

S2869/2711 SAT-STA-20141118-00122
DIRECTV Enterprises, LLC
DTV14

IB2014002278



File # SAT-STA-20141118-00122
Call Sign S2711 Grant Date 12/04/14
(or other identifier)
From see conditions Term Dates period of 30 days
To: 30 days
Approved: Stephen J. Duall
Stephen J. Duall
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

Date & Time Filed: Nov 18 2014 3:47:40:226PM
File Number: SAT-STA-20141118-00122
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY
FOR OFFICIAL USE ONLY

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
STA DIRECTV 14 11.18.14

1. Applicant

| | | | |
|-------------------|-------------------------------------|----------------------|-------------------------|
| Name: | DIRECTV Enterprises, LLC | Phone Number: | 301-663-0053 |
| DBA Name: | | Fax Number: | 240-358-0569 |
| Street: | 2230 E. Imperial Hwy CA/LAI/N340 | E-Mail: | jwengryniuk@directv.com |
| City: | El Segundo | State: | CA |
| Country: | USA | Zipcode: | 90245 - |
| Attention: | Mr Jack M Wengryniuk | | |

Attachment to Grant
Application of DIRECTV Enterprises, LLC
IBFS File No. SAT-STA-20141118-00122
Call Sign S2711

The request of DIRECTV Enterprises, LLC (DIRECTV), IBFS File No. SAT-STA-20141118-00122 is GRANTED. Accordingly, DIRECTV is authorized for a period of 30 days, commencing upon arrival at the 76° W.L. orbital location, to conduct in-orbit testing (IOT) of the DIRECTV-14 space station (Call Sign S2869) along with the DIRECTV RB-1 payload (Call Sign S2711) at the 76° W.L. orbital location, as specified in its application.¹ DIRECTV is also authorized to verify the performance of all transponders and antenna beams for DIRECTV-14 and RB-1, and conduct TT&C operations for DIRECTV-14 to maintain the space station at the 76° W.L. orbital location. Operations under this authorization must be in accordance with the terms, conditions, and technical specifications set forth in DIRECTV's application and the Federal Communications Commission's rules not waived herein, and are subject to the following conditions:


1. All operations under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, *i.e.*, DIRECTV must not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating station.
2. In the event of any harmful interference under this grant of special temporary authority, DIRECTV must cease operations immediately upon notification of such interference, and must inform the Commission, in writing, immediately of such an event.
3. This grant of special temporary authority will commence upon the arrival of DIRECTV 14 at the 76° W.L. orbital location.
4. DIRECTV must coordinate the operations of DIRECTV 14 with existing geostationary space stations to ensure that no unacceptable interference results from its operations at the 76.0° W.L. orbital location or during drift to the 76.0° W.L. orbital location, and during the drift from the 76.0° W.L. orbital location to the 99.175° W.L. orbital location.
5. DIRECTV-14's operations at the 76.0° W.L. orbital location must be limited to IOT in the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands and must not include the provision of commercial services, and DIRECTV RB-1's operations at the 76.0° W.L. orbital location must be limited to IOT in the 17.3-17.7 GHz (space-to-Earth) and 24.75-25.15 GHz (Earth-to-space) frequency bands and must not include the provision of commercial services.
6. DIRECTV must coordinate its TT&C operations with all other potentially affected operators and ensure that no harmful interference results.
7. During in-orbit testing, DIRECTV must maintain the DIRECTV 14 space station within an east-west longitudinal station-keeping tolerance of ± 0.05 degrees of the 76.0° W.L. orbital location.
8. IOT operations for DIRECTV-14 in the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands, and for DIRECTV RB-1 in the 17.3-17.7 GHz (space-to-Earth) and 24.75-25.15 GHz (Earth-to-space) frequency bands must comply with the conditions imposed in

¹ DIRECTV will conduct IOT at 76 W.L. using the 29.5-30.0 GHz (Earth-to-space) and the 19.7-20.2 GHz (space-to-Earth) frequencies for which DIRECTV-14 is authorized, and the 17.3-17.7 GHz (space-to-Earth) and 24.75-25.15 GHz (Earth-to-space) frequency bands for which DIRECTV RB-1 is authorized. *See* Grant Stamp, IBFS File Nos. SAT-LOA-20060908-00099, SAT-AMD-20080114-00013, and SAT-AMD-20080321-00076 (July 28, 2009) ("RB-1 Authorization"); Grant Stamp, IBS File No. SAT-LOA-20120518-00085; IBFS File No. SAT-MOD-20110727-00135 (Oct. 26, 2011); SAT-MOD-20111128-00230 (May 5, 2012). DIRECTV is also authorized to use the 28351.0 MHz (Earth-to-space), 28353.0 MHz (Earth-to-space), 18799.0 MHz (space-to-Earth), and 18799.5 MHz (space-to-Earth) frequency bands for Telemetry, Tracking, and Command (TT&C).

Attachment to Grant
Application of DIRECTV Enterprises, LLC
IBFS File No. SAT-STA-20141118-00122
Call Sign S2711

IBFS File Nos. SAT-LOA-20060908-00099, SAT-AMD-20080114-00013, and SAT-AMD-20080321-00076 (July 28, 2009); SAT-MOD-20110727-00135 (Oct. 26, 2011); SAT-MOD-20111128-00230 (May 5, 2012); and SAT-LOA-20120518-00085 (Dec. 4, 2012).

9. 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. Petitions for reconsideration under Section 1.106 of the Commission's rules or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the public notice indicating that this action was taken.

