

S2110 SAT-STA-20140612-00063 IB2014001165
Iridium Constellation LLC
Iridium



File # SAT-STA-20140612-00063
Call Sign S2110 Grant Date 07/29/14
(or other identifier)
Term Dates period of
From 08/26/14 To: 180 days
Approved: *Stephen J. Duall*
Stephen J. Duall
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

Date & Time Filed: Jun 12 2014 11:14:02:730AM
File Number: SAT-STA-20140612-00063
Callsign:

FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPACE STATION SPECIAL TEMPORARY AUTHORITY
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
180-day Iridium Orbital Debris STA for one SV


1. Applicant

Name:	Iridium Constellation LLC	Phone Number:	703-287-7400
DBA Name:		Fax Number:	703-287-7450
Street:	1750 Tysons Boulevard	E-Mail:	donna.bethea-murphy@iridium.com
	Suite 1400		
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -
Attention:	Donna Bethea-Murphy		

Attachment to Grant
IBFS File No. SAT-STA-20140612-00063
Call Sign S2110

The application of Iridium Constellation LLC (Iridium), IBFS File No. SAT-STA-20140612-00063, for special temporary authority for a period of 180 days is granted, commencing August 26, 2014, subject to the following conditions:

1. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Iridium's own risk.
2. Grant of this special temporary authority is without prejudice to any action on IBFS File No. SAT-MOD-20080701-00140.
3. 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-STA-20140612-00063</u>
	Call Sign <u>S2110</u> Grant Date <u>07/29/14</u> (or other identifier)
	Term Dates period of From <u>08/26/14</u> To: <u>180 days</u>
	Approved: <u><i>Stephen J. Duall</i></u> Stephen J. Duall Chief, Satellite Policy Branch

2. Contact

Name:	Jennifer D. Hindin	Phone Number:	202-719-4975
Company:	Wiley Rein LLP	Fax Number:	202-719-7049
Street:	1776 K Street, NW	E-Mail:	jhindin@wileyrein.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006 -
Attention:		Relationship:	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.)

Iridium requests special temporary authority for one hundred eighty (180) days to operate one space station in a manner that complies with the updated orbital debris mitigation plan Iridium previously submitted to the Commission.

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
Donna Bethea Murphy

11. Title of Person Signing
Vice President, Regulatory Engineering

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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**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

Application of)	
)	
Iridium Constellation LLC)	Call Sign: S2110
)	
For Special Temporary Authority)	File No. SAT-STA-2014_____

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

On May 29, 2014, the Commission granted the application of Iridium Constellation LLC (“Iridium”) for special temporary authority (“STA”)¹ to operate one space station in its non-geostationary satellite orbit (“NGSO”) constellation for thirty (30) days in a manner that complies with the updated orbital debris mitigation plan Iridium previously submitted to the Commission (the “Iridium ODM Plan”).² Iridium hereby requests STA to operate the same space station in its NGSO constellation for one hundred eighty (180) days in a manner that complies with the Iridium ODM Plan.³

Grant of this application serves the public interest because it would allow Iridium to operate this additional satellite in accordance with the Commission’s current orbital debris mitigation guidelines and would be wholly consistent with authority granted to other NGSO

¹ Application of Iridium Constellation LLC for Special Temporary Authority, SAT-STA-20140514-00051 (granted May 29, 2014).

² See Application of Iridium Constellation LLC for Minor Modification of Mobile Satellite Service Authorization to Update Orbital Debris Mitigation Requirements, Call Sign S2110, File No. SAT-MOD-20080701-00140 (filed Jul. 1, 2008). The orbital debris mitigation plan in File No. SAT-MOD-20080701-00140 is hereby incorporated by reference.

³ Iridium currently has STA through June 22, 2014 to operate six space stations in its NGSO constellation in a manner that complies with Iridium ODM Plan. Application of Iridium Constellation LLC for Special Temporary Authority, SAT-STA-20131114-00134 (granted Dec. 24, 2013) (the “Six Satellite STA”). The instant request is separate and apart from the Six Satellite STA.

operators. In 2015, Iridium expects to begin the launch of Iridium NEXT, its cutting-edge, second-generation satellite constellation. Importantly, until the Iridium NEXT constellation is phased in to replace the current constellation, grant will ensure continuity of reliable service for the critical communications needs of first responders, public safety users, the U.S. military, the U.S. government, commercial users, and consumers around the globe.

