

S3039 SAT-RPL-20180913-00071 IB2018005754
DIRECTV Enterprises, LLC
T16



File # SAT-RPL-20180913-00071

Call Sign S3039 Grant Date 03/27/19

(or other identifier)

From see conditions Term Dates see conditions To: see conditions

Approved: Stephen J. Duall

Stephen J. Duall
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

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| APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS FCC 312 MAIN FORM FOR OFFICIAL USE ONLY | FCC Use Only |
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:

Application for Authorization to Launch and Operate T16 at Nominal 103 W.L.

| | | | |
|------------------------------|------------------------------------|---------------|----------------|
| 1-8. Legal Name of Applicant | | | |
| Name: | DIRECTV Enterprises, LLC | Phone Number: | 310-964-3589 |
| DBA Name: | | Fax Number: | United States |
| Street: | 1120 20th Street, NW Suite 1000 | E-Mail: | nm704u@att.com |
| City: | Washington | State: | DC |
| Country: | USA | Zipcode: | 20036 - |
| Attention: | Navid Motamed | | |

ATTACHMENT TO GRANT
DIRECTV Enterprises, LLC
IBFS File No. SAT-RPL-20180913-00071

| | | |
|---|---|---|
| IBFS File No(s): | SAT-RPL-20180913-00071 | <p>GRANTED – With Conditions</p>  <p>International Bureau Satellite Division</p> |
| Licensee/Grantee: | DIRECTV Enterprises, LLC (DIRECTV) | |
| Call Sign: | S3039 | |
| Satellite Name: | T16 | |
| Orbital Location: (required station-keeping tolerance) | 102.70° W.L. (± 0.025 degrees) | |
| Administration: | United States of America | |
| Nature of Service: | Fixed-Satellite Service (FSS), Direct-to-Home (DTH) | |
| Scope of Grant: | Authority to construct, deploy, and operate a geostationary orbit (GSO) space station, to be called T16 ¹ | |
| Service Area(s): | CONUS, Alaska, Hawaii, Puerto Rico | |
| Frequencies²: | 18.3-18.59 GHz (space-to-Earth) 19.7-20.2 GHz (space-to-Earth) ³ 17.3-17.7 GHz (Earth-to-space) 24.75-25.15 GHz (Earth-to-space) ⁴ 28.35-28.6 GHz (Earth-to-space) 29.25-29.29 GHz (Earth-to-space) 29.5-30 GHz (Earth-to-space) ⁵ Telemetry, Tracking & Command: 12698.0 MHz, 12697.0 MHz (space-to-Earth) 17791.0 MHz, 17789.0 MHz (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"> DIRECTV must prepare the necessary information, as may be required for submission to the International Telecommunication Union (ITU), to initiate and complete the advance publication, international coordination, due diligence, and notification process for this space station, in accordance with the ITU Radio Regulations. DIRECTV shall be responsible for all cost-recovery fees associated with ITU filings. No protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments with other administrations. <i>See</i> 47 CFR § 25.111(b). | | |

¹ DIRECTV states that the T16 space station will be a replacement for the DIRECTV 15 (Call Sign S2930), DIRECTV 10 (Call Sign S2641), and DIRECTV 12 (Call Sign S2797) space stations currently operating at, respectively, the 102.75° W.L., 102.85° W.L., and 102.8° W.L. orbital locations.

² DIRECTV states that T16 contains 12/17 GHz frequencies capable of providing Direct Broadcast Satellite service, but that that authorization requested for these frequencies is only for TT&C functions.

³ Not included on DIRECTV 10.

⁴ Not included on DIRECTV 10.

