

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

In the Matter of)	
)	
Iridium Satellite LLC)	File Nos. SES-MOD-20130416-00322;
)	Call Sign E960132
)	
Iridium Carrier Services LLC)	File No. SES-MOD-20130416-00326;
)	Call Sign E960622
)	
Applications for Blanket Earth Station)	
AMS(R)S Authority)	

REQUEST TO HOLD IN ABEYANCE

Inmarsat Inc. (“Inmarsat”) requests that the Commission hold in abeyance the processing of the above-referenced applications (“Applications”)¹ of Iridium Satellite LLC and Iridium Carrier Services LLC (together, “Iridium”) until Iridium provides sufficient technical information regarding the proposed AMS(R)S operations to allow parties an opportunity to meaningfully evaluate the Applications.² Specifically, the Applications do not contain sufficient technical information regarding the earth station terminals or the proposed AMS(R)S operations to allow evaluation of potential changes to the interference environment. Further, the proposed AMS(R)S earth station operations appear in some respects to be broader in scope than the existing authority to use the Iridium MSS spacecraft to provide AMS(R)S. Therefore, Inmarsat respectfully requests that the Commission require Iridium to supplement the Applications in a manner that will allow meaningful public comment.

¹ See Public Notice, Rep. No. SES-01700 at 4-5 (rel. Nov. 19, 2014) (“Public Notice”). Inmarsat has no objection to the Commission derestricting this proceeding to enable full discussion of the issues.

² Alternatively, the Commission could dismiss the Applications without prejudice to Iridium’s refiling with the full technical specifications and showings required for earth station applications.

I. BACKGROUND

The Applications seek authority to operate blanket licensed mobile terminals for Iridium's proposed AMS(R)S service in the 1618.725-1626.5 MHz band.³ In 2013, the Commission authorized the provision of AMS(R)S in this band on the Iridium MSS satellite network.⁴ The Applications appear to be intended to seek the corresponding earth station authority contemplated by that 2013 Commission decision.

In the proceeding leading to the 2013 decision, Inmarsat and other satellite operators raised a number of concerns about Iridium's proposed AMS(R)S operations, most notably concerns that previously-licensed systems in the same and adjacent frequencies could be required to limit their operations in order to protect Iridium's new AMS(R)S service from interference.⁵ To address these concerns, the Commission placed a number of limiting conditions on the resulting AMS(R)S satellite authorization for the Iridium MSS system.⁶ The Commission also made clear that Iridium would need to obtain separate earth station authority prior to

³ This band is allocated for MSS uplink transmissions on a primary basis and is allocated for MSS downlink operation only on a secondary basis. The band is also allocated for AMS(R)S on a primary basis regardless of the direction of transmission.

⁴ See *Iridium Constellation LLC, for Authority to Modify License for a Low Earth Orbit Mobile Satellite System*, File Nos. SAT-MOD-19961204-00139, SAT-AMD-20050816-00160, SAT-AMD-2005118-00236, Call Sign: S2110, Memorandum Opinion and Order, DA 13-141 (rel. Feb. 4, 2013) ("*Iridium AMS(R)S Order*").

⁵ See *id.* ¶ 11; see also Letter from Diane Cornell, Vice President Government Affairs, Inmarsat Inc., to Marlene H. Dortch, Secretary, FCC, Written *Ex Parte* Presentation, Application for Authority to Provide Aeronautical Mobile-Satellite (Route) Service Over the IRIDIUM System, File Nos. SAT-MOD-19961204-00139, SAT-AMD-20050816-00160, SAT-AMD-2005118-00236, at 2 (filed Mar. 14, 2012).

