

S2754 SAT-LOI-20091110-00120  
Hughes Network Systems, LLC  
SPACEWAY 5

IB2009007088

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Callsign/Satellite ID: S2799

File # SAT-LOI-20091110-00120

Call Sign S2799 Grant Date 06/24/11

(or other identifier) Term Dates

From see Conditions To:

Approved: Stephen J. Duall

Stephen J. Duall

Chief, Satellite Policy Branch

Approved by OMB  
3060-0678



\*with conditions

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS

FCC 312 MAIN FORM

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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
HNS, LLC - Ka-Band GSO FSS LOI - SPACEWAY 5 at 109.1 W.L.

1-8. Legal Name of Applicant

Name:	Hughes Network Systems, LLC	Phone Number:	301-428-5506
DBA Name:		Fax Number:	301-428-2802
Street:	11717 Exploration Lane	E-Mail:	Steven.Doiron@hughes.com
City:	Germentown	State:	MD
Country:	USA	Zipcode:	20876
Attention:	Mr. Steven Doiron		-

**Attachment to Grant**  
**Hughes Network Systems, LLC**  
**IBFS File No. SAT-LOI-20091110-00120**  
**Call Sign S2754**  
**June 24, 2011**

The request of Hughes Networks systems, LLC (Hughes) for access to the market in the United States using a planned Ka-band geostationary satellite orbit (GSO) Fixed-Satellite Service (FSS) space station, SPACEWAY 5 (Call Sign S2754), that will operate under the authority of the United Kingdom at the 109.1° W.L. orbital location is GRANTED.<sup>1</sup> Accordingly, the SPACEWAY 5 space station IS DECLARED ELIGIBLE for use with appropriately licensed U.S. earth stations to provide FSS from the 109.1° W.L. orbital location using the 28.35-29.1 GHz and 29.25-30.0 GHz frequency bands (Earth-to-space) and the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth) once Hughes completes coordination with Federal satellite systems operating in the downlink band and submits a copy of the U.K. space operations authorization in the public record in this proceeding. This action is subject to the technical specifications set forth in Hughes application, the Commission's rules not waived herein, and the following conditions:

1. SPACEWAY 5 may not provide Direct-to-Home (DTH) service, Direct Broadcast Satellite (DBS) or Digital Audio Radio Service (DARS) to, from, or within the United States.
2. SPACEWAY 5 shall be maintained within an east-west longitudinal station-keeping tolerance of  $\pm 0.05$  degrees of the 109.1° W.L. orbital location.
3. Operations on the SPACEWAY 5 space station shall comply with coordination agreements reached between the United Kingdom and other Administrations.<sup>2</sup>
4. The power flux-density (PFD) at the Earth's surface produced by the emissions from SPACEWAY 5 space station for all atmospheric conditions, and for all methods of modulation, in the 18.3-19.3 GHz and 19.7-20.2 GHz frequency bands (space-to-Earth), shall not exceed a level of -119 dBW/m<sup>2</sup>/MHz at any angle of arrival.<sup>3</sup>

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<sup>1</sup> Hughes had filed a previous market access request for the SPACEWAY 5 space station in 2008. See IBFS File Nos. SAT-LOI-20080618-00129; SAT-AMD-20090608-00066 (Call Sign S2754). Because the November 2009 market access request being considered here, IBFS File No. SAT-LOI-20091110-00120, did not change SPACEWAY 5's orbital location or add any new frequency bands, the Satellite Division treated the 2009 request as an amendment to the 2008 request. Further, to avoid confusion, the Division closed the 2008 request in the International Bureau Filing System. See Policy Branch Information, Satellite Space Applications, Accepted for Filing, *Public Notice*, Report No. SAT-00659 (rel. Jan. 15, 2010). Consequently, Hughes' request for a waiver of Section 25.137(d) of the Commission's rules is not necessary.

<sup>2</sup> Ciel filed comments in this proceeding suggesting that the Commission place certain conditions on the operations of SPACEWAY 5 in the United States based upon certain aspects of the International Telecommunication Union (ITU) coordination process. Comments of Ciel Satellite Limited Partnership, filed Feb. 16, 2010, at 2. We decline to specify detailed conditions concerning possible scenarios that may arise if Ciel and Hughes and their respective Administrations do not complete coordination. We expect the operators to work in good faith to resolve any issues preventing completion of coordination and for Hughes to seek modification of its market access grant should the need for modification arise from coordination. See Hughes Network Systems, Letter of Intent Seeking Access to the United States Market, *Declaratory Ruling*, DA 11-1067 at ¶¶ 22-27 (rel. June 17, 2011) (*SPACEWAY 6 Market Access Order*) (declining to impose conditions in similar circumstances).