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2. DIRECTV must maintain the T16 space station within an east-west longitudinal station-keeping tolerance of $\pm 0.025^\circ$ of its assigned 102.70° W.L. orbital location.⁶
3. Prior to commencing operations, DIRECTV must coordinate its space-to-Earth operations in the 18.3-18.59 GHz and the 19.7-20.2 GHz frequency bands with the U.S. Federal systems, including Federal operations to earth stations in foreign countries, in accordance with Footnote US334 to the U.S. Table of Frequency Allocations, 47 CFR § 2.106. In addition to meeting the terms of the coordination agreement, non-conforming operations in the 19.7-20.2 GHz band must not cause harmful interference to, nor claim protection from, present and future Federal GSO and NGSO systems, non-Federal NGSO systems, or any non-conforming services previously authorized on a non-harmful interference basis. Two weeks prior to the start of any operations in the 18.3-18.59 GHz and the 19.7-20.2 GHz, DIRECTV must provide contact information for a 24/7 point of contact for the resolution of any harmful interference to the Federal user, Jimmy Nguyen, Email: Jimmy.Nguyen@us.af.mil.
4. The power flux-density (PFD) at the Earth's surface produced by the emissions from the T-16 space station for all atmospheric conditions, and for all methods of modulation in the 18.3-18.59 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth), must not exceed a level of -118 dBW/m²/MHz at any angle of arrival.
5. In the 28.35-28.6 GHz and 29.5-30 GHz (Earth-to-space) frequency bands reception is permitted at levels up to the applicable equivalent power flux-density requirements of Article 22 of the ITU Radio Regulations.
6. The 29.25-29.5 GHz band is designated for uplinks for FSS systems using geostationary satellites and for feeder uplinks for Mobile Satellite Systems using non-geostationary orbit satellites on a co-primary basis. Communications between U.S.-licensed earth stations and the T16 space station in the 29.25-29.5 GHz band must comply with sections 25.258 and 25.278 of the Commission's rules. 47 CFR §§ 25.258 and 25.278.
7. Prior to commencing operations with the T16 space station, DIRECTV must file with the Commission the information required by section 25.172 of the Commission's rules, 47 CFR § 25.172.
8. The T16 space station must begin providing service at the 102.70° W.L. orbital location in each of the frequency bands listed below before the last of the existing satellites currently operating in each of the frequency bands listed below discontinues service at the nominal 103° W.L. orbital location. Failure of T16 to meet this condition will render this authorization to operate in the respective frequency band NULL and VOID.⁷

| | T10 (S2641) | T12 (S2797) | T15 (S2930) |
|-----------------|-------------|-------------|-------------|
| space-to-Earth | | | |
| 17.3-17.7 GHz | | X | X |
| 18.3-18.59 GHz | X | X | X |
| 19.7-20.2 GHz | | X | X |
| Earth-to-space | | | |
| 24.75-25.15 GHz | | X | X |
| 28.35-28.6 GHz | X | X | X |
| 29.25-29.29 GHz | X | X | |
| 29.50-30.0 GHz | | X | X |

⁶ DIRECTV 10, 12, and 15 each operate within an east-west longitudinal station-keeping tolerance of $\pm 0.025^\circ$ of their respective assigned orbital locations.

⁷ DIRECTV states that T16 does not seek authority to operate in the 18.59-18.8 GHz (space-to-Earth) and 29.29-29.5 GHz (Earth-to-space) frequency bands that are authorized for use by T10 and T12 space stations. See Narrative at 23. Thus, these frequency bands will no longer be used by DIRECTV once T10 or T12 are relocated or cease operations. Our authorization for T16 does not address any replacement expectancy or continued use of the 18.59-18.8 GHz (space-to-Earth) and 29.29-29.5 GHz (Earth-to-space) frequency bands by DIRECTV once T10 or T12 are relocated or cease operations.

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9. The license term for the T16 space station is 15 years and will begin on the date that DIRECTV certifies to the Commission that T16 has been successfully placed into orbit and its operations fully conform to the terms and conditions of this authorization.

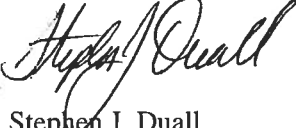
Licensee/grantee is afforded thirty (30) days from the date of release of this action to decline the grant as conditioned. Failure to respond within this period will constitute formal acceptance of the grant as conditioned.

