

S2348 SAT-STA-20190503-00035 IB2019001332  
DG Consents Sub, Inc.  
WorldView-4



\*with conditions

File # SAT-STA-20190503-00035

Call Sign S2348 Grant Date 05/22/19

(or other identifier)

From 05/22/19 Term Dates period of 30 days

Approved: Stephen J. Duall

Approved by OMB  
3060-0678

Date & Time Filed: May 3 2019 3:07:49:653PM  
File Number: SAT-STA-20190503-00035  
Callsign:

Stephen J. Duall  
Chief, Satellite Policy Branch

FEDERAL COMMUNICATIONS COMMISSION  
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY  
FOR OFFICIAL USE ONLY


APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:  
Request for 30-day STA to Relocate WV-4 (S2348)

1. Applicant

<b>Name:</b>	DG Consents Sub, Inc.	<b>Phone Number:</b>	303-682-1390
<b>DBA Name:</b>		<b>Fax Number:</b>	303-684-1390
<b>Street:</b>	1300 W. 120th Avenue	<b>E-Mail:</b>	libby.smith@digitalglobe.com
<b>City:</b>	Westminster	<b>State:</b>	CO
<b>Country:</b>	USA	<b>Zipcode:</b>	80234
<b>Attention:</b>	Ms Libby Smith		

**ATTACHMENT TO GRANT  
DG Consents Sub, Inc.  
IBFS File No. SAT-STA-20190503-00035**

<b>IBFS File No(s):</b>	SAT-STA-20190503-00035	<p><b>GRANTED – With Conditions</b></p>  <p><b>International Bureau Satellite Division</b></p>
<b>Licensee/Grantee:</b>	DG Consents Sub, Inc.	
<b>Call Sign:</b>	S2348	
<b>Satellite Name:</b>	WorldView-4	
<b>Orbital Location: (required station- keeping tolerance)</b>	Non-geostationary orbit (NGSO) (see Scope of Grant below)	
<b>Administration:</b>	United States of America	
<b>Nature of Service:</b>	Earth Exploration Satellite Service (EESS); Telemetry, tracking, and command (TT&C)	
<b>Scope of Grant:</b>	Special temporary authority for a period of 30 days to conduct TT&C and EESS operations with the WorldView-4 space station (formerly known as GeoEye-2) at an altitude between 450 kilometers and 550 kilometers.	
<b>Service Area(s):</b>	Global See IBFS File Nos. SAT-MOD-20160408-00033, SAT-MOD-20160408-00033, Exhibit 43 at 4; SAT-MOD-20120427-00079, Technical Annex at TA-15.	
<b>Frequencies:</b>	8025-8400 MHz (data downlinks)  Telemetry and Tracking: 120 kHz channel centered on 8386 MHz Receive command: 64 kHz channel centered in 2052 MHz.	

**Operations under this grant must comport with the legal and technical specifications set forth by the applicant or petitioner and with Federal Communication Commission’s rules not waived herein. This grant is also subject to the following conditions:**

1. The power flux-density from operation of the WorldView-4 space station in the 8025-8400 MHz band must not exceed the limits in No. 22.5 or Table 21-4 of the International Telecommunication Union’s Radio Regulations or the limits in ITU-R Recommendation SA-1157.
2. Upon receipt of a conjunction warning from the JSpOC or other source, DG Consents must review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including, but not limited to: contacting the operator of any active spacecraft involved in such warning; sharing ephemeris data and other appropriate operational information with any such operator; modifying spacecraft attitude and/or operations.
3. Because DG Consents must comply with the technical requirements in Part 2 of the Commission’s rules and the above-referenced power flux-density limits, which should prevent harmful interference to other operators in the band, we grant its request for a waiver of the default service rules in 47 CFR § 25.217(b). See *DigitalGlobe, Inc., supra* at para. 15.
4. Transmissions of remote-sensing and telemetry data in the 8025-8400 MHz frequency band may only be made to earth stations coordinated with the National Aeronautics and Space Administration (NASA). DG Consents shall provide the FCC the list of coordinated earth stations.
5. Operations pursuant to this authorization must not cause harmful interference to stations operating in the 2025-2110 MHz band in accordance with the U.S. Table of Frequency Allocations. See 47 CFR § 2.106, Footnote US347.
6. Nothing in this authorization extends the license term for WorldView-4 (Call Sign S2348), which expires on Sept. 5, 2023. See IBFS File No. SAT-MOD-20050511-00097.