<sup>3</sup> Footnote US255 to the Table of Frequency Allocations, 47 C.F.R. § 2.106, requires that the PFD across the 200 megahertz of the 18.6-18.8 GHz band not exceed -95 dBW/m<sup>2</sup>. Hughes proposes to operate with a maximum PFD of -119 dBW/m<sup>2</sup>/MHz in this band. This level corresponds to a maximum PFD of -95.99 dBW/m<sup>2</sup>/200 MHz. Consequently, the PFD limit in US 255 is met. Hughes' proposed operations also satisfy other rules that provide PFD limits for transmitting Ka-band space stations. See 47 C.F.R. §§ 25.138(a)(6), 25.208(c), and 25.208(d).

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5. Pursuant to 47 C.F.R. § 25.145, operations using the SPACEWAY 5 space station in the 18.3-18.8 GHz band (space-to-Earth) are not entitled to protection from co-primary terrestrial services until the period during which terrestrial Fixed Service stations remain co-primary has expired.

6. Operations using the SPACEWAY 5 space station shall not cause harmful interference to any station authorized to operate on a primary basis in the 28.6-29.1 GHz frequency band, must accept any interference from these systems, and must terminate operations immediately upon notification of harmful interference.

7. Hughes is GRANTED a waiver of Footnote NG165 to Section 2.106 of the United States Table of Frequency Allocations (Table of Allocations), 47 C.F.R. § 2.106, to permit operations in the 18.8-19.3 GHz (space-to-Earth) frequency band, provided that such operations must accept any interference from any current or future non-Federal NGSO FSS system, any current or future Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations authorized to use the 18.8-19.3 GHz frequency band, and further provided that such operations shall not cause harmful interference to any current or future authorized non-Federal NGSO FSS system, any current or future Federal GSO FSS or NGSO FSS system, or any grandfathered co-primary fixed service stations. Operations shall immediately cease in the 18.8-19.3 GHz band upon notification of such harmful interference.

8. Hughes must coordinate its space-to-Earth operations in the 18.3-19.3 GHz and 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 US 334 to the Table of Allocations, 47 C.F.R. § 2.106.

9. This grant shall become effective upon Hughes filing a copy of an authorization under the United Kingdom Outer Space Act for the space operations of SPACEWAY 5 in the public record in this proceeding.

10. Hughes' request for a partial waiver of Section 25.114(c)(4)(iii) of the Commission's rules is GRANTED. Section 25.114(c)(4)(iii) of our rules requires applicants to identify which antenna beams are connected or switchable to each transponder and TT&C function. In its application, Hughes states that its SPACEWAY 5 satellite network has fifteen primary gateways and two backup gateways. Hughes has provided information on the interconnectivity between the fifteen primary gateway beams, for a total of 500 interconnections. Hughes states that providing interconnectivity information with respect to the two backup gateway beams would require it to provide 1,000 additional beam interconnections. Hughes also states that such information is unnecessary because these beams are associated with spare capacity associated with two backup gateways. We agree that the information in Hughes' application is sufficient to analyze SPACEWAY 5's beam capacity, and that requiring Hughes to submit the information for back-up facilities is unduly burdensome. Hughes, however, must submit the additional beam interconnection information in connection with any licensing of the two back-up gateways or approval of operations between SPACEWAY 5 and those gateways in the United States.<sup>4</sup>

11. This grant will be null and void with no further action on the Commission's part if the space station is not constructed, launched, and placed into operation in accordance with the technical parameters, terms and conditions of this authorization by these specified time periods following the date of authorization:

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<sup>4</sup> SPACEWAY 6 Market Access Order at ¶¶ 9-10.

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- a. Hughes must file a bond with the Commission in the amount of \$3 million, pursuant to the procedures set forth in 47 C.F.R. § 25.165, within 30 days of the date of this grant (July 25, 2011);
- b. Enter into a binding contract for construction within one year (June 24, 2012);
- c. Complete the Critical Design review within two years (June 24, 2013);
- d. Commence construction within three years (June 24, 2014); and
- e. Launch and begin operations within five years (June 24, 2016).

