S2930 SAT-STA-20150415-00023 IB2015000703
DIRECTV Enterprises, LLC
DTV15

File # SAT-STA-20150415-00023
Call Sign S2930 Grant Date 05/28/15
(or other identifier)
Term Dates From See conditions To: period of 30 days
Approved: Stephen J. Duall
Stephen J. Duall
Chief, Satellite Policy Branch

Approved by OMB
3060–0678

Date & Time Filed: Apr 15 2015 3:55:52:626PM
File Number: SAT–STA–20150415–00023
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY

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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
D15 STA Request IOT

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		

DIRECTV Enterprises, LLC
IBFS File Nos. SAT-STA-20150415-00023 and SAT-STA-20150421-00028
Call Signs S2930 and S2712

The applications of DIRECTV Enterprises, LLC (DIRECTV) for special temporary authority, IBFS File Nos. SAT-STA-20150415-00023 and SAT-STA-20150421-00028, ARE GRANTED. Accordingly, DIRECTV is authorized for a period of 30 days, commencing upon the arrival of DIRECTV 15 at the 66.8° W.L. orbital location, to conduct in-orbit testing (IOT) of the DIRECTV 15 Fixed-Satellite Service (FSS) space station (Call Sign S2930) using the 28.35-28.6 GHz, 29.25-29.29 GHz, and 29.5-30.0 GHz (Earth-to-space), and 18.3-18.59 GHz and 19.7-20.2 GHz (space-to-Earth) frequency bands, and to conduct IOT of the RB-2 Broadcasting Satellite Service (BSS) space station (S2712) using the 17.3-17.7 GHz (space-to-Earth) and the 24.75-25.15 GHz (Earth-to-space) frequency bands. DIRECTV is authorized to conduct Telemetry, Tracking, and Control (TT&C) for DIRECTV 15 using the 29502.5 MHz and 29505.9 MHz (Earth-to-space), and 20198.5 MHz and 20199.55 MHz (space-to-Earth) frequency bands, and is authorized to conduct TT&C for RB-2 using either the 29502.5 MHz and 29505.9 MHz (Earth-to-space), and 20198.5 MHz and 20199.55 MHz (space-to-Earth) frequency bands or the 2471 MHz and 25249 MHz (Earth-to-space), and 17301 MHz and 17302 MHz (space-to-Earth) frequency bands. DIRECTV is also authorized to conduct TT&C operations necessary to drift DIRECTV 15 and RB-2 to the 102.75° W.L. orbital location upon completion of in-orbit testing. Operations under this authorization are subject to the terms, conditions, and technical specifications set forth in DIRECTV's application and the Federal Communications Commission's rules, and are subject to the conditions set forth below.

1. All operations under this grant of special temporary authority must be on an unprotected and non-harmful interference basis. DIRECTV must not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating radio communication system. In the event of any harmful interference as a result of operations under this grant of special temporary authority, DIRECTV must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.

2. DIRECTV must coordinate operations of DIRECTV 15 and RB-2 with existing geostationary space stations to ensure that no unacceptable interference results from its operations at the 66.8° W.L. orbital location or during drift to either the 102.75° W.L. or 102.825° orbital locations.

3. Operations of DIRECTV 15 and RB-2 at 66.8° W.L. must be limited to IOT and must not include the provision of commercial services.

4. DIRECTV must operate only the TT&C frequencies authorized for DIRECTV 15 and RB-2 during the drift from the 66.8° W.L. orbital location to 102.75° W.L.

5. DIRECTV must maintain the DIRECTV 15 and RB-2 space stations with an east/west longitudinal station-keeping tolerance of +/- 0.05 degrees of the 66.8° W.L. orbital location.

6. DIRECTV must notify the Commission, in writing that IOT operations have begun, within two business days of the commencement.

