E-Mail:</b>	doug.brandon@terrestar.com
<b>City:</b>	Reston	<b>State:</b>	VA
<b>Country:</b>	USA	<b>Zipcode:</b>	20190 -
<b>Attention:</b>	Mr Douglas I Brandon		



*With Condition*

File # SES-STA-20100709-00899  
Call Sign E070098 Grant Date 7/14/2010  
(or other identifier)  
Term Dates  
From 7/14/2010 To: 9/30/2010  
Approved: Janette M. Spreng

Attachment

SES-STA-20100709-00899  
E070098

Condition:

All operations shall be on an unprotected and non-harmful interference basis, i.e., TerreStar License Inc. 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.

*With Condition*



File # SES-STA-20100709-00899  
Call Sign E070098 Grant Date 7/14/2010  
(or other identifier)  
Term Dates  
From 7/1/2010 To: 9/30/2010  
Approved: Jeanette D. Spruick

<b>2. Contact</b>	
<b>Name:</b> Joseph A. Godles, Esq.	<b>Phone Number:</b> 202-429-4900
<b>Company:</b> Goldberg Godles Wiener & Wright	<b>Fax Number:</b> 202-429-4912
<b>Street:</b> 1229 19th Street, NW	<b>E-Mail:</b> jgodles@g2w2.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20036 -2413
<b>Attention:</b>	<b>Relationship:</b> 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 SESLIC2007053000732 or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification CGX – Fixed Satellite Transmit/Receive Earth Station	
5. Type Request	
<input type="radio"/> Use Prior to Grant <input type="radio"/> Change Station Location <input checked="" type="radio"/> Other	
6. Requested Use Prior Date 07/01/2010	
7. City North Las Vegas	8. Latitude (dd mm ss.s h) 36 14 9.9 N

9. State NV	10. Longitude (dd mm ss.s h) 115 7 1.3 W
11. Please supply any need attachments. Attachment 1: STA extension                      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.) <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">In accordance with the details of the attached exhibit, Applicant hereby requests a further extension, commencing July 1, 2010, of its Special Temporary Authority, in order to continue conducting Phase II in-orbit testing (IOT) of the TerreStar-1 satellite using its gateway earth station facility licensed under Call Sign E070098. Applicant requests</div>	
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 "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing Douglas I Brandon	15. Title of Person Signing General Counsel and Senior Vice President
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).	

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## **12. Description**

In accordance with the details of the attached exhibit, Applicant hereby requests a further extension, commencing July 1, 2010, of its Special Temporary Authority, in order to continue conducting Phase II in-orbit testing (IOT) of the TerreStar-1 satellite using its gateway earth station facility licensed under Call Sign E070098. Applicant requests that the STA be extended through and including September 30, 2010.

## REQUEST FOR EXTENSION OF SPECIAL TEMPORARY AUTHORITY

Following the successful launch of the TerreStar-1 satellite on July 1, 2009, TerreStar conducted and successfully completed, pursuant to grants of Special Temporary Authority (“STA”), satellite payload In-Orbit-Testing (IOT) activity. Since the third quarter of 2009, also pursuant to STAs, TerreStar has been engaged in “Phase II” SBN-IOT (Satellite Beamforming Network – In-Orbit-Testing) of its Ground Based Beam Forming (GBBF) and other subsystems.<sup>1</sup> TerreStar’s active STAs for SBN-IOT will expire on June 30, 2010.

Due to the complex and ground-breaking nature of the GBBF and satellite base station technologies involved, TerreStar’s SBN-IOT test activities need to be extended beyond June 30. Accordingly, TerreStar is seeking further extension of the STAs until and including September 30, 2010.<sup>2</sup>

The following three facilities will be used to continue SBN-IOT: (1) TerreStar-1, a Canadian-licensed satellite as to which TerreStar holds a letter of intent (“LOI”) authorization (Call Sign S2633) to serve the United States; (2) the 6.3-m and 9.3-m antennas associated with TerreStar’s licensed gateway earth station located in North Las Vegas, Nevada (Call Sign E070098); and (3) an unlicensed 1.8-m mobile earth terminal (“MET”)<sup>3</sup> that is co-located with TerreStar’s North Las Vegas gateway earth station.

A copy of this exhibit accompanies each STA extension request TerreStar is filing in connection with SBN-IOT. The STA request form this exhibit is attached to identifies, for each STA extension request: (1) the time period for which an STA is sought; and (2) the facility for which an STA is sought.<sup>4</sup>

The essence of the continuing SBN-IOT testing activity is described below:

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<sup>1</sup> TerreStar is currently operating under STA’s most recently extended on February 20, 2010, under File Nos. SES-STA-20100208-00166 and SES-STA-20100208-00167. At the time that it submitted those requests for further STA, TerreStar had included an additional further request to cover the operation of its Calibration Earth Station (“CES”) devices. TerreStar has completed the SBN-IOT of its CES units and is thus not concurrently submitting herewith a request to extend authority to operate those.

<sup>2</sup> Comsearch has extended the coordination of the operations to which this STA pertains through the period for which TerreStar is currently seeking extension.

<sup>3</sup> The 1.8-m MET, operating in a temporary fixed mode, uses a custom antenna that is designed for the express purpose of testing service link performance on TerreStar-1. The 1.8-m MET is entirely different from the MET handsets that will be used by TerreStar’s customers.

<sup>4</sup> Based on discussions with the FCC’s staff, and in light of the fact that no FCC radio license has been issued for TerreStar-1, TerreStar did not file any request for special temporary authority for the satellite in connection with IOT. Rather, TerreStar identified in the initial IOT STA requests the parameters for TerreStar-1’s operations during IOT that deviate from the parameters on which the LOI authorization for TerreStar-1 are based.

- SBN IOT is largely completed. The continuing work involves over-the-satellite debugging and performance improvement of the GBBF and related element channel amplitude/phase calibration and pointing subsystems.
- New engineering software will need to be uploaded at the North Las Vegas facilities and regression tests performed to ensure its proper functioning. Engineers are also troubleshooting and resolving certain minor GBBF problems.

In addition to the SBN-IOT test activity described above, for the information of the Commission, TerreStar has also been engaged, in parallel, in the end-to-end testing of its satellite system under the existing licenses for its North Las Vegas (NLV) gateway station and the blanket authority for integrated handsets (*i.e.*, user terminals). Extensive voice and data test calling is occurring using Ku-band feeder channels and S-band service links. Major ground subsystems being tested include the satellite base station system (S-BSS), satellite beam access subsystem (SBAS), other GBBF components, handsets, and the Core Network. A new version of the S-BSS is being tested and final steps are being taken to complete adjustments necessary for improved system capability and performance. Finally, TerreStar handsets, with the trade name Genus, continue to be subject to numerous satellite field tests to improve functionalities and performance.