

S2129 SAT-MOD-20140327-00036 IB2014000573
DG Consents Sub, Inc.
USASAT 30A



File # SAT-MOD-2014 03 27- 00036
Call Sign S2129 Grant Date 06/05/14
(or other identifier)
Term Dates
From 06/05/14 To: _____
Approved: Stephen J. Dwall
Stephen J. Dwall
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

Date & Time Filed: Mar 27 2014 3:41:01:520PM
File Number: SAT-MOD-20140327-00036

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 of License to Change WV-1 Descending Node

1-8. Legal Name of Applicant

Name:	DG Consents Sub, Inc.	Phone Number:	303-684-4000
DBA Name:		Fax Number:	303-684-4340
Street:	1601 Dry Creek Drive	E-Mail:	dan.jablonsky@digitalglobe.com
	Suite 260		
City:	Longmont	State:	CO
Country:	USA	Zipcode:	80503 -
Attention:	Mr. Dan Jablonsky		

9-16. Name of Contact Representative

Name:	Philip A. Bonomo	Phone Number:	202-416-6773
Company:	Lerman Senter PLLC	Fax Number:	202-429-8970
Street:	2000 K Street, NW Suite 600	E-Mail:	pbonomo@lermansenter.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006-
Attention:		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

<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: SATMOD2012071000111</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.

- Using U.S. licensed satellites
- 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:

- 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: 2025.0000

Frequency Upper: 8400.0000

(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.

- 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."

9-16. Name of Contact Representative

Name:	Philip A. Bonomo	Phone Number:	202-416-6773
Company:	Lerman Senter PLLC	Fax Number:	202-429-8970
Street:	2000 K Street, NW Suite 600	E-Mail:	pbonomo@lermansenter.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006-
Attention:		Relationship:	Legal Counsel

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- 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
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<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>	
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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 checked="" 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 type="checkbox"/> g. Other (please specify)</p>	
<p>21. STATUS: Choose the button next to the applicable status. Choose only one.</p> <p><input checked="" 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 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</p>	
<p>24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).</p> <p><input type="checkbox"/> a. C-Band (4/6 GHz) <input type="checkbox"/> b. Ku-Band (12/14 GHz)</p> <p><input checked="" type="checkbox"/> c. Other (Please specify upper and lower frequencies in MHz.)</p> <p>Frequency Lower: 2025.0000 Frequency Upper: 8400.0000 (Please specify additional frequencies in an attachment)</p>	

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- 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? Yes No

30. Is the applicant an alien or the representative of an alien? Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government? Yes No 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? Yes No 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

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.

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.)

The applicant requests modification of WorldView-1, one of the applicant's Earth Exploration Satellite Service satellites licensed under Call Sign S2129, to adjust the space station's descending node. See Exhibit A.

Exhibit A

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).

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PER, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

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.

Description of Modification of License Application

With this application, DG Consents Sub, Inc. (“DigitalGlobe”) requests modification of WorldView-1, one of its non-geostationary satellite orbit (“NGSO”) Earth Exploration Satellite Service (“EESS”) satellites licensed under Call Sign S2129.¹ Specifically, DigitalGlobe proposes to adjust the descending node of WorldView-1, with accompanying modifications to the satellite’s orbital inclination and right ascension of the ascending node.

In support of its request for a modification, DigitalGlobe provides the following information in accordance with Section 25.114 of the Commission’s rules.² DigitalGlobe provides this information only to the extent that it has changed from the information currently on file for WorldView-1 under Call Sign S2129, and hereby certifies that the remaining information has not changed.³

I. Proposed Adjustment of WorldView-1.

DigitalGlobe proposes to transition the WorldView-1 satellite from its existing 10:30 descending node orbit to a 13:30 descending node orbit. This shift from a morning orbit to an afternoon orbit will enable DigitalGlobe subsequently to launch WorldView-3 into the vacated morning orbit, which it is contractually obligated to do pursuant to an agreement entered into with the Federal government to support the EnhancedView commercial imagery program.⁴ The WorldView-1 transition will be gradual, and DigitalGlobe anticipates that the entire adjustment will take place over a 12- to 24-month period. To accomplish the transition, the orbital inclination of WorldView-1 will be modified and the right ascension of the ascending node will change during the transition period. The orbital apogee and perigee will not be modified. Table 1 below contains a comparison of the authorized and proposed orbital parameters.

¹ DG Consents is a subsidiary of DigitalGlobe, Inc. WorldView-1 was added to DigitalGlobe’s EESS satellite system in 2005. *See DigitalGlobe, Inc., Order and Authorization, 20 FCC Rcd 15696 (Sat. Div. 2005) (“DigitalGlobe Order”).* No modification is requested herein of the other satellites (QuickBird, WorldView-2 and WorldView-3) comprising DigitalGlobe’s EESS system licensed under Call Sign S2129.

² 47 C.F.R. § 25.114.

³ *See* 47 C.F.R. § 25.117(d)(1).

⁴ Through the EnhancedView program, DigitalGlobe provides products and services to help meet the increasing geospatial intelligence needs of the Intelligence Community and Department of Defense. *See* <http://media.digitalglobe.com/manual-releases/NGA-Awards-EnhancedView-Commercial-Imagery-Contract> (last visited March 25, 2014).

