

S2712 SAT-MOD-20140612-00066 IB2014001171
DIRECTV Enterprises, LLC
DIRECTV RB-2



File # SAT-MOD-2014-0612-00066

Call Sign S2712 Grant Date 05/14/15
(or other identifier)

Term Dates see
From 05/14/15 To: conditions

Approved by OMB
3060-0678

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File Number: SAT-MOD-20140612-00066

*with conditions

Approved: Stephen J. Duall
Stephen J. Duall
Chief, Satellite Policy Branch

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
DRB-2 MOD 6.12.14

1-8. Legal Name of 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 No. SAT-MOD-20140612-00066
Call Sign S2712

The application of DIRECTV Enterprises LLC (DIRECTV), IBFS File No. SAT-MOD-20140612-00066, to modify its authorization to operate a 17/24 GHz Broadcasting-Satellite Service space station, DIRECTV RB-2 (Call Sign S2712), is GRANTED. DIRECTV filed this application to conform the parameters of its RB-2 space station authorization with the satellite as constructed and to modify its authorized orbital location from 102.825° W.L. to 102.75° W.L.¹ Accordingly, DIRECTV is authorized to operate the DIRECTV RB-2 space station at the 102.75° W.L. orbital location using the 17.3-17.7 GHz (space-to-Earth) and the 24.75-25.15 GHz (Earth-to-space) frequency bands. Operations under this authorization must be in accordance with its initial authorization,² as modified in this application, the Commission's rules not waived herein, and the following conditions:

1. DIRECTV must maintain its space station within an east/west longitudinal station-keeping tolerance of ± 0.025 degrees of the assigned 102.75° W.L. orbital location.

2. DIRECTV is granted a waiver of Section 25.264(c) of the Commission's rules, 47 C.F.R. 25.264(c). DIRECTV was previously granted a waiver of this rule, which requires 17/24 GHz BSS space station licensees to provide predicted and measured off-axis gain information and associated PFD calculations to facilitate operations with Direct Broadcast Satellite space stations, for its operations at the 102.825° W.L. orbital location.³ DIRECTV was directed to request a new waiver if it moved from the 102.875° W.L. orbital location. We grant the waiver on our own motion because the operation of DIRECTV RB-2 at 102.75° W.L. does not undermine the rationale for the original grant of this waiver.⁴ This waiver is limited to RB-2's operation at the 102.75° W.L. orbital location with a station-keeping excursion of no greater than ± 0.025 degrees. If DIRECTV moves the RB-2 space station from this location or increases its station-keeping excursion, DIRECTV must request a new waiver of Section 25.264(c).

3. DIRECTV may operate its DIRECTV RB-2 payload up to power-flux density (PFD) levels reduced from those specified in Section 25.208(w) of the Commission's rules, 47 C.F.R. § 25.208(w), in accordance with the following calculation methodology: For a given location on the surface of the Earth at which the required PFD reduction value needs to be determined, calculate the topocentric angular separation ' ϕ ' of the

¹ This application was placed on public notice as acceptable for filing. Policy Branch Information Satellite Space Applications Accepted for Filing, Public Notice, Report No. SAT-01032 (Aug. 1, 2014). SES Americom, Inc. (SES) and Ciel Satellite Limited Partnership (Ciel) filed a consolidated Petition to Deny against this application, requesting that the Commission deny or defer operating authority for the RB-2 space station until DIRECTV has completed coordination with Ciel. DISH Operating LLC filed a Petition to Condition, asking that DIRECTV be required to coordinate with Ciel. Industry Canada has authorized Ciel, an affiliate of SES, to operate in the 17/24 GHz BSS frequencies at the 103° W.L. orbital location. The authorization for RB-2 is already subject to a condition that addresses the obligations of international coordination under the procedures of the International Telecommunication Union (ITU). Consequently, there is no reason to impose additional conditions regarding coordination of the RB-2 space station.

² *DIRECTV Enterprises, LLC*, Order and Authorization, 24 FCC Rcd 9393 (Int'l Bur. 2009).


³ See *DIRECTV Enterprises LLC*, IBFS File No. SAT-MOD-20140612-00067 (granted Nov. 20, 2014).

