

S2129 SAT-MOD-20101122-00243 IB2010003570  
 DG Consents Sub, Inc.  
 QuickBird



File # SAT-MOD-20101122-00243  
 Call Sign S2129 Grant Date 01/18/12  
 (or other identifier)  
 Term Dates duration of license  
 From 01/18/12 To:  
 Approved: Stephen J. Duall  
 Stephen J. Duall  
 Chief, Satellite Policy Branch

\*\* see also  
 SAT-AMD-20110829-00168  
 Approved by OMB  
 3060-0678

Date & Time Filed: Nov 22 2010 11:48:40:606AM  
 File Number: SAT-MOD-20101122-00243

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:  
 Modification to Change QuickBird Orbit

1-8. Legal Name of Applicant

<b>Name:</b>	DG Consents Sub, Inc.	<b>Phone Number:</b>	303-682-3800
<b>DBA Name:</b>		<b>Fax Number:</b>	303-684-4340
<b>Street:</b>	1601 Dry Creek Drive	<b>E-Mail:</b>	scedars@digitalglobe.com
<b>City:</b>	Longmont	<b>State:</b>	CO
<b>Country:</b>	USA	<b>Zipcode:</b>	80503 -
<b>Attention:</b>	Mr. Seth Cedars		

**Attachment to Grant**  
**IBFS File Nos. SAT-MOD-20101122-00243 & SAT-AMD-20110829-00168**  
**Call Sign S2129**

The application of DG Consents Sub Inc. (DG Consents), IBFS File No. SAT-MOD-20101122-00243, as amended by IBFS File No. SAT-AMD-20110829-00168, to modify its authorization for its non-geostationary satellite orbit (NGSO) space station, QuickBird (Call Sign S2129), IS GRANTED. Accordingly, DG Consents' authorization is modified to specify an increase in the peak orbital altitude of its QuickBird space station from 450 kilometers to 482 kilometers and to authorize radiofrequency operations in Earth Exploration Satellite Service (EESS) in the 8025-8345 MHz frequency band (space-to-Earth) consistent with that modification and during decay of the satellite's orbit under natural forces.<sup>1</sup> In addition, the QuickBird space station is authorized to continue transmissions in the 8025-8400 MHz (space-to-Earth) frequency band after it has completed its sensing mission, but before it completes post-mission disposal through re-entry into the Earth's atmosphere.<sup>2</sup> Operations under this authorization shall be in accordance with the technical specifications set forth in DG Consents's application, Federal Communication Commission (Commission) rules, and the following conditions:

1. This authorization is conditioned upon DG Consents operating its QuickBird space station in accordance with the terms and conditions of the approval by the National Oceanic and Atmospheric Administration of the end-of-life disposal plan for the QuickBird space station.

2. DG Consents request to waive application of international power flux-density (PFD) limits for narrowband transmissions by the QuickBird space station in the 8025-8400 MHz (space-to-Earth) frequency band<sup>3</sup> while in orbit below 400 kilometers IS GRANTED. Table 21-4 of the International Telecommunication Union (ITU) Radio Regulations states that the PFD at the Earth's surface produced by emissions from an EESS space station in this band must not exceed certain values at defined angles of arrival.<sup>4</sup> DG Consents states that narrowband transmissions of the QuickBird space station will exceed these PFD limits at altitudes below 400

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<sup>1</sup> DG Consents has been operating the QuickBird space station with a peak orbital altitude of 482 kilometers pursuant to grants of special temporary authority. See IBFS File Nos. SAT-STA-2011115-00219, SAT-STA-20110913-00179, SAT-STA-20110719-00131, & SAT-STA-20110422-00074.

<sup>2</sup> *EarthWatch Inc.*, Order and Authorization, 10 FCC Rcd 10467 (Int'l Bur. 1995), as modified by 12 FCC Rcd 21637 (Int'l Bur. 1997) (authorizing the QuickBird space station to transmit in the 8025-8400 MHz band during its operational life).

<sup>3</sup> The 8025-8400 MHz frequency band also is allocated on a co-primary basis to government Fixed, Fixed-Satellite (FSS), and EESS, and on a secondary basis to government Mobile-Satellite Service (MSS). In addition, the 8175-8215 MHz band is allocated on a co-primary basis to government Meteorological-Satellite (Earth-to-space) service (MetSat). See 47 C.F.R. § 2.106.

