



File # SAT-STA-20190710-00058

Call Sign S2110 Grant Date 09/04/19
(or other identifier)

From 07/31/19 Term Dates period of To: 180 days

Approved: Stephen J. Duall
Chief, Satellite Policy Branch

Approved by OMB
3060-0678

Date & Time Filed: Jul 10 2019 3:15:27:416PM
File Number: SAT-STA-20190710-00058
Callsign:

*with conditions

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 STA for Block 1 extension

1. Applicant

Name:	Iridium Constellation LLC	Phone Number:	703-287-7518
DBA Name:		Fax Number:	
Street:	1750 Tysons Boulevard	E-Mail:	maureen.mclaughlin@iridium.com
	Suite 1400		
City:	McLean	State:	VA
Country:	USA	Zipcode:	22102 -
Attention:	Ms Maureen C McLaughlin		

ATTACHMENT TO GRANT
Iridium Constellation LLC
IBFS File No. SAT-STA-20190710-00058

IBFS File No(s):	SAT-STA-20190710-00058	<p>GRANTED - With Conditions</p>  <p>International Bureau Satellite Division</p>
Licensee/Grantee:	Iridium Constellation LLC (Iridium)	
Call Sign:	S2110	
Satellite Name:	Iridium 1 st Generation Constellation	
Orbital Location: (required station-keeping tolerance)	763 km circular orbit, 86.4° inclination	
Administration:	United States of America	
Nature of Service:	Telemetry, tracking and command (TT&C)	
Scope of Grant:	Special temporary authorization for a period of 180 days to conduct TT&C operations with the SV97 satellite, which is an in-orbit spare in Iridium's Big LEO band non-geostationary satellite orbit (NGSO) constellation ¹	
Service Area(s):	N/A	
Frequencies:	19.4-19.6 GHz (space-to-Earth) 29.1-29.3 GHz (Earth-to-space)	
<p>Unless otherwise specified herein, 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:</p> <p>1. Operations must comport with the conditions in IBFS No. SAT-MOD-20171030-00146.</p>		
<p>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.</p> <p>This action is taken pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.</p> <p>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).</p>		
Action Date:	September 4, 2019	
Term Dates	From: July 31, 2019	To: period of 180 days
Approved:	 Stephen J. Duall Chief, Satellite Policy Branch	

¹ Iridium was previously granted a modification of its authorization under Call Sign S2110 to extend the license term until July 31, 2019. See IBFS File No. SAT-MOD-20171030-00146, granted Jan. 18, 2018, as corrected on Mar. 22, 2018. Grant of this special temporary authority request will permit TT&C operations with SV97 for a period of 180 days after the expiration of the current license term. Iridium expects that SV97 will be decommissioned in November 2019. IBFS File No. SAT-STA-20190710-00058, Narrative, at 1-2. Iridium concurrently filed a request for special temporary for a period of 30 days to conduct TT&C operations with SV97 pending grant of this 180-day STA request, IBFS File No. SAT-STA-20190710-00059, granted July 25, 2019.

2. Contact

Name:	Jennifer D. Hindin	Phone Number:	202-719-4975
Company:	Wiley Rein LLP	Fax Number:	
Street:	1776 K St 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
2020-01-27 00:00:00.0

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 seeks STA for 180 days to extend the license term for its Block 1 satellites until Jan. 27, 2020.

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
Maureen C McLaughlin

11. Title of Person Signing
Vice President Public Policy

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-2019 _____
)	

APPLICATION FOR SPECIAL TEMPORARY AUTHORITY

Iridium Constellation LLC (“Iridium”) hereby requests special temporary authority (“STA”) for one hundred eighty (180) days,¹ commencing July 31, 2019, to modify its authorization for its “Big LEO” band non-geostationary satellite orbit (“NGSO”) constellation (call sign S2110) to extend the license term for its first-generation (“Block 1”) satellites until January 27, 2020.²

On January 18, 2018, the Commission granted Iridium’s license modification to extend the license term for its Block 1 satellites until July 31, 2019 “so that it has sufficient time for its new Iridium NEXT constellation to become fully operational, including having a full complement of Iridium NEXT spare satellites in orbit.”³ Now almost eighteen months later, Iridium nearly has completed the complex, real-time replacement of Block 1 with Iridium NEXT, with just one Block 1 satellite, SV97, remaining to be deorbited. Iridium expects the final maneuver in this transition from Block 1 to Iridium NEXT to occur in November 2019,

¹ See 47 C.F.R. § 25.120(b)(2). Concurrently with this application, Iridium is also filing a request for STA for 30 days.