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|  GRANTED* International Bureau *with conditions | File # <u>SAT-STA-20141118-00122</u> |
| | Call Sign <u>S2711</u> Grant Date <u>12/04/14</u> |
| | (or other identifier) |
| | From <u>see conditions</u> Term Dates <u>period of 30 days</u> |
| | Approved: <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch |

| | |
|---|---------------------------------------|
| 2. Contact | |
| Name: William M. Wiltshire | Phone Number: 202-730-1350 |
| Company: Harris, Wiltshire & Grannis LLP | Fax Number: 202-730-1301 |
| Street: 1919 M Street NW Suite 800 | E-Mail: wwiltshire@hwglaw.com |
| City: Washington | State: DC |
| Country: USA | Zipcode: - |
| Attention: William M. Wiltshire | 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 SATLOA2012051800085 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 CRY – Space Station (Geostationary) | |
| 5. Type Request | |
| <input checked="" type="radio"/> Change Station Location <input type="radio"/> Extend Expiration Date <input type="radio"/> Other | |
| 6. Temporary Orbit Location 76 W.L. | 7. Requested Extended Expiration Date |

8. 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.)

DIRECTV Enterprises, LLC seeks special temporary authority for in-orbit testing of the DIRECTV 14/RB-1 spacecraft at the 76 WL orbital location.

9. 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. Yes No

10. Name of Person Signing
Romulo Pontual

11. Title of Person Signing
Executive Vice President

12. Please supply any need attachments.

Attachment 1: Narrative

Attachment 2:

Attachment 3:

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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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.



November 18, 2014

BY ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: *Request for Special Temporary Authority for In-Orbit Testing of
DIRECTV 14 and DIRECTV RB-1 at 76° W.L.*

Dear Ms. Dortch:

DIRECTV Enterprises, LLC (“DIRECTV”) hereby requests Special Temporary Authority (“STA”) to locate the DIRECTV 14 satellite (call sign S2869) along with the DIRECTV RB-1 payload (call sign S2711) at the 76° W.L. orbital location for in-orbit testing (“IOT”) after launch of the satellite, which is currently scheduled for December 4, 2014. This STA will cover a period of approximately 30 days within a 60 day window, which DIRECTV requests be keyed to become effective upon the satellite’s arrival at 76° W.L.

DIRECTV 14 is currently at the launch site being readied for launch. DIRECTV desires to conduct IOT for approximately four weeks before moving the satellite to its licensed position to begin commercial operations. Specifically, DIRECTV contemplates the following schedule [with approximate dates indicated in brackets]:

- After launch and orbit raising maneuvers, DIRECTV 14 will be located at 76° W.L. [no earlier than about December 14, 2014].
- After DIRECTV 14 reaches 76° W.L., DIRECTV will then commence IOT of the satellite for approximately 4 weeks.¹
- After IOT is completed, DIRECTV 14 will then be drifted to its assigned location at 99° W.L. (nominal) over the course of approximately 23 days [reaching that orbital position on or about February 5, 2015].

¹ During the period covered by this STA, DIRECTV will use 28351.0 and 28353.0 MHz for its command uplinks and 18799.0 and 18799.5 MHz for its telemetry downlinks.

Marlene H. Dortch
November 18, 2014
Page 2 of 3

In order to address the timing uncertainties normally associated with positioning a spacecraft after launch, DIRECTV requests that the STA become effective upon the arrival of DIRECTV 14 at 76° W.L.

Operation and testing of DIRECTV 14 and DIRECTV RB-1 during IOT will consist of performance verification testing of all transponders and antenna pattern verification testing of all antenna beams. During this testing, unmodulated CW carriers will be used to generate swept frequency response and gain transfer characteristics of each transponder. The maximum value of transmit power used during this testing will be consistent with the DIRECTV 14 and DIRECTV RB-1 applications,² except for short periods of time during gain transfer when the maximum transmit power for DIRECTV 14 could exceed that value by up to 10 dB during some tests.³ This testing will not result in harmful interference to other Ka-band satellite systems as the closest co-frequency operational satellite is located 9° away. Nor will this testing result in harmful interference to any DBS satellite system as the closest co-frequency operational DBS satellite is located 1° away and, as demonstrated in the measured transmit antenna gain submission for DIRECTV RB-1, the 17/24 GHz BSS payload on DIRECTV 14 will not exceed the -117 dBW/m²/100kHz PFD coordination trigger beyond 0.12°.⁴ DIRECTV will also coordinate its TT&C operations with all other potentially affected operators to ensure that no harmful interference results. Furthermore, DIRECTV is prepared to terminate all testing operations immediately upon notification from the Commission that its operations cause harmful interference to any authorized user of the spectrum.

Grant of this STA request will serve the public interest by allowing DIRECTV to test the DIRECTV 14/RB-1 satellite to ensure that it is fully operational and ready to begin providing service to millions of DIRECTV subscribers from the satellite's licensed orbital location. Allowing DIRECTV to test the satellite at 76° W.L. will serve the public interest by minimizing the risk of interference.

² See IBFS File Nos. SAT-LOA-20120518-00085 (DIRECTV 14) and SAT-LOA-20060908-00099, SAT-MOD-20110727-00135, SAT-MOD-20111128-00230 (DIRECTV RB-1).

³ Note that, as with IOT testing of DIRECTV 10, 11 and 12, all DIRECTV 14 IOT testing will be closely coordinated with U.S. government systems under FN US334.

⁴ See IBFS File No. SAT-MOD-20141103-00119.

Marlene H. Dortch
November 18, 2014
Page 3 of 3

Accordingly, and in light of the impending launch date, DIRECTV requests the expeditious grant of special temporary authority.

Respectfully submitted,

A handwritten signature in blue ink that reads "William M. Wiltshire". The signature is fluid and cursive, with the first name being the most prominent.

William M. Wiltshire
Counsel to DIRECTV Enterprises, LLC