Table 1: Authorized and Proposed Orbital Parameters for WorldView-1

	Authorized WorldView-1 Orbital Parameters	Modified WorldView-1 Orbital Parameters
Inclination Angle (deg)	97.36	97.36 +1.2/-0.1
Orbital Period (seconds)	5670	Unchanged
Apogee (km)	521	Unchanged
Perigee (km)	506	Unchanged
Right Ascension of the Ascending Node (RAAN) (deg)	156.763 This RAAN value at the epoch below yields Local Mean Time (LMT) at Descending Node = 10:30AM. RAAN changes daily at sun synchronous rate.	135.035 RAAN will change faster than sun-synchronous rate during transition to 13:30PM LMT. RAAN will be within a range of +48.75/-3.75 degrees versus a nominal sun- synchronous profile.
Argument of Perigee (deg)	90	Unchanged
Orbit Epoch Date	21 Mar 2008, 12:00:00 UTC	1 Mar 2014, 12:00:00 UTC

The changes reflected in Table 1 will cause no increase in the interference envelope for WorldView-1, and thus should be deemed a minor modification to the underlying authorization. The Commission has determined in previous cases involving non-GSO satellites in other services that increases in orbit altitudes (and associated changes in such related parameters as inclination angles) are not considered to be major unless they increase the potential for interference.⁵ Those same principles apply to the change in orbital configuration of the WorldView-1 satellite that DigitalGlobe proposes in this modification request.

⁵ See, e.g., *Orbital Communications Corp.*, Order and Authorization, 13 FCC Rcd 10828, 10838-39 (Int'l. Bur. 1998); *Teledesic Corp.*, Order and Authorization, 14 FCC Rcd 2261, 2266 (Int'l. Bur. 1999) (changes in orbital configuration, including number of satellites, number of planes, orbit altitude and inclination angle, not considered major without increase in interference to other systems or increase in difficulty in sharing).

Table 2 below contains the anticipated ranges of accuracy to which the WorldView-1 orbit will be maintained after the transition is complete.⁶ These ranges are unchanged from those included as part of the initial application for WorldView-1, and are offered here for reference.

**Table 2: Anticipated Ranges of Accuracy to Which WorldView-1
Orbital Parameters Will Be Maintained**

Orbital Parameters	WorldView-1 Orbital Parameters
Inclination Angle (deg)	+/- 0.1
Apogee (km)	+/- 2
Perigee (km)	+/- 2
Right Ascension of the Ascending Node (deg)	+/- 3.75 relative to nominal sun-synchronous profile

II. Schedule S.

The technical characteristics of the modified WorldView-1 satellite are detailed in the Schedule S portion of the FCC Form 312 of this Application, a copy of which is included as Attachment A hereto. DigitalGlobe completed the electronic version Schedule S to the best of its ability since the form is more readily suited for geosynchronous communication satellites. Any discrepancies between the data in the electronic version of Schedule S and the version included in the print out in Attachment A should be resolved in favor of the print version in Attachment A.

III. Public Interest Considerations.

The grant of this modification application will serve the public interest by permitting DigitalGlobe to transition WorldView-1 from its existing morning orbit to an afternoon orbit, thereby making it possible for WorldView-3 to be launched into the vacated morning orbit. DigitalGlobe is contractually obligated to place WorldView-3 in a morning orbit (from where it will operate more optimally) pursuant to an agreement entered into with the Federal government to support the EnhancedView program. The optimized characteristics of WorldView-3 will enable DigitalGlobe both to provide the National Geospatial-Intelligence Agency, Intelligence Community and Department of Defense with enhanced data imagery as well as to support humanitarian and crisis support efforts. The proposed transition of WorldView-1 to an afternoon orbit will have no effect on the services which that satellite currently offers.

⁶ See 47 C.F.R. § 25.114(d)(iii).

IV. Orbital Debris Mitigation.

The changes proposed herein will have no impact on the orbital debris mitigation showing on file with the Commission for WorldView-1. Specifically, the proposed new orbital parameters will not increase the satellite's susceptibility to collisions or fragmentation events. In addition, the proposed changes will not hamper execution of the post-mission disposal arrangements that were accepted and approved by the National Oceanic and Atmospheric Administration ("NOAA") and subsequently relied upon by the Commission in the *DigitalGlobe Order*.⁷

V. Extent of Communications with WorldView-1 During Descent to the Atmosphere.

The changes proposed herein will have no impact on the extent of communications with WorldView-1 during its descent to the atmosphere. DigitalGlobe intends to utilize WorldView-1 for imaging services until imaging services are no longer possible. After terminating services, DigitalGlobe will prepare the satellite for eventual reentry and end all communications with it.

⁷ See *DigitalGlobe Order*, 20 FCC Rcd at 15704-05. DigitalGlobe notes that the Commission last August adopted a new rule permitting applicants for commercial remote sensing space stations to, in lieu of submitting detailed post-mission disposal plans to the Commission, certify that they have submitted such plans to NOAA for review. See *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Report and Order, 28 FCC Rcd 12403 (2013) (amending 47 C.F.R. 25.114(d)).