⁶ *Iridium AMS(R)S Order* ¶ 16.

commencing AMS(R)S operations in the United States and on U.S. commercial aircraft, and left open certain issues to be addressed in the context of the associated earth station applications.⁷

The satellite authorization for AMS(R)S over the Iridium network is limited to oceanic, polar and remote regions “consistent with Inmarsat’s request, the ICAO SARPs and the FAA’s Technical Standard Orders.”⁸ The Commission acknowledged that “[a]s Inmarsat correctly observes, the ICAO and FAA standards are premised on Iridium terminals operating in an interference environment suitable for their operations such as oceanic airspace, and neither ICAO nor the FAA has made a favorable finding concerning Iridium AMS(R)S operations in the more unfavorable interference environment of more intensively used airspace.”⁹ For Iridium’s proposed AMS(R)S operations with respect to the U.S, the FAA’s testing and analysis were limited to oceanic airspace,¹⁰ as expressly acknowledged in the satellite proceeding by the operator of the Iridium MSS system.¹¹ Indeed, AMS(R)S generally is not used in U.S. continental airspace due to the presence of an extensive line-of-sight communications network operating in the VHF band.¹² Moreover, while the Commission clearly defined oceanic and

⁷ *Id.* ¶ 14.

⁸ *Id.* ¶ 10 (referencing Standards and Recommended Practices (“SARPs”) developed by the International Civil Aviation Organization (“ICAO”) and the Federal Aviation Administration (“FAA”) Technical Standards Order, TSO-C159a).

⁹ *Iridium AMS(R)S Order* ¶10 n.32.

¹⁰ See Letter from Diane Cornell, Vice President, Governmental Affairs, Inmarsat Inc., to Marlene H. Dortch, Secretary, FCC, Application for Authority to Provide Aeronautical Mobile-Satellite (Route) Service Over the IRIDIUM System, File Nos. SAT-MOD-19961204-00139, SAT-AMD-20050816-00160, SAT-AMD-20051118-00236, at 2 (filed Jan. 11, 2012) (“Inmarsat Comments”); *see also Iridium AMS(R)S Order* ¶ 10 n.32.

¹¹ See Letter from Donna Bethea Murphy, Vice President Regulatory Engineering, Iridium to Marlene H. Dortch, Secretary, FCC, Written *Ex Parte* Presentation, IBFS File No. SAT-MOD-19961204-00139, at 3 (filed Dec. 13, 2011) (referencing the FAA June 2011 authorization for “operation in U.S. oceanic airspace using Iridium”).

¹² See Inmarsat Comments at 2; *see also Iridium AMS(R)S Order* ¶ 10 n.31.

polar regions, it did not define the term “remote areas,” leaving this to be defined by appropriate individual countries and airspace authorities based on the particular circumstances.¹³

The *Iridium AMS(R)S Order* also contains a condition requiring that any additional protection for AMS(R)S operations from interference from previously authorized MSS operations in adjacent frequency bands, beyond that afforded by existing arrangements, be sought through new or modified inter-operator arrangements.¹⁴ To date, such coordination with Inmarsat has not occurred.

In the context of the Iridium satellite authorization, Inmarsat raised issues relating to the potential for interference when Iridium and Inmarsat aeronautical earth station (“AES”) terminals are installed on the same aircraft. The Radio Technical Commission for Aeronautics (“RTCA”), which is the U.S. Federal Advisory Committee for technical aviation issues, has recognized that simultaneous independent operation of Iridium and Inmarsat AES equipment on the same aircraft has the potential to cause significant interference to Iridium AMS(R)S services and that no generally applicable and technically feasible means of mitigating the potential for interference could be identified.¹⁵ Inmarsat’s position at that time was that any such interference issues between Inmarsat and Iridium AES operating on the same aircraft could be left up to the marketplace for resolution. Thus, Inmarsat requested that cautionary language regarding the constraints identified by RTCA be incorporated as a condition to any AMS(R)S earth station authorization that may be granted to Iridium.¹⁶ The Commission identified this as an issue to be addressed in the context of future AMS(R)S earth station applications.

¹³ *Iridium AMS(R)S Order* ¶ 10 n.31.

¹⁴ *Id.* ¶ 16.

¹⁵ *See* Inmarsat Comments at 3-4.

¹⁶ *See Iridium AMS(R)S Order* ¶ 14 n.39.

