

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

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In the Matter of	)	
	)	
Iridium Constellation LLC	)	File No. SAT-MOD-20120813-00128
	)	
Application for Modification of	)	
Authorization (Call Sign S2110)	)	

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**OPPOSITION OF IRIDIUM CONSTELLATION LLC**

Iridium Constellation LLC (“Iridium”), pursuant to Section 25.154(c) of the rules of the Federal Communications Commission (the “Commission” or “FCC”),<sup>1</sup> hereby submits this Opposition to the Petition to Deny or Dismiss, in Part (the “Petition”) filed by HNS License Sub, LLC (“Hughes”) in the above-captioned proceeding.<sup>2</sup> Iridium’s modification application (the “Modification Application”) seeks authority periodically to co-locate and operate additional satellites in Iridium’s mission constellation.<sup>3</sup> As described in the Modification Application, and herein, only one of the two satellites in each co-located pair will utilize the Ka-band feeder link to receive telemetry, tracking, and control (“TT&C”) communications. As such, the proposed configuration will not require more bandwidth in the 29.25-29.3 GHz shared with GSO FSS networks and therefore moots the limited concern raised by Hughes. Moreover, grant of the Modification Application will create clear public interest benefits by improving service

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<sup>1</sup> 47 C.F.R. § 25.154(c).

<sup>2</sup> Petition to Deny or Dismiss, in Part of HNS License Sub, LLC, File No. SAT-MOD-20120813-00128 (filed Oct. 31, 2012) (“Hughes Petition”).

<sup>3</sup> Application of Iridium Constellation LLC for Modification of Authorization (Call Sign S2110), File No. SAT-MOD-20120813-00128 (Aug. 13, 2012) (“Modification Application”).

quality for customers and allowing Iridium engineers the flexibility to address efficiently occasional system faults and anomalies. The proposed Modification Application is fully consistent with the FCC's rules, policy, and precedent. Accordingly, the Commission should grant the Modification Application.<sup>4</sup>

**I. IRIIDIUM'S PROPOSED OPERATION OF CO-LOCATED SATELLITES WILL NOT CHANGE INTERFERENCE IN THE KA-BAND**

Iridium's proposed configuration of co-located satellites will not increase bandwidth use in the 29.25-29.3 GHz band.<sup>5</sup> The touchstone of Iridium's configuration of co-located satellites is that each pair will operate in tandem as the functional equivalent of one satellite. This means that for each set of co-located satellites, there will continue to be only one satellite receiver using the 29.25-29.3 GHz band.

Hughes incorrectly assumes that each co-located Iridium satellite will use the same Ka-band frequencies for TT&C, thereby increasing Iridium's susceptibility to interference from GSO transmissions in the shared 29.25-29.3 GHz band.<sup>6</sup> However, Iridium's configuration demonstrates otherwise. In each pair of co-located satellites, just one satellite will use Ka-band frequencies to receive TT&C communications. The other will receive a relay of any TT&C information from the first satellite via inter-satellite link

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<sup>4</sup> The Commission's Public Notice omitted a 50 MHz portion of Iridium's authorized Ka-band feeder uplink. *See* Public Notice, Policy Branch Information: Satellite Space Applications Accepted for Filing, Report No. SAT-00901, at 1 (Sept. 28, 2012) ("Public Notice"). The Hughes Petition's focus on the interference environment in the omitted frequencies demonstrates that Hughes was not prejudiced by the Public Notice.

<sup>5</sup> Modification Application, at 4-5; Exhibit A.

<sup>6</sup> *See* Hughes Petition, at 2, 6. FCC Rule 25.154 requires that petitions "[c]ontain specific allegations of fact (except for those of which official notice may be taken) to support the specific relief requested" and that they be "supported by affidavit of a person or person with personal knowledge thereof . . ." 47 C.F.R. § 25.154(a)(4). The Hughes Petition contains no such affidavit and should therefore be treated as an informal objection under Commission rules. *See* 47 C.F.R. § 25.154(b)(1).

frequencies outside the 29.25-29.3 GHz band. This co-location configuration unequivocally refutes Hughes' concern of an additional strain on the existing spectrum sharing environment between Iridium and GSO FSS networks.

Iridium notes that Hughes used the majority of its Petition as a vehicle to reargue interference issues that arose as part of prior Hughes applications. The Commission should strike those arguments from this record as superfluous.<sup>7</sup>

**II. GRANT OF IRIDIUM'S MODIFICATION APPLICATION WILL PROVIDE IMPORTANT PUBLIC INTEREST BENEFITS**

Grant of Iridium's modification application will generate definitive public interest benefits for consumers. Hughes claims that the application's suggested potential benefits are "speculative."<sup>8</sup> To the contrary, grant of the Modification Application will further the FCC's policy of providing satellite operators the necessary flexibility to react to technological changes within their fleets. Further, the flexibility achieved by the proposed co-location of satellites will improve global service and lower costs.

As described in the Modification Application, grant will enable Iridium engineers to implement a more flexible configuration of its satellite constellation when necessary to mitigate quickly and efficiently occasional system faults and anomalies.<sup>9</sup> This added functionality and ability to utilize software-based solutions will lower costs, produce more L-band connectivity, and improve service to Iridium users, many of whom rely on Iridium to provide critical communication services during national and international emergencies. While the Petition casually asserts that "flexibility for its own sake" is not

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<sup>7</sup> See Hughes Petition, at 3-6.

<sup>8</sup> See Hughes Petition, at 7.

<sup>9</sup> Modification Application, at 4.

a public interest benefit, flexibility that reduces problem-solving costs and enhances service capabilities to users such as first responders, the Federal government, and aid organizations cannot be written off as a “vague generalit[y]” and unmistakably serves the public interest.<sup>10</sup>

Further, the flexibility contemplated by Iridium’s modification application to improve service and abate sporadic system anomalies is precisely the type of satellite system management encouraged by the Commission. In its evaluation of modification applications, “the Commission has determined that spacecraft design decisions should be left to each space station licensee, because the licensee is in a better position to determine how to tailor its system to meet the particular needs of its customer base.”<sup>11</sup> This “flexible” policy “allow[s] satellite operators to respond promptly to changing technological . . . conditions.”<sup>12</sup> As a result, “[i]f a [modification] proposal will not cause interference to other licensed operations, the Commission generally authorizes it if it is otherwise in the public interest.”<sup>13</sup>

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<sup>10</sup> Cf. Hughes Petition, at 6-7.

<sup>11</sup> *DigitalGlobe, Inc.*, Order and Authorization, 20 FCC Rcd 15696, ¶ 9 (I.B. 2005).

<sup>12</sup> *Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service*, Memorandum Opinion and Order, 3 FCC Rcd 6972, ¶ 2 (1988); see also *DigitalGlobe, Inc.*, ¶ 9.

<sup>13</sup> *DigitalGlobe, Inc.*, ¶ 9 (citing *EarthWatch Inc.*, Order and Authorization, 16 FCC Rcd 15985, ¶ 10 (I.B. 2001)).

**III. CONCLUSION**

Accordingly, because the co-location of satellites will generate concrete public interest benefits and will not make the Iridium constellation any more susceptible to interference from co-frequency GSO FSS operations in the 29.25-29.3 GHz band, the Commission expeditiously should grant the Modification Application.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I, Jackie Martin, do hereby certify that on this 15th day of November 2012, I caused copies of the foregoing "Opposition of Iridium Constellation LLC" to be delivered to the following via First Class U.S. mail:

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