

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

In the Matter of)	
)	
Iridium Carrier Services, LLC)	SES-MOD-20170413-00389 and
)	SES-AMD-20170726-00813
)	
Iridium Satellite, LLC)	SES-MOD-20170413-00388 and
)	SES-AMD-20170726-00812
)	

COMMENTS OF INMARSAT

Inmarsat Inc. (“Inmarsat”) hereby comments on the applications of Iridium Carrier Services, LLC and Iridium Satellite LLC (collectively “Iridium”) two modify Iridium earth station licenses call signs E960622 and E960132 to add the Certus terminals, including the amendments to those applications.¹ Through its applications, Iridium seeks authorization to add additional terminals to its existing earth station licenses to communicate with the Iridium NGSO mobile satellite service constellation in the 1618.725-1626.5 MHz band on a primary basis in the Earth-to-space direction and in the same spectrum in the space-to-Earth direction on a secondary basis. Inmarsat respectfully requests that (1) prior to deciding on Iridium’s application, the Federal Communications Commission require Iridium to demonstrate that it will continue to comply with the conditions imposed on its 2013 authorization to provide aeronautical mobile-satellite (route) service (“AMS(R)S “),² and (2) should the Federal Communications Commission

¹ See Application of Iridium Carrier Services, LLC and Iridium Satellite LLC referenced above; *see also* Satellite Communications Services Satellite Radio Applications Accepted for Filing, *Public Notice*, Report No. SES-01980 (Aug. 9, 2017).

² Iridium Constellation LLC, For Authority to Modify License For A Low Earth Orbit Mobile Satellite System, Memorandum Opinion and Order, 28 FCC Rcd 964 (IB 2013).

decide to grant this application, it condition the grant on Iridium providing the Commission updated ITU filings to ensure that the international filing is consistent with Iridium operations.

Inmarsat operates a global satellite communications system of 13 geostationary space stations offering diverse services in the L- and Ka-Bands, including eight satellites operating in the 1626.5 - 1660.5 MHz (Earth-to-space) and 1525 - 1559 MHz (space-to-Earth) frequency bands. Inmarsat's global L-band satellites provide a plethora of services including mobile voice and data, Internet of Things applications, and vital safety of life services relied upon globally by governments, enterprises, and individuals. These satellites operate under the authority of the United Kingdom, although Inmarsat has requested and received authorization to serve the United States. These satellites are on the Commission's ISAT permitted space station list.³

As the Commission is well aware, given the unique characteristics and allocations across the L-band spectrum, there are many systems that operate throughout this spectrum that provide various essential services, including services relied on for safety of life. Therefore it is imperative that the electromagnetic environment of systems operating in these bands is accurately reflected in the ITU Master International Frequency Register (MIFR). Reviewing the ITU notified parameters for the HIBLEO-2 system⁴ confirms that the proposed uplink EIRP density levels for the Certus terminals are up to 10 dB higher than the levels included in the filing. Because the ITU filing typically reflects an envelope under which operations will occur it is not unusual for a satellite system to operate with parameters that are not exactly the same as those filed. However, exceeding the envelope of the ITU filed parameters requires that the filing administration file a modification to the existing filing, because this excess would have the

³ See <http://www.fcc.gov/isat-list>

⁴ See HIBLEO-2 Part I-S published in IFIC 2847 on 13th June 2017.

potential to increase the interference to existing users and does not allow planning of new systems that could be filed in the future. It is important that all operations of any notified system not exceed levels contained in the ITU MIFR. Since the proposed maximum uplink EIRP density from Certus UT is significantly higher than the maximum level notified with the ITU for the HIBLEO-2 system, these terminals could cause more interference to operators using the same band and could impact users in adjacent bands depending on the out of band emission filters employed by the Certus terminals.

In 2013 the Commission authorized Iridium to provide AMS(R)S in the 1618.725-1626.5 MHz band to remote, oceanic and polar regions, subject to conditions.⁵ Among those conditions, the Commission foreclosed any future claims to increased protection for Iridium’s AMS(R)S from interference caused by previously-authorized adjacent band satellite operations, stipulating that such protection could only be afforded through inter-operator coordination.⁶ Importantly, the Commission determined that deciding on Iridium’s AMS(R)S application was only timely because of the technical standardization work that had occurred at the International Civil Aviation Organization (“ICAO”) and Federal Aviation Administration (“FAA”).⁷ This included the development of an FAA Technical Standard Order specifying performance requirements for Iridium AMS(R)S equipment and FAA approval of the use of Iridium equipment for AMS(R)S in certain airspace.⁸ In contrast, despite recognizing material technical differences between the Iridium Certus terminals and its previous devices, Iridium seeks AMS(R)S authority in the instant application while making clear that no such approvals or performance requirements have

⁵ Iridium Constellation LLC, For Authority to Modify License For A Low Earth Orbit Mobile Satellite System, Memorandum Opinion and Order, 28 FCC Rcd 964 (IB 2013).

⁶ *Id.* ¶ 11

⁷ *Id.* ¶ 9

⁸ *Id.* ¶ 7.

been obtained for the Iridium Certus terminals.⁹ As such, the compatibility between Iridium Certus terminals and other AMS(R)S equipment is not established.

In light of the fact that Iridium has not completed the same technical standardization and FAA approval processes deemed necessary by the Commission prior to granting AMS(R)S authority for Iridium's previous generation of terminals, Inmarsat respectfully recommends that the Commission require Iridium to demonstrate that its Iridium Certus terminals will be able to provide aeronautical services consistent with the conditions imposed in its 2013 AMS(R)S authorization grant before the Commission renders its decision on the present applications. Additionally, should the Commission decide to grant the Iridium applications, Inmarsat respectfully requests that the Commission condition its grant on modification of Iridium's ITU filing to ensure the proposed operation of the Certus terminal is reflected and coordinated per ITU Radio Regulations.

Respectfully submitted,

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⁹ Iridium Carrier Services LLC, SES-MOD-20170413-00389 *et al.*, Narrative at 4.

CERTIFICATE OF SERVICE

I, Giselle Creeser, hereby certify that, on this 8th day of September, 2017, I caused a copy of the foregoing *Comments of Inmarsat* to be served upon the following individuals by U.S. mail:

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Respectfully submitted,

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