⁴ See *Id.*

103° W.L. and 99° W.L. geostationary orbital locations, and the corresponding off-axis gain $G_{CO1}(\phi)$ of the antenna specified in Section 25.224(a)(1) of the Commission's rules at that angular separation. For the same location on the surface of the Earth, also calculate the topocentric angular separation of the 102.75° W.L. and 99° W.L. geostationary orbital locations, and the gain of the antenna ' $G_{CO2}(\phi)$ ' specified in Section 25.224(a)(1) of the Commission's rules at that angular separation. Then, perform the subtraction $G_{CO2}(\phi) - G_{CO1}(\phi)$.⁵ The result is the required reduction in PFD from the value specified in Section 25.208(w). The PFD levels of DIRECTV's space station transmissions must not exceed the lower of this calculated power or the power levels stated in its application, and must meet the reduced PFD limits under all atmospheric conditions.

4. DIRECTV is afforded 30 days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

5. 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.

 GRANTED * International Bureau *with conditions	File # <u>SAT-MOD-20140612-00066</u>
	Call Sign <u>S2712</u> Grant Date <u>05/14/15</u> (or other identifier)
	Term Dates <u>see</u> From <u>05/14/15</u> To: <u>conditions</u>
	Approved: <u><i>Stephen J. Duall</i></u> Stephen J. Duall Chief, Satellite Policy Branch

⁵ For purposes of this calculation, the antenna diameter 'D' should be assumed to be 0.45 meters, which is the minimum-diameter antenna for which 17/24 GHz BSS licensees may claim protection from interference, according to Section 25.224(a); the wavelength ' λ ' should be assumed to be 0.017131 meters, corresponding to a frequency of 17.5 gigahertz; and the value of ' η ' can be assumed to be 0.65, as stated in Section 25.224. 47 C.F.R. § 25.224.

9-16. Name of Contact Representative

Name:	William M. Wiltshire	Phone Number:	202-730-1350
Company:	Harris, Wiltshire & Grannis LLP	Fax Number:	202-730-1301
Street:	1200 18th Street	E-Mail:	wwiltshire@wiltshiregrannis.com
	wwiltshire@wiltshiregrannis.co		
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036-
Attention:	William M. Wiltshire	Relationship:	Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- b3. Amendment to a Pending Application
- b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)
- (N/A) b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States
- (N/A) b12. Application for Database Entry
- b13. Amendment to a Pending Database Entry Application
- b14. Modification of Database Entry

17c. 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):

17d.

Fee Classification BFY – Space Station Modification (Geostationary)

<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2712</p>	<p>19. If this filing is an amendment to a pending application enter both fields, if this filing is a modification please enter only the file number:</p> <p>(a) Date pending application was filed: (b) File number: SATMOD2011112800229</p>
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TYPE OF SERVICE

<p>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:</p> <p><input type="checkbox"/> a. Fixed Satellite</p> <p><input type="checkbox"/> b. Mobile Satellite</p> <p><input type="checkbox"/> c. Radiodetermination Satellite</p> <p><input type="checkbox"/> d. Earth Exploration Satellite</p> <p><input type="checkbox"/> e. Direct to Home Fixed Satellite</p> <p><input type="checkbox"/> f. Digital Audio Radio Service</p> <p><input checked="" type="checkbox"/> g. Other (please specify) 17/24 GHz Broadcasting Satellite Service</p>	
<p>21. STATUS: Choose the button next to the applicable status. Choose only one.</p> <p><input type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier</p>	<p>22. If earth station applicant, check all that apply.</p> <p><input type="checkbox"/> Using U.S. licensed satellites</p> <p><input type="checkbox"/> Using Non-U.S. licensed satellites</p>
<p>23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:</p> <p><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</p>	

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

a. C-Band (4/6 GHz) b. Ku-Band (12/14 GHz)

c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: 17300

Frequency Upper: 25250

(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.

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

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive Transmit-Only Receive-Only N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a — authorization to add new emission designator and related service
- b — authorization to change emission designator and related service
- c — authorization to increase EIRP and EIRP density
- d — authorization to replace antenna
- e — authorization to add antenna
- f — authorization to relocate fixed station
- g — authorization to change frequency(ies)
- h — authorization to add frequency
- i — authorization to add Points of Communication (satellites & countries)
- j — authorization to change Points of Communication (satellites & countries)
- k — authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l — authorization to change orbit location
- m — authorization to perform fleet management
- n — authorization to extend milestones
- o — Other (Please specify)

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.

29. Is the applicant a foreign government or the representative of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No
30. Is the applicant an alien or the representative of an alien?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
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?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A

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?

Yes No N/A

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.

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.

Exhibit A

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 requests authority for minor modification of the authorization for its DIRECTV RB-2 payload to conform to the parameters of the satellite currently under construction.

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.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Romulo Pontual

—>

46. Title of Person Signing
Executive Vice President Chief Technology Officer

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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