<sup>4</sup> ITU Radio Reg. 21-7, Table 21-4, states that the PFD at the Earth's surface produced by emissions from an EESS space station in this band, including emissions from a reflecting satellite, for all conditions and for all methods of modulation, shall not exceed the following values:

1) -150 dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival between 0 and 5 degrees above the horizontal plane;

2)  $-150 + 0.5(\delta - 5)$  dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival  $\delta$  (in degrees) between 5 and 25 degrees above the horizontal plane;

3) -140 dB(W/m<sup>2</sup>) in any 4 kHz band for angles of arrival between 25 and 90 degrees above the horizontal plane.

**Attachment to Grant**  
**IBFS File Nos. SAT-MOD-20101122-00243 & SAT-AMD-20110829-00168**  
**Call Sign S2129**


kilometers.<sup>5</sup> We have coordinated DG Consents' proposed operations with the National Telecommunications and Information Administration (NTIA) through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). NTIA has approved DG Consent's proposed operations. Accordingly, we authorize DG Consents to operate narrowband transmissions in the 8025-8400 MHz (space-to-Earth) frequency band on a non-harmful interference basis while the QuickBird space station is in orbit below 400 kilometers. The waiver of applicability of international PFD limits is limited to a U.S. earth station and to an earth station in Norway, provided that DG Consents must obtain the written agreement to operations with the Norwegian earth station from any affected administration and must provide such agreement to the Commission at least five business days prior to such operations.

3. All other parameters of the authorization for the QuickBird space station are unchanged.

4. Waivers of the modified processing round requirements of Sections 25.156 and 25.157, 47 C.F.R. §§ 25.156 and 25.157, are granted for the reasons set forth in the *DigitalGlobe, Inc.*, Order and Authorization, 20 FCC Rcd 15696, 15699 ¶ 8 (Sat. Div., Int'l Bur. 2005).

5. DG Consents is afforded thirty 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.

6. 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. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 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	File # <u>SAT-AMD-20110829-00168</u> <u>SAT-MOD-20101122-00243</u>
	Call Sign <u>S2129</u> Grant Date <u>01/18/12</u> (or other identifier)
	Term Dates duration of From <u>01/18/12</u> To: <u>license</u>
	Approved: <u>Stephen J. Duall</u> Stephen J. Duall Chief, Satellite Policy Branch

<sup>5</sup> DG Consents states that wideband transmissions of the QuickBird space station in the 8025-8400 MHz frequency band will not exceed the PFD limits contained in Table 21-4 of ITU Radio Regulation 21-7. See Exhibit 43 at 4, IBFS File No. SAT-AMD-20110829-00168.

9-16. Name of Contact Representative

<b>Name:</b>	Stephen D. Baruch	<b>Phone Number:</b>	202-416-6782
<b>Company:</b>	Lerman Senter PLLC	<b>Fax Number:</b>	202-429-4626
<b>Street:</b>	2000 K Street, N.W. Suite 600	<b>E-Mail:</b>	sbaruch@lermansenter.com
<b>City:</b>	Washington	<b>State:</b>	DC
<b>Country:</b>	USA	<b>Zipcode:</b>	20006-
<b>Attention:</b>		<b>Relationship:</b>	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

<p>17c. Is a fee submitted with this application?</p> <p><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).</p> <p><input type="radio"/> Governmental Entity    <input type="radio"/> Noncommercial educational licensee</p> <p><input type="radio"/> Other (please explain):</p>	
<p>17d.</p> <p>Fee Classification CGW – Space Station Modification (Non-Geostationary)</p>	
<p>18. If this filing is in reference to an existing station, enter:</p> <p>(a) Call sign of station: S2129</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:</p> <p>(b) File number: SATMOD2007073000107</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 type="checkbox"/> a. Fixed Satellite <input type="checkbox"/> b. Mobile Satellite <input type="checkbox"/> c. Radiodetermination Satellite <input checked="" type="checkbox"/> d. Earth Exploration Satellite <input 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 checked="" type="radio"/> Common Carrier <input checked="" type="radio"/> Non-Common Carrier	22. If earth station applicant, check all that apply. <input type="checkbox"/> Using U.S. licensed satellites <input type="checkbox"/> Using Non-U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities: <input checked="" 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: 8025                      Frequency Upper: 8400                      (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 checked="" type="radio"/> No <input type="radio"/> N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="radio"/> Yes <input checked="" type="radio"/> No <input 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 checked="" type="radio"/> No <input 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?  Yes  No  
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

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

<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><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><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><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>	

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.)

Authorization to increase orbit altitude of Quick Bird satellite. See Exhibit 43.

Exhibit 43

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  
Yancey L. Spruill

-->

46. Title of Person Signing  
Treasurer

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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