7. This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

GRANTED*
International Bureau

File # SAT-STA-20150415-00023
SAT-STA-20150421-00028
Call Sign S2930 / S2712 Grant Date 05/28/15 / 05/07/15
(or other identifier)
Term Dates From see conditions To: period of 30 days (See conditions)
Approved:

Stephen J. Duall
Chief, Satellite Policy Branch

*with conditions

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:**	20036 –
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 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 CRY – Space Station (Geostationary)

5. Type Request

◉ Change Station Location ○ Extend Expiration Date ○ Other

6. Temporary Orbit Location	7. Requested Extended Expiration Date
66.8 WL	

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 hereby requests Special Temporary Authority to conduct in-orbit testing of the DIRECTV 15 satellite at the 66.8 W.L. 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	11. Title of Person Signing
Romulo Pontual	Executive Vice President Chief Technology Officer

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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ATTORNEYS AT LAW

April 15, 2015

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 15 and DIRECTV RB-2 at 66.8° W.L.*

Dear Ms. Dortch:

DIRECTV Enterprises, LLC ("DIRECTV") hereby requests Special Temporary Authority ("STA") to locate the DIRECTV 15 satellite (call sign S2930) along with the DIRECTV RB-2 payload (call sign S2712) at the 66.8° W.L. orbital location for in-orbit testing ("IOT") after launch of the satellite, which is currently scheduled for May 20, 2015.[1] 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 66.8° W.L.

DIRECTV 15 is currently at the launch site being readied for launch. DIRECTV desires to conduct IOT for approximately two 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 15 will be located at 66.8° W.L. [no earlier than about June 3, 2015].

- After DIRECTV 15 reaches 66.8° W.L., DIRECTV will then commence IOT of the satellite for approximately 2 weeks.[2]

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[1] Note that the DIRECTV 15 satellite also carries a DBS payload for which DIRECTV has not requested operating authority but for which IOT will also be conducted at this location.

[2] During the period covered by this STA, DIRECTV will use 29502.5 and 29505.9 MHz for its command uplinks and 20198.5 and 20199.55 MHz for its telemetry downlinks.

- After IOT is completed, DIRECTV 15 will then be drifted to its assigned location at 103° W.L. (nominal) over the course of approximately 26 days [reaching that orbital position on or about July 12, 2015].

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 15 at 66.8° W.L.

Operation and testing of DIRECTV 15 and DIRECTV RB-2 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 15 and DIRECTV RB-2 applications,[3] except for short periods of time during gain transfer when the maximum transmit power for DIRECTV 15 could exceed that value by up to 10 dB during some tests.[4] This testing will not result in harmful interference to other Ka-band satellite systems as the closest co-frequency operational satellite is located more than 9° away. Nor will the testing of DIRECTV RB-2 result in harmful interference to any DBS satellite system as the closest co-frequency operational DBS satellite is located 5.3° away[5] and, as demonstrated in the measured transmit antenna gain submission for DIRECTV RB-2, the 17/24 GHz BSS payload on DIRECTV 15 will not exceed the -117 dBW/m^2/100kHz PFD coordination trigger beyond 0.08°.[6] 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 15/RB-2 satellite to ensure that it is fully operational and ready to begin providing service to millions of DIRECTV subscribers from the satellite's licensed

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[3] *See* IBFS File Nos. SAT-LOA-20140825-00094 (DIRECTV 15) and SAT-LOA-20060908-00100, SAT-MOD-20080114-00014, SAT-MOD-20080321-00077, SAT-MOD-20110727-00136, SAT-MOD-20140612-00066 (DIRECTV RB-2).

[4] Note that, as with IOT testing of DIRECTV 10, 11, 12, and 14, all DIRECTV 15 IOT testing will be closely coordinated with U.S. government systems under FN US334.

[5] DIRECTV has had initial discussions with EchoStar to coordinate the IOT of the DBS payload on DIRECTV 15 with EchoStar operations at 61.5 W.L. and 72.7 W.L., and will conduct formal discussion in the near future.

[6] *See* IBFS File No. SAT-MOD-20140612-00067.

orbital location. Allowing DIRECTV to test the satellite at 66.8° W.L. will serve the public interest by minimizing the risk of interference.

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

Respectfully submitted,

/s/

William M. Wiltshire
Counsel to DIRECTV Enterprises, LLC