² See Iridium Constellation LLC, *SAT-MOD-20171030-00146*, Stamp Grant (Jan. 18, 2018, corrective grant Mar. 22, 2018) (“Block 1 MOD Grant”).

³ *Id.*, Narrative, at 1.

when an Iridium NEXT vehicle will complete its drift to the Plane 4 spare satellite orbit. Following its arrival and subsequent testing, Iridium expects to deorbit SV97.

Accordingly, Iridium requests STA for 180 days to extend the license term for its Block 1 satellites until January 27, 2020, to allow sufficient time for Iridium to complete its transition to its Iridium NEXT fleet. Extending the Block 1 license term will serve the public interest by helping to ensure continuity of service for Iridium's end users.

I. BACKGROUND AND REQUEST FOR SPECIAL TEMPORARY AUTHORITY

On January 1, 1995, the FCC authorized Iridium's predecessor in interest to launch and operate an NGSO mission constellation of 66 satellites in the Big LEO band along with 12 in-orbit spares.⁴ On August 1, 2016, the Commission authorized Iridium to construct, deploy and operate its second-generation satellite constellation, commonly known as Iridium NEXT, with 66 space stations and up to 15 "second-generation in-orbit satellites."⁵ Specifically, the grant "[was] based on a planned one-for-one substitution of first-generation satellites by second-generation satellites, but [did] not preclude Iridium seeking authorization at a later date to retain some first-generation satellites as spares."⁶ In January 2018, the Commission extended the Block 1 license term to July 31, 2019, and provided authority "to transit and maintain up to 18 first-generation satellites as in-orbit spares, and to maneuver and activate such spares as necessary."⁷

⁴ See *Application of Motorola Satellite Communications, Inc.*, Order and Authorization, 10 FCC Rcd 2268, ¶ 25 (IB 1995).

⁵ See generally *Iridium Constellation LLC, Application for Modification of License to Authorize a Second-Generation NGSO MSS Constellation*, Order and Authorization, 31 FCC Rcd. 8675, ¶¶ 45-47 (Aug. 1, 2016) ("Iridium NEXT Order").

⁶ *Id.*, ¶ 5 n.22.

⁷ Block 1 MOD Grant, at 1.

Iridium has completed nine successful Iridium NEXT launches. Following positioning and completion of in-orbit testing, Iridium NEXT satellites have been brought into operation and replaced first-generation satellites in specific orbital slots. Currently, just one Block 1 satellite remains, SV97, which Iridium utilizes as a spare in Plane 4.

Iridium has commenced drift of an Iridium NEXT satellite to Plane 4 to replace SV97, and Iridium expects the Iridium NEXT satellite to arrive in November 2019. Once it arrives and undergoes testing, Iridium will deorbit SV97. Accordingly, Iridium requests STA to extend the Block 1 license term to January 27, 2020, which would provide Iridium with the time necessary to complete the transition from Block 1 to the Iridium NEXT constellation.

II. PUBLIC INTEREST STATEMENT

Grant of this STA request will serve the public interest. Iridium NEXT “provide[s] mobile voice and data services to end users on a network with improved voice quality and enhanced data transmission speeds.”⁸ Iridium has nearly completed the unprecedented engineering feat to replace its Block 1 constellation with Iridium NEXT in real-time. Just one Block 1 satellite remains to be deorbited. Providing Iridium with the time necessary to replace the remaining Block 1 satellite will allow Iridium to ensure the continuity of robust service for Iridium’s customers.

Additionally, the STA will have a negligible effect on orbital debris mitigation. As Iridium has been launching second-generation satellites, it has been de-boosting and de-orbiting its first-generation satellites on a rolling basis. Having positioned its storage orbit just 15 km below mission altitude, the remaining Block 1 satellite has been conserving fuel that may be necessary for its de-orbiting once the Iridium NEXT spare satellite arrives.

⁸ Iridium NEXT Order, ¶ 1.

Grant of this STA request also poses no interference risk. The location of the last Block 1 spare satellite's orbit has ensured safe station-keeping without any overlap in orbital position.

III. CONCLUSION

For the reasons herein, Iridium respectfully requests that the Commission grant STA to extend the license term for Iridium's Block 1 satellite constellation for 180 days to January 27, 2020.

Respectfully submitted,

Jennifer D. Hindin
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By: *Maureen C. McLaughlin*
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July 10, 2019