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 27, 2019 | |
| Term Dates | From: see conditions | To: see conditions |

Approved:


 Stephen J. Duall
 Chief, Satellite Policy Branch

| | | | |
|--------------------------------------|--------------------|---------------|-----------------------|
| 9-16. Name of Contact Representative | | | |
| Name: | Jennifer D. 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 |

CLASSIFICATION OF FILING

| | |
|---|---|
| <p>17. Choose the buttonnext to the classification that applies to thisfiling for both questions a. and b. Choose only one for 17a and only one for 17b.</p> <p>a.</p> <p>(N/A) a1. Earth Station</p> <p><input checked="" type="radio"/> a2. Space Station</p> | <p>b.</p> <p><input type="radio"/> b1. Application for License of New Station</p> <p>(N/A) b2. Application for Registration of New Domestic Receive-Only Station</p> <p>(N/A) b3. Amendment to a Pending Application</p> <p>(N/A) b4. Modification of License or Registration</p> <p>(N/A) b5. Assignment of License or Registration</p> <p>(N/A) b6. Transfer of Control of License or Registration</p> <p>(N/A) b7. Notification of Minor Modification</p> <p>(N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite</p> <p><input type="radio"/> b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p><input checked="" type="radio"/> b10. Replacement Satellite Application - no new frequency bands</p> <p><input type="radio"/> b11. Replacement Satellite Application - new frequency bands (Not eligible for streamlined processing)</p> <p><input type="radio"/> b12. Petition for Declaratory Ruling to be Added to the Permitted List</p> <p>(N/A) b13. Other (Please specify)</p> |
|---|---|

TYPE OF SERVICE

| | |
|---|---|
| 20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply: | |
| <input checked="" type="checkbox"/> a. Fixed Satellite <input type="checkbox"/> b. Mobile Satellite <input type="checkbox"/> c. Radiodetermination Satellite <input type="checkbox"/> d. Earth Exploration Satellite <input checked="" type="checkbox"/> e. Direct to Home Fixed Satellite <input type="checkbox"/> f. Digital Audio Radio Service <input type="checkbox"/> g. Other (please specify) | |
| 21. STATUS: Choose the button next to the applicable status. Choose only one. <input type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier | 22. If earth station applicant, check all that apply. Not Applicable |
| 23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities: <input type="radio"/> Connected to a Public Switched Network <input type="radio"/> Not connected to a Public Switched Network <input checked="" type="radio"/> N/A | |
| 24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s). <input type="checkbox"/> a. C-Band (4/6 GHz) <input type="checkbox"/> b. Ku-Band (12/14 GHz) <input checked="" type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.) Frequency Lower: 12200 Frequency Upper: 30000 (Please specify additional frequencies in an attachment) | |

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

(N/A) a. Fixed Earth Station
(N/A) b. Temporary-Fixed Earth Station
(N/A) c. 12/14 GHz VSAT Network
(N/A) d. Mobile Earth Station
 e. Geostationary Space Station.
 f. Non-Geostationary Space Station
 g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Not Applicable

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an "X" in the box(es) next to all that apply.) Not Applicable

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments. Yes No

ALIEN OWNERSHIP

Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

| | |
|---|--|
| <p>29. Is the applicant a foreign government or the representative of any foreign government?</p> | <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p> |
| <p>30. Is the applicant an alien or the representative of an alien?</p> | <p><input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A</p> |
| <p>31. Is the applicant a corporation organized under the laws of any foreign government?</p> | <p><input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A</p> |
| <p>32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p> | <p><input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A</p> |
| <p>33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p> | <p><input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A</p> |
| <p>34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.</p> | |

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

Yes No

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Question 40

41. 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

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43. Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (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 authority to launch and operate the Ka-band and 17/24 GHz BSS payloads of its T16 satellite at the nominal 103 W.L. orbital location and to launch (but not operate except for limited TT&C) the 12/17 GHz DBS payload on the spacecraft.

Narrative

43a. Geographic Service Rule Certification

By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.

A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.

B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.

C

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

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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.