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

**ATTACHMENT TO GRANT  
DG Consents Sub, Inc.  
IBFS File No. SAT-STA-20190503-00035**

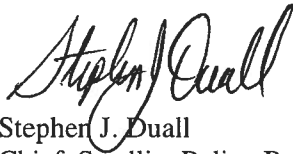
This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 CFR § 0.261, and is effective upon release.

Station licenses are subject to the conditions specified in Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. § 309(h).

<b>Action Date:</b>	May 22, 2019
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<b>Term Dates</b>	<b>From:</b> May 22, 2019	<b>To:</b> period of 30 days
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**Approved:**

  
Stephen J. Duall  
Chief, Satellite Policy Branch

2. Contact

<b>Name:</b>	Henry R. Gola	<b>Phone Number:</b>	202-719-7561
<b>Company:</b>	Wiley Rein LLP	<b>Fax Number:</b>	
<b>Street:</b>	1776 K Street, NW	<b>E-Mail:</b>	hgola@wileyrein.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

(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)

3. Reference File Number or Submission ID

4a. 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):

4b. Fee Classification CXW - Space Station (Non-Geostationary)

5. Type Request

Change Station Location

Extend Expiration Date

Other

6. Temporary Orbit Location

7. Requested Extended Expiration Date

8. Description (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

DG Consents Sub, Inc. requests special temporary authority for 30 days, beginning May 9, 2019, to relocate and operate WorldView-4 (S2348) at orbital altitudes between 450 and 550 km.

9. 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

10. Name of Person Signing  
Libby Smith

11. Title of Person Signing  
Senior Manager and Technology Control Officer

12. Please supply any need attachments.

Attachment 1: Narrative

Attachment 2:

Attachment 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).

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### **Narrative Attachment**

DG Consents Sub, Inc. (“DigitalGlobe”) requests special temporary authority (“STA”) for 30 days, beginning May 9, 2019, to relocate and operate WorldView-4, authorized under Call Sign S2348, at orbital altitudes between 450 and 550 km.<sup>1</sup> DigitalGlobe intends to file a modification application for permanent authority to operate WorldView-4 at 450-550 km and a concurrent 60-day STA application pending FCC review of that modification request.

WorldView-4 is a non-geostationary-satellite orbit satellite currently authorized to provide Earth Expiration Satellite Service (“EESS”) at altitudes between 496 km and 770 km.<sup>2</sup> On January 7, 2019, WorldView-4 experienced a failure in its control moment gyros, preventing the satellite from collecting usable imagery due to the loss of an axis of stability. However, WorldView-4’s authorized communication paths remain operational, and DigitalGlobe maintains control of the satellite.

DigitalGlobe intends to lower WorldView-4 to the 450-550 km range to conduct testing and training. Subject to FCC approval, DigitalGlobe will begin relocation, which DigitalGlobe expects will take about four months. DigitalGlobe will operate only the satellite’s telemetry, tracking, and command (“TT&C”) frequencies during relocation and will do so on a non-interference basis. TT&C communications will occur in the same frequencies as currently authorized, at 8386 MHz (120 KHz) for downlink and 2052 MHz (64 KHz) for uplink. Once at the 450-550 km orbital altitude, DigitalGlobe will conduct X-band data downlink at 8025-8400 MHz at the new altitude in addition to TT&C.

Grant of this STA request will allow DigitalGlobe to maximize the utility of its WorldView-4 satellite, while ensuring complete de-orbit of the impaired satellite. DigitalGlobe will use the WorldView-4 satellite for training purposes at 450-550 km—enhancing the skills and experience of DigitalGlobe’s network operators. In addition, lowering WorldView-4 to 450-550 km will ensure satellite re-entry within 25 years even in the unlikely event that the satellite experiences further anomalies. Currently, the TT&C functions on WorldView-4 are fully functional, and the spacecraft has fuel reserves sufficient to support testing at 450-550 km and subsequently perform maneuvers to facilitate complete de-orbit in 1-2 weeks. Therefore, authorization here serves the public interest.

DigitalGlobe has notified the National Oceanic and Atmospheric Administration of its intent to relocate and operate WorldView-4 at 450-550 km, as required. In addition, DigitalGlobe will coordinate with the Consolidated Space Operations Center at the Vandenberg Air Force Base, as well as with all potentially affected satellite operators authorized at orbital altitudes between 450 and 550 km.

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<sup>1</sup> 47 C.F.R. § 25.120.

<sup>2</sup> See *DG Consents Sub, Inc.*, Stamp Grant, IBFS File No. SAT-MOD-20160408-00033, Call Sign S2348 (granted Aug. 5, 2016).