II. ANTENNA SPECIFICATIONS

As an initial matter, there is no indication in the Applications of the specific equipment that Iridium proposes to use in providing AMS(R)S, and insufficient technical information otherwise exists to evaluate the potential changes to the interference environment occasioned by Iridium's proposed operations. The Applications identify the antenna terminal type at issue through a vague footnote reference to "portable handheld terminals."¹⁷ Although Iridium filed a clarification to the Applications identifying the antenna as "the first antenna type shown in each license,"¹⁸ nowhere does Iridium identify the model name or number of the antenna terminal that is the subject of the Applications.¹⁹ Moreover, the Applications do not include any FCC Form 312 Schedule B technical information regarding the proposed AMS(R)S operations. Iridium indicates in the Applications that AMS(R)S will be provided through transceivers "in accordance with the parameters specified in Iridium's blanket license" and that it "is not proposing any change in the transmission characteristics of its earth stations."²⁰ Even assuming that the intended antenna is the Motorola Time Domain Duplex antenna identified in the relevant licenses (which initially were granted almost 20 years ago), the relevant particulars of operations

¹⁷ Applications, Exhibit 2 at n.4.

¹⁸ See Letter from Donna Bethea Murphy, Vice President, Regulatory Engineering, Iridium, to Marlene H. Dortch, Secretary, FCC, File Nos. SES-MOD-20130416-00323, SES-MOD-20130416-00322, Applications of Iridium Satellite LLC and Iridium Carrier Services LLC for Blanket Earth Station AMS(R)S Authority, at 1 (filed Nov. 10, 2014) ("Iridium Supplement").

¹⁹ Adding further lack of clarity to Iridium's reference to the "first antenna type shown in each license," the copies of the licenses available in IBFS list the three distinct licensed antenna types in a different order in each section of the license.

²⁰ Applications, Exhibit 2 at n.4.

for the proposed AMS(R)S terminals cannot be discerned from the reference copy of the licenses or the Public Notice.²¹

Such technical information still is needed to evaluate the potential interference environment in the context of a new service, particularly in cases such as this where the Commission has deferred addressing interference issues to the earth station application. In this case, the Commission anticipated that interference protection issues would be addressed in the context of future AMS(R)S applications. In addition, the technical specifications of the antenna may be needed to evaluate the potential for interference that occurs when Iridium and Inmarsat AES terminals are installed on the same aircraft and to confirm that the market-based solutions that Inmarsat previously had envisioned still would be a reasonable solution to any potential interference issue.

III. SCOPE OF AUTHORITY REQUESTED

It is also unclear from the Applications whether the geographic scope and level of protection Iridium seeks are consistent with the prescribed limitations adopted in the *Iridium AMS(R)S Order*. In some respects, the Applications appear to seek authority for AMS(R)S earth station operations that is broader than the AMS(R)S authority granted for the Iridium MSS satellite network. Because the *Iridium AMR(S)R Order* contemplates that Iridium would need to seek blanket earth station authority that corresponds to the grant of satellite authority,²² any

²¹ For instance, the reference copy for the Iridium Satellite LLC license (call sign E960132) identifies only receive-only carriers for the Motorola Time Domain Duplex antenna, while the Public Notice for the proposed AMS(R)S operations include transmit carriers with a maximum EIRP/carrier (but not the maximum EIRP density). Similarly, the reference copy for the Iridium Carrier Services LLC license (call sign E960622) identifies emission designators and maximum EIRP/carrier levels that are different than those identified in the Public Notice.

²² *Iridium AMS(R)S Order* ¶ 14.

authority sought that is broader than the scope of that *Order* would require a further, corresponding space station modification.

Most significantly, Iridium does not provide sufficient detail in the Applications to determine the exact geographic area in which AMS(R)S will be provided, but by including “remote areas” in the Applications Iridium seems to seek broader authority within the United States than was granted in the satellite authorization.²³ Iridium’s satellite authorization within the United States covers only oceanic regions. If Iridium is now seeking to expand its authority for AMS(R)S to “remote” parts of the United States, further clarification on the exact geographic scope is warranted, because the Commission declined to define “remote areas” in the *Order*.

