

E010011 SES-STA-20150227-00104 IB2015000369  
Deere & Company

Approved by OMB  
3060-0678

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:  
Request for Special Temporary Authority

1. Applicant

<b>Name:</b>	Deere & Company	<b>Phone Number:</b>	310-381-2000
<b>DBA Name:</b>		<b>Fax Number:</b>	310-381-2001
<b>Street:</b>	20780 Madrona Ave.	<b>E-Mail:</b>	lewellenmarkn@johndeere.com
<b>City:</b>	Torrance	<b>State:</b>	CA
<b>Country:</b>	USA	<b>Zipcode:</b>	90503 -3777
<b>Attention:</b>	Mr. Mark Lewellen		



File # SES-STA-20150227-00104

Call Sign E010011 Grant Date 5/7/2015  
(or other identifier)

From 03/08/2015 Term Dates

To: 05/06/2015

Approved: Mark E. Flores

*Section*  
Admin grant based on 1.6.2 of  
47-C.F.R.

**2. Contact**

**Name:** Catherine Wang      **Phone Number:** 202-373-6037  
**Company:** Morgan, Lewis & Boeckius LLP      **Fax Number:** 202-373-6001  
**Street:** 2020 K Street, NW      **E-Mail:** catherine.wang@morganlewis.com  
**City:** Washington      **State:** DC  
**Country:** USA      **Zipcode:** 20006  
**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 SESRWL2011090801047 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      CGB – Mobile Satellite Earth Stations

5. Type Request

Use Prior to Grant       Change Station Location       Other

6. Requested Use Prior Date  
03/07/2015

7. City/Contiguous U.S., Alaska and Hawaii	8. Latitude (dd mm ss.s h) 0 0 0.0 N
9. State	10. Longitude (dd mm ss.s h) 0 0 0.0 W
11. Please supply any need attachments. Attachment 1: Exhibit A 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;">Deere &amp; Company seeks follow-on special temporary authority to operate StarFire terminals with modified receive-only frequencies during the pendency of license modification application to Call Sign E010011. Please see Exhibit A for STA justification.</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 Mark Lewellen	15. Title of Person Signing Spectrum Manager
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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**EXHIBIT A – REASON FOR SPECIAL TEMPORARY AUTHORITY**

Deere & Company (“Deere”), pursuant to Section 25.120(b)(3) of the Commission’s Rules, 47 C.F.R. § 25.120(b)(3), hereby requests special temporary authority (“STA”) for a follow-on period of 60 days to operate receive-only, non-common carrier, mobile earth stations operating in the L-band to downlink transmissions from Inmarsat geostationary satellites at 15.5° and 54° west longitude and 178° east longitude (collectively “Inmarsat Satellites”).<sup>1</sup> The Commission granted Deere STA for an initial 60 day period on November 7, 2014 (File No. SES-STA-20141030-00836), and extended STA for a 60 day period on January 7, 2014 (SES-STA-20141217-00909). Deere requests the instant follow-on authority to begin no later than March 7, 2015. Specifically, Deere requests STA for its existing network of mobile earth terminals (“METs”) operating under Call Sign E010011 to receive 2.5 kHz space-to-earth emissions (designator 2K50D1D) from the Inmarsat Satellites at the following center frequencies.<sup>2</sup>

**Table 1.0 - Amended StarFire L-band Frequencies**

<b>Geostationary Arc Position</b>	<b>Center Frequency (MHz/Space-to-Earth)</b>
54 west longitude	1545.9775
15.5 west longitude	1545.9875
178 east longitude	1545.9875

Since 2001, Deere has been enabling domestic agricultural equipment with its StarFire precision farming system. The StarFire system employs receive-only vehicle mounted mobile earth stations. These earth stations receive L-band space-to-earth emissions from Inmarsat geostationary satellites that provide correctional data. This data augments the navigational information the StarFire terminals receive simultaneously from Global Positioning System (“GPS”) satellites. This augmented system enables the operators of domestic farming equipment to pinpoint their location to within +/- 2.5 centimeters.<sup>3</sup> This precise positioning capability developed originally to assist farmers in comparing the crop yields from various fields to determine, among other things, the amount of fertilizer and seed appropriate for a particular field and crop, has now found additional important uses to improve farming efficiency, including enabling farmers to manually record observations such as weed patches, crop appearance, and other field variables with remarkable precision. In addition, among other benefits, when coupled to the vehicle steering system through the Deere AutoTrack system it aids the operator to steer a

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<sup>1</sup> All involved Inmarsat spacecraft have been approved to serve the United States, and are reflected on the Commission ISAT list.

<sup>2</sup> No changes have been made to the previously approved frequencies and technical parameters.

<sup>3</sup> Navigational accuracy depends on several variables, including visibility to overhead satellites and other supplemental transmitters providing correctional data.

more precise path when making repeated passes over the same track, thus greatly reducing crop and soil damage.

Follow-on STA is needed because Deere was recently notified by Inmarsat that StarFire L-band downlink signals in North America would transition to frequencies identified above in Table 1.0.<sup>4</sup> Grant of STA will serve the public interest by ensuring continuity of service for thousands of existing Deere StarFire customers during the pendency of Deere's concurrently filed permanent application to modify Call Sign E010011 to receive the above-referenced frequencies.<sup>5</sup> Pursuant to Section 25.120(b)(3) of the rules, Deere requests a 60-day STA without the need for prior public notice. As discussed above, grant of authority is requested on or before close of business on March 7, 2015 so that Deere can continue to provide service to customers without any loss of service.

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<sup>4</sup> Vizada, Inc. ("Vizada") uplinks correctional data on Deere's behalf from earth stations located in Santa Paula, California and Southbury, Connecticut. After the frequency transition, Vizada will continue to provide the same uplink services.

<sup>5</sup> Application Submission ID: IB2014002165