

S2922 SAT-STA-20170302-00032
DIRECTV Enterprises, LLC
SKY-B1

IB2017000563



File # SAT-STA-20170302-00032
Call Sign S2922 Grant Date 03/08/17
(or other identifier)
Term Dates period of
From 03/18/17 To: 30 days
Approved: Stephen J. Duall

Approved by OMB
3060-0678

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File Number: SAT-STA-20170302-00032
Callsign:

*with conditions

Stephen J. Duall
Chief, Satellite Policy Branch

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:
STA Request for SKY-B1 IOT in Ka-band Frequencies at 43.15 WL

1. Applicant

Name:	DIRECTV Enterprises, LLC	Phone Number:	301-663-0053
DBA Name:		Fax Number:	240-358-0569
Street:	6050 Elmer Derr Rd	E-Mail:	jw0854@att.com
City:	Frederick	State:	MD
Country:	USA	Zipcode:	21703 -
Attention:	Jack Wengryniuk		

ATTACHMENT TO GRANT
DIRECTV Enterprises, LLC
IBFS File No. SAT-STA-20170302-00032

IBFS File No(s):	SAT-STA-20170302-00032	<p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	DIRECTV Enterprises, LLC	
Call Sign:	S2922	
Satellite Name:	SKY-B1	
Orbital Location: (required station-keeping tolerance)	43.15 ° W.L. (+/- 0.05 degrees east/west)	
Administration:	United States of America	
Nature of Service:	In-Orbit Testing (IOT)	
Scope of Grant:	Special temporary authority for a period of 30 days to: (1) conduct telemetry, tracking, and command operations necessary to drift the SKY-B1 space station from the 33° W.L. orbital location to the 43.15 ° W.L. orbital location and maintain it at that location, and (2) conduct in-orbit testing (IOT) of the SKY-B1 Ka-band payload at the 43.15 ° W.L. orbital location. ¹	
Service Area(s):	N/A	
Frequencies:	Payload testing frequencies: 19.7-20.2 GHz (space-to-Earth); and 29.5-30.0 GHz (Earth-to-space) ² TT&C center frequencies: 11.443 and 11.4435 GHz or 11.4465 and 11.447 GHz (space-to-Earth); and 13.2495 and 14.498 GHz (Earth-to-space)	
<p>Unless otherwise specified herein, operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission’s rules not waived herein. This grant is also subject to the following conditions:</p> <ol style="list-style-type: none"> 1. DIRECTV must operate the SKY-B1 space station at the 43.1° W.L. orbital location subject to the conditions in the authorization granted on May 11, 2016.³ 2. 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 must not claim protection from interference caused to it by, any other lawfully operating station. 3. 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. 4. DIRECTV must coordinate the operations of SKY-B1 with existing geostationary space stations to ensure that no unacceptable interference results from its operations at the 43.15° W.L. orbital location or during drift from the 33° W.L. orbital location to the 43.15° W.L. orbital location. 5. SKY-B1’s operations at the 43.15° W.L. orbital location must be limited to IOT in the Ka-band frequencies listed above and must not include the provision of commercial services. 		

¹ SKY-B1 was launched on February 14, 2017 and began conducting IOT of all frequencies on the spacecraft at 33° W.L. on March 1 pursuant to a grant of special temporary authority. IBFS File No. SAT-STA-20170123-00008. DIRECTV indicates that due to challenges coordinating with potentially affected Ka-band operators, it now plans to conduct IOT of the Ka-band frequencies once the satellite arrives at 43.15° W.L., rather than at the satellite’s temporary location of 33° W.L. as previously contemplated. Exhibit 1, Request for Special Temporary Authority, at 1.

² Operations in these frequencies are subject to the authority of the Telecommunications Regulatory Authority of the United Arab Emirates, and this authorization does not include any grant of market access to the United States in this frequency band.

³ See IBFS File Nos. SAT-RPL-20140221-00026 and SAT-AMD-20150806-00054.

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6. DIRECTV must coordinate its TT&C operations with all other potentially affected operators and ensure that no harmful interference results.

7. DIRECTV must operate only the TT&C frequencies on SKY-B1 during the space station's drift from the 33° W.L. orbital location to the 43.15° W.L. orbital location.

8. During in-orbit testing, DIRECTV must maintain the SKY-B1 space station within an east-west longitudinal station-keeping tolerance of ± 0.05 degrees of the 43.15° W.L. orbital location.

Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

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

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

Action Date:	March 8, 2017	
Term Dates	From: March 18, 2017	To: 30 days

Approved:



Stephen J. Duall
Chief, Satellite Policy Branch

2. Contact

Name:	Jennifer Hindin	Phone Number:	202-719-4975
Company:	Wiley Rein LLP	Fax Number:	202-719-7049
Street:	1776 K Street, NW	E-Mail:	jhindin@wileyrein.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 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

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 requests a grant of special temporary authority for 30 days commencing March 18, 2017 to drift the SKY-B1 satellite (Call Sign S2922) from its temporary location at 33 W.L. to its requested permanent location of 43.15 W.L. and to conduct in-orbit testing of the satellite in Ka-band frequencies at 43.15 W.L.

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
Jack Wengryniuk

11. Title of Person Signing
Senior Director

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.