Iridium explains in the Iridium Supplement that its AMS(R)S service will be provided only within authorized areas, but explains that its proposed AMS(R)S terminals are designed to attempt communication first with the terrestrial network, and that the aeronautical part of the system will not attempt to communicate with the Iridium satellite network unless contact cannot be made with the terrestrial network.²⁴ As noted above, Inmarsat believes that the AMS(R)S space station authority is limited within U.S. airspace to oceanic regions. Even if the Commission concludes that the satellite authorization includes remote areas, “remote areas” has not been defined and thus it is not possible to determine where within U.S. airspace Iridium is authorized to provide AMS(R)S. If the AMS(R)S system uses the unavailability of the terrestrial network as the only criteria for turning on satellite-based AMS(R)S communications, there could be instances where the proposed AMS(R)S satellite operations would be triggered even though

²³ Iridium Supplement at 1. In contrast, Iridium acknowledges that it is required to “limit AMS(R)S operations outside the United States to the oceanic regions, the Antarctic land mass and adjacent waters, and the remote areas of those territories for which it has successfully completed the agreement seeking process pursuant to ITU Radio Regulation 5.367.” Applications, Exhibit 2 at 2.

²⁴ Iridium Supplement at 1-2.

doing so is outside of the scope of the satellite authorization. Given the ambiguity regarding how the system works, how Iridium will determine whether it can adequately avoid Inmarsat's adjacent operations in any undefined "remote areas," and the absence of salient technical information about the earth station antennas, Inmarsat cannot adequately evaluate the proposed operations at this time.

Moreover, Iridium does not specify the level of protection it is seeking for the proposed AMS(R)S operations. Assuming Iridium is seeking a license subject to the terms of future coordination agreements, grant of the Applications presumably could change the terms of protection. Iridium acknowledges that "any additional protection desired from AMS(R)S operations . . . beyond that afforded by existing arrangements, must be sought through new or modified inter-operator arrangements," but it is not clear from the Applications whether Iridium seeks such additional protection.²⁵ In any event, such additional protection would be premature and inconsistent with the grant of AMS(R)S satellite authority because such inter-operator arrangements have not been coordinated.²⁶ To the extent Iridium is not seeking additional protection, the same limitation imposed in the *Iridium AMS(R)S Order* regarding the absence of any "super-primary" status²⁷ should apply to any earth station authority that ultimately may issue.

IV. CONCLUSION

Inmarsat respectfully requests that the Commission defer action on the Applications until Iridium provides the salient technical characteristics of the antenna and the proposed AMS(R)S operations, and Inmarsat has an adequate opportunity to evaluate and comment on that new data.

²⁵ See Applications, Exhibit 2 at 1.

²⁶ *Iridium AMS(R)S Order* ¶ 11.

²⁷ *Id.* ¶¶ 11, 16.

Such information is necessary to allow Inmarsat and other interested parties a meaningful opportunity to evaluate the potential interference environment created by the introduction of this new service. In addition, Iridium should be required to clarify the geographic scope of its proposed AMS(R)S service and demonstrate that it can and will comply with the limitations adopted in the *Iridium AMS(R)S Order*.

Respectfully submitted,

/s/

Christopher J. Murphy
Vice President, Government Affairs
INMARSAT, INC.
1101 Connecticut Avenue, N.W.
Suite 1200
Washington, D.C. 20036
Telephone: (202) 248-5158

John P. Janka
Elizabeth R. Park
LATHAM & WATKINS LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, D.C. 20004
Telephone: (202) 637-2200

December 19, 2014

CERTIFICATE OF SERVICE

I, Elizabeth R. Park, hereby certify that on this 19th day of December, 2014, I served a true copy of the foregoing Request to Hold in Abeyance of Inmarsat Inc. via first-class mail upon the following:

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

Joseph A. Godles
Goldberg Godles Wiener & Wright LLP
1229 19th Street, NW
Washington, DC 20036

/s/
Elizabeth R. Park