TECHNICAL CERTIFICATE

I, Jeff Culwell, hereby certify, under penalty of perjury, that I am the technically qualified person responsible for the preparation of the engineering information contained in the technical portions of the foregoing amendment and the related attachments, that I am familiar with Part 25 of the Commission's Rules, and that the technical information is complete and accurate to the best of my knowledge and belief.

/s/ Jeff Culwell

Jeff Culwell
VP Operations
DigitalGlobe, Inc.

Dated: March 25, 2014

Attachment A

Schedule S

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
(Technical and Operational Description)**

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: USASAT 30A	e. Estimated Date of Placement into Service: 1/3/2008	i. Will the space station(s) operate on a Common Carrier basis? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
b. Construction Commencement Date: 8/1/2003	f. Estimated Lifetime of Satellite(s): 7 Years	j. Number of transponders offered on a Common Carrier basis: 0
c. Construction Completion Date: 7/20/2007	g. Total Number of Transponders: 0	k. Total Common Carrier Transponder Bandwidth: 0 MHz
d. Estimated Launch Date: 9/18/2007	h. Total Transponder Bandwidth (No. Transponders x Bandwidth): 0 MHz	l. Orbit Type: Mark all boxes that apply. <input type="checkbox"/> GSO <input checked="" type="checkbox"/> NGSO

S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will operate. Also indicate the nature of service(s) for each frequency band.

Frequency Band Limits				e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (Hz)		Upper Frequency (Hz)			
a. Numeric	b. Unit (K/M/G)	c. Numeric	d. Unit (K/M/G)		
8025	M	8400	M	T	Earth Exploration Satellite Service
2025	M	2110	M	R	Earth Exploration Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W):			b. Reason for orbital location selection:					
Longitudinal Tolerance or E/W Station-Keeping:		e. Inclination Excursion or N/S Station-Keeping Tolerance:				Range of orbital arc in which adequate service can be provided (Optional): _____ Degrees E/W		
c. Toward West: _____ Degrees	d. Toward East: _____ Degrees					f. Westernmost: _____ g. Easternmost: _____		
h. Reason for service arc selection (Optional):								

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

S4a. Total Number of Satellites in Network or System: 3

S4c. Celestial Reference Body (Earth, Sun, Moon, etc.): E

S4b. Total Number of Orbital Planes in Network or System: 3

S4d. Orbit Epoch Date: 3/1/2014

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other
1	1	97.36*	5670	521	506	135.035**	90			

*nominal, +1.2/-0.1

** RAAN will change faster than sun-synchronous rate during transition to 13:30PM LMT. RAAN will be within a range of +48.75/-3.75 degrees versus a nominal sun-synchronous profile.

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)	(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)
1	1	0									

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S14. Is the space station(s) controlled and monitored remotely? If YES, provide the location and telephone number of the TT&C control point(s). YES NO

Remote Control (TT&C) Location(s):

S14a. Street Address 1601 Dry Creek Drive, Suite 260			
S14b. City Longmont	S14c. County Boulder	S14d. State / Country CO/USA	S14e. Zip Code 80503
S14f. Telephone Number 303-684-4589		S14g. Call Sign of Control Station (if appropriate)	

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number		S14g. Call Sign of Control Station (if appropriate)	

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number		S14g. Call Sign of Control Station (if appropriate)	

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number		S14g. Call Sign of Control Station (if appropriate)	

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number		S14g. Call Sign of Control Station (if appropriate)	

S14a. Street Address			
S14b. City	S14c. County	S14d. State / Country	S14e. Zip Code
S14f. Telephone Number		S14g. Call Sign of Control Station (if appropriate)	

**FEDERAL COMMUNICATIONS COMMISSION
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S15. SPACECRAFT PHYSICAL CHARACTERISTICS WV 60

S15a. Mass of spacecraft without fuel (kg) 2050.0	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15b. Mass of fuel & disposables at launch (kg) 383.0		
S15c. Mass of spacecraft and fuel at launch (kg) 2433.0	S15f. Length (m) 2.54	S15i. Payload 0.9735
S15d. Mass of fuel, in orbit, at beginning of life (kg) 383.0	S15g. Width (m) 2.54	S15j. Bus 0.866
S15e. Deployed Area of Solar Array (square meters) 13.1	S15h. Height (m) 3.94	S15k. Total 0.8435

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts)	(a) 56	(f) 56	(k) 56	(p) 56
Bus (Watts)	(b) 1954	(g) 1954	(l) 1954	(q) 1954
Total (Watts)	(c) 2010	(h) 2010	(m) 2010	(r) 2010
Solar Array (Watts)	(d) 3574	(i) 3440	(n) 2929	(s) 2819
Depth of Battery Discharge (%)	(e) 35 %	(j) 35 %	(o) 35 %	(t) 35 %

S17. CERTIFICATIONS

a. Are the power flux density limits of § 25.208 met?	YES	NO	X N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	YES	NO	X N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2), and (3) met?	X YES	NO	N/A

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the commission's rules, 47 C.F.R. § 25.114.