EXHIBIT 1
REQUEST FOR SPECIAL TEMPORARY AUTHORITY

DIRECTV Enterprises, LLC (“DIRECTV”) respectfully requests a grant of space station special temporary authority (“STA”)¹ for 30 days commencing March 18, 2017 to drift the SKY-B1 satellite (Call Sign S2922) from its temporary location at 33° W.L. to its requested permanent location of 43.15° W.L.² and to conduct in-orbit testing (“IOT”) of the satellite in Ka-band frequencies at 43.15° W.L.

SKY-B1 successfully launched on February 14, 2017 and began conducting IOT at 33° W.L. on March 1 pursuant to a grant of space station special temporary authority.³ IOT of the satellite at 33° W.L. is expected to last until approximately March 18, 2017 under this existing grant of space station special temporary authority. The drift to 43.15° W.L. would occur under this request for special temporary authority and is expected to last approximately 10 days.⁴ Due to challenges coordinating with potentially affected Ka-band operators, DIRECTV now plans to conduct IOT of the Ka-band frequencies once the satellite arrives at 43.15° W.L. rather than at the satellite’s temporary location of 33° W.L. as previously contemplated.⁵ The SKY-B1 satellite is expected to arrive at 43.15° W.L. on March 28, 2017, and IOT in the Ka-band

¹ DIRECTV has filed this STA request, an FCC Form 159, and a \$945.00 filing fee electronically via the International Bureau’s Filing System.

² DIRECTV has a pending request to modify the SKY-B1 fixed-satellite space station license to relocate the satellite from its authorized location at 43.1° W.L. to 43.15° W.L. *See* File No. SAT-MOD-20170221-00019. *See also Policy Branch Information; Actions Taken*, Report No. SAT-01158, File No. SAT-AMD-20150806-00054 (May 13, 2016) (Public Notice).

³ *See Policy Branch Information; Actions Taken*, Report No. SAT-01214, File No. SAT-STA-20170123-00008 (Feb. 3, 2017) (Public Notice).

⁴ During the drift from 33° W.L. to 43.15° W.L., only the satellite’s TT&C frequencies will be utilized.

⁵ *See Policy Branch Information; Actions Taken*, Report No. SAT-01214, File No. SAT-STA-20170123-00008 (Feb. 3, 2017) (Public Notice).

frequencies is expected to last approximately four hours. The special temporary authority requested here would cover both the SKY-B1 drift and the Ka-band payload testing.

DIRECTV separately and simultaneously is requesting earth station special temporary authority to operate its Castle Rock, Colorado earth station (Call Sign E070027) to support IOT of the SKY-B1 satellite.

SKY-B1 payload testing will be performed in the following frequency bands:

- 19.7-20.2 GHz (space-to-Earth); and
- 29.5-30.0 GHz (Earth-to-space).⁶

Telemetry, Tracking, and Command (“TT&C”) services for SKY-B1 will be performed using the following center frequencies:

- 11.443 and 11.4435 GHz or 11.4465 and 11.447 GHz (space-to-Earth); and
- 13.2495 and 14.498 GHz (Earth-to-space).

During the IOT of SKY-B1, DIRECTV will operate in the above-referenced frequency bands. DIRECTV has not identified any operational co-frequency Ka-band satellites within +/-6 degrees of the requested IOT location of 43.15° W.L.⁷ In the unlikely event that harmful interference occurs during IOT, DIRECTV will take all necessary steps to eliminate the interference.

DIRECTV assessed and limited the probability of SKY-B1 becoming a source of debris as a result of collision with large debris or other operational space stations during IOT at 43.15°

⁶ This request for space station special temporary authority for in-orbit testing of the 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space) frequencies at 43.15° W.L. is not a request for any grant of market access to the United States in these frequencies. DIRECTV will conduct the in-orbit testing of the Ka-band frequencies at 43.15° W.L. on a non-interference basis. Operations in the Ka-band frequencies will be subject to the authority of the Telecommunications Regulatory Authority of the United Arab Emirates. See *DIRECTV Enterprises, LLC, Attachment to Grant*, File Nos. SAT-RPL-20140221-00026 and SAT-AMD-20150806-00054 (May 11, 2016).

⁷ Although SES DTH do Brasil Ltda’s SES-14 space station (Call Sign S2974) is authorized to operate a Ka-band beacon at 47.5° W.L., DIRECTV understands that this satellite has not yet been launched.

W.L. SKY-B1 will not be located at the same orbital location as another satellite or at an orbital location that has an overlapping station-keeping volume with another satellite. Further, DIRECTV is not aware of any other FCC-licensed system, or any other system applied for and under consideration by the FCC, having an overlapping station-keeping volume with SKY-B1 at 43.15° W.L. In addition, DIRECTV is not aware of any system with an overlapping station-keeping volume with SKY-B1 at 43.15° W.L. that is the subject of an International Telecommunication Union (“ITU”) filing and that is either in orbit or progressing towards launch.

To the extent necessary, DIRECTV requests that the waivers previously granted to SKY-B1 at 43.1° W.L. be extended to the satellite at 43.15° W.L. In particular, DIRECTV requests that the previously granted waiver of footnote NG52 of the United States Table of Frequency Allocations, 47 C.F.R. § 2.106, be extended as necessary to test the satellite at 43.15° W.L.

The IOT of SKY-B1’s Ka-band payload at 43.15° W.L. is a critical step in ensuring that the satellite will be fully operational. DIRECTV understands that grant of this space station STA is without prejudice to any Commission action on the pending request for permanent authority to operate SKY-B1 at 43.15° W.L. Accordingly, DIRECTV respectfully requests that the Commission grant this request.