I. BACKGROUND

In 2002, the Commission approved an end-of-life disposal plan developed by Iridium's predecessor.⁴ That plan contemplates placement of spacecraft in a disposal orbit at a perigee altitude of approximately 250 kilometers, which would result in atmospheric re-entry within one year. In 2004, the Commission conducted a rulemaking on orbital debris mitigation and determined that either placing NGSO spacecraft in an orbit that would allow re-entry to the Earth's atmosphere within twenty-five years or boosting the spacecraft to a perigee altitude level above the low-Earth orbit would "suggest that the space station will operate consistent with the public interest."⁵ In 2008, Iridium filed an application requesting that the FCC modify its authorization to operate its NGSO satellites consistent with this updated orbital debris plan.⁶ The 2008 application remains pending.

II. REQUEST FOR SPECIAL TEMPORARY AUTHORITY

The Commission has granted STA for Iridium to operate six satellites in its NGSO constellation in a manner compliant with the Iridium ODM Plan. Separate and apart from that

⁴ See *Application of Space Station System Licensee, Assignor, and Iridium Constellation LLC, Assignee, for Consent to Assignment of License*, File No. SAT-ASG-20010319-00025, Memorandum Opinion, Order and Authorization, 18 FCC Rcd 2271, ¶ 47 (I.B. 2002).

⁵ *Mitigation of Orbital Debris*, 19 FCC Rcd 11567, ¶ 84 (2004) ("*Orbital Debris Order*").

⁶ *Iridium Constellation LLC, Orbital Debris Mitigation*, File No. SAT-MOD-20080701-00140 (filed July 1, 2008).

STA grant, this request seeks special temporary authority for Iridium to operate for up to one hundred eighty (180) days one satellite in its existing constellation in a manner that complies with the Iridium ODM Plan. Following fuel gauging estimates, Iridium determined that while this satellite has ample fuel to achieve an orbit with a perigee altitude of 600 km, which leads to a predicted orbital lifetime of less than twenty-five years, this satellite does not contain fuel reserves sufficient for a controlled de-orbit to 250 km.

III. PUBLIC INTEREST STATEMENT

Grant of the requested special temporary authority will serve the public interest and is necessitated by extraordinary circumstances. In particular, grant of this application will enable Iridium to maximize the useful life of this satellite. Iridium anticipates that launch of Iridium NEXT, its second-generation satellite constellation, will begin in 2015. Until Iridium NEXT is phased in to replace the current constellation, grant of this STA will enable the Iridium constellation to continue to provide highly reliable service to customers who use Iridium's system for communications throughout the world, particularly in regions that are not reached by terrestrial services. It will also benefit Iridium's significant government users, such as the Department of Defense and many federal U.S. bureaus, agencies and departments. And it would avoid service disruptions that could impede the use of Iridium's services in national and international emergencies, in which Iridium's system has played a vital role in the past.

Grant of the requested STA is also consistent with Commission policy and precedent. Indeed, since the FCC endorsed a twenty-five year de-orbit policy for NGSO operators in 2004, no operator has been required to follow the stringent one-year re-entry standard earlier proposed by Iridium. For example, the Commission approved the orbital debris mitigation plan of Orbcomm Licensee Corporation to move its satellites to a perigee altitude of 635-680 kilometers

from which the satellites will be expected to re-enter the atmosphere within twenty-five years.⁷

And the FCC also approved Globalstar's amended post-mission disposal plan to raise its satellites at their end-of-life to a 1514 kilometer graveyard orbit.⁸

IV. CONCLUSION

For these reasons, Iridium respectfully requests that the Commission expeditiously grant an STA to allow operation of a satellite with the capability to achieve atmospheric re-entry within twenty-five years at end of life, for a period of up to one hundred eighty (180) days while its application requesting modification of its authorization to reflect Iridium's updated orbital debris mitigation plan remains pending.

Respectfully submitted,

By: Donna Bethea-Murphy

Donna Bethea-Murphy
Vice President, Regulatory
Engineering
Iridium Satellite LLC
1750 Tysons Boulevard
Suite 1400
McLean, VA 22102

June 12, 2014

⁷ See Modification Application of Orbcomm Licensee Corp. File No. SAT-MOD-20070531-00076 at 28-31 (filed May 31, 2007) (approved by *Applications by Orbcomm Licensee Corp. for Authority to Modify its Non-Voice, Non-Geostationary Satellite System*, Order and Authorization, 23 FCC Rcd 4804 (Int'l Bur. 2008)).

⁸ See Globalstar LLC, Amended Orbital Debris Mitigation Plan, File Nos. SAT-MOD-20030606-00098 and SAT-AMD-20050105-00003 (stamp-granted January 28, 2005, Public Notice, DA No. 05-316 (rel. Feb. 4, 2005)).