12. Hughes is afforded 30 days from the date of this action to decline this grant, as conditioned. Failure to respond within this period will constitute formal acceptance of the grant, as conditioned.

13. Petitions for Reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commissions rules, 47 C.F.R. §§ 1.106 and 1.115, may be filed within 30 days of the date of the public notice indicating that this action was taken.

 <b>GRANTED*</b> International Bureau *with conditions	<b>File #</b> <u>SAT-LOI-20091110-00120</u>
	<b>Call Sign</b> <u>S2799</u> <b>Grant Date</b> <u>06/24/11</u> <b>(or other identifier)</b>
	<b>Term Dates</b> <b>From</b> <u>see conditions</u> <b>To:</b> _____
	<b>Approved:</b> <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch

9-16. Name of Contact Representative

Name:	Stephen D. Baruch	Phone Number:	(202) 416-6782
Company:	Lerman Senter PLLC	Fax Number:	(202) 293-7783
Street:	2000 K Street, N.W. Suite 600	E-Mail:	sbaruch@lermansenter.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006 -1809
Attention:		Relationship:	Legal Counsel

CLASSIFICATION OF FILING

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.

- a.  
 a1. Earth Station  
 a2. Space Station

- b.  
 b1. Application for License of New Station (N/A)  
 b2. Application for Registration of New Domestic Receive-Only Station (N/A)  
 b3. Amendment to a Pending Application (N/A)  
 b4. Modification of License or Registration (N/A)  
 b5. Assignment of License or Registration (N/A)  
 b6. Transfer of Control of License or Registration (N/A)  
 b7. Notification of Minor Modification (N/A)  
 b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite  
 b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States  
 b10. Replacement Satellite Application - no new frequency bands  
 b11. Replacement Satellite Application - new frequency bands (Not eligible for streamlined processing)  
 b12. Petition for Declaratory Ruling to be Added to the Permitted List (N/A)  
 b13. Other (Please specify)

<p>17c. 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 checked="" type="radio"/> Other(please explain): Letter of Intent – No Fee Required</p>	<p>17c. Fee Classification    BNY – Space Station (Geostationary)</p>
<p>18. If this filing is in reference to an existing station, enter:          (a) Call sign of station:                Not Applicable</p>	<p>19. If this filing is an amendment to a pending application enter:          (a) Date pending application was filed:                Not Applicable          (b) File number of pending application:                Not Applicable</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:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier
- 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:

- Connected to a Public Switched Network
- Not connected to a Public Switched Network
- N/A

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: 18300.0000      Frequency Upper: 30000.0000      (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 checked="" type="radio"/> No <input 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 checked="" type="radio"/> No <input type="radio"/> N/A</p>
<p>32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned 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 checked="" type="radio"/> No <input 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 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 checked="" type="radio"/> Yes <input type="radio"/> No <input 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**

Exhibit 33

<p>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.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes    <input type="radio"/> No  Exhibit 35 </p>
<p>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.</p>	<p style="text-align: right;"> <input type="radio"/> Yes    <input checked="" type="radio"/> No </p>
<p>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.</p>	<p style="text-align: right;"> <input type="radio"/> Yes    <input checked="" type="radio"/> No </p>
<p>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</p>	<p style="text-align: right;"> <input type="radio"/> Yes    <input checked="" type="radio"/> No </p>
<p>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.</p>	<p style="text-align: right;"> <input type="radio"/> Yes    <input checked="" type="radio"/> No </p>

<p>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.</p>	<p style="text-align: right;">Exhibit 40</p>
<p>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.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes    <input type="radio"/> No </p>
<p>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.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes    <input type="radio"/> No </p>
<p>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? United Kingdom</p>	

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.)

Letter of Intent seeking to use a satellite authorized by the United Kingdom to access the United States market using the Ka-band at the 109.1 degrees W.L. orbital location.

Letter of Intent

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)      Limited Liability Company

45. Name of Person Signing  
Steven Doiron

46. Title of Person Signing  
Senior Director, Regulatory Affairs

47. Please supply any need attachments.

1: Exhibit 24

2:

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).

Completed Schedule S

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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.**