

**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,<sup>1</sup> 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.<sup>2</sup>

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.”<sup>3</sup> 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,

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

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

<sup>3</sup> *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.<sup>4</sup> 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."<sup>5</sup> 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."<sup>6</sup> 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."<sup>7</sup>

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

<sup>5</sup> 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").

<sup>6</sup> *Id.*, ¶ 5 n.22.

<sup>7</sup> 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.”<sup>8</sup> 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.

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<sup>8</sup> 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,

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