

August 19, 2020

BY ECFS

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW, Room TW-A325
Washington, DC 20554

Re: *Ligado Networks Subsidiary LLC, Amendment to License Modification Applications, IBFS File Nos. SAT-AMD-20180531-00045, SAT-AMD-20180531-00044, SES-AMD-20180531-00856; SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091; IB Docket Nos. 12-340, 11-109*

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Federal Communications Commission's ("Commission's") rules,¹ this letter provides notice that on July 24, 2020, Iridium Communications Inc. ("Iridium"), held a call with Commissioner Michael O'Rielly and Erin McGrath, Legal Advisor for Wireless, Public Safety, and International to Commissioner O'Rielly. Iridium was represented by Matt Desch, Chief Executive Officer; Tom Hickey, Chief Legal Officer; Maureen C. McLaughlin, Vice President of Public Policy; Robert McDowell, Cooley LLP; and the undersigned. During the call Iridium discussed the attached presentation concerning the above captioned proceedings.

Please direct any questions concerning this submission to the undersigned.

Respectfully Submitted,

/s/ Bryan N. Tramont
Bryan N. Tramont
Counsel to Iridium Communications Inc.

¹ 47 C.F.R. § 1.1206.

WILKINSON) BARKER) KNAUER) LLP

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Attachment

cc: Commissioner Michael O'Rielly
Erin McGrath



HARMFUL INTERFERENCE TO IRIDIUM FROM LIGADO ORDER

August 2020



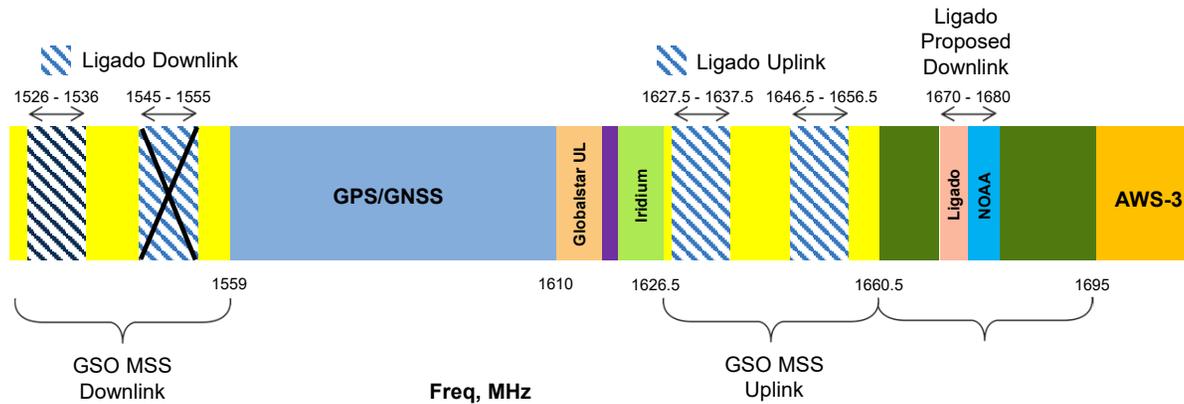


OVERVIEW

- The Ligado Order fails to address Iridium's substantial concerns about harmful interference from Ligado's terrestrial operations.
- The FCC should reduce Ligado's authorized power level in the 1627.5-1637.5 MHz band to protect Iridium's satellite communications system.
- The FCC should impose additional conditions to ensure that Ligado remedies any harmful interference caused to Iridium.



THE LIGADO ORDER WILL RESULT IN HARMFUL INTERFERENCE TO L-BAND SATELLITE SERVICES



- The FCC's grant of terrestrial authority to Ligado Networks results in significant harmful interference to satellite services across the L-band, including GPS, SATCOM providers, and the weather/environmental data community.
- The FCC ignored the purpose of its ATC rules, which require ATC operators like Ligado to resolve any harmful interference from their terrestrial operations to other services.
- The conditions the FCC placed on Ligado are inadequate to protect Iridium.



LIGADO'S OPERATIONS WILL IMPACT THE MANY CRITICAL SERVICES PROVIDED BY IRIDIUM

- Iridium has a 20+ year history of providing essential satellite communications services, including to the DoD.
 - Through the Enhanced Mobile Satellite Services (EMSS) Program, DoD (and other US Government agencies) receive unlimited satellite communications services under a 7-year, \$738.5 million contract (most recent version of EMSS contract signed with Iridium in 2019).
 - Iridium supports the US Government through many different satellite-based services, including terrestrial voice (terrestrial- and maritime-based), aviation services, Internet of Things, push-to-talk, and one-way messaging, with its \$3 billion second-generation satellite constellation.
- Iridium provides the U.S. Air Force (USAF) with Aircraft Secure Communications, Data Exfil, Expeditionary/Infantry COTM, and Air Safety Services.
- The Iridium constellation also enables Satellite Time and Location (STL), a secure timing solution that is 1,000 times stronger than GPS signals.
 - STL can reach deep into buildings and urban canyons, improving access and coverage to provide high accuracy timing even indoors, beyond where GPS signals can reach. STL leverages cryptographic security features, ensuring that our nation's infrastructure is less vulnerable to disruption and attack.



THE ORDER FAILS TO ADDRESS HARMFUL INTERFERENCE TO IRIDIUM

- Iridium's technical analysis (submitted on Sept. 1, 2016, and supplemented on May 22, 2020), aviation-specific technical analysis (submitted on Dec. 14, 2016), and various supplements indicate that Ligado's terrestrial operations, operating only 1 MHz from Iridium's spectrum, would result in significant harmful interference to Iridium's mobile terminals – including those used for mission critical federal government users like DoD and DOE.
- The Order's rejection of rejects Iridium's technical analyses does not withstand minimal scrutiny.
 - Iridium's assumptions regarding simultaneously transmitting devices, power levels and free-space path loss were based on Ligado's proposal, the FCC Rules and a CSMAC report, respectively, so the Order's criticism of these assumptions are without merit.
- The Order fails to address the consequences of harmful interference to Iridium's aviation services and without elaboration treats interference to aviation services the same as any other Iridium MSS service.



THE 2005 ATC OOB E LIMITS WILL NOT PROTECT IRIDIUM

- The out-of-band emissions (OOBE) levels adopted in the 2005 ATC Order were premised on a far smaller number of user terminals than Ligado now plans to deploy. The FCC's decision to retain these levels for Ligado is unsupported by the record.
- Ligado's predecessor, MSV, even acknowledged that the limits adopted in the 2005 ATC Order would need to be revisited if significantly larger numbers of ATC user terminals were deployed than were contemplated at the time.
- At the 2005 levels, a single Ligado user terminal can produce harmful interference to an Iridium user up to 1 km away and make Iridium users unable to receive transmissions from Iridium's satellites while Ligado terminals are transmitting.



THE ORDER FAILS TO APPLY FCC RULES AND WAIVER CRITERIA

- Section 25.255 provides that “[i]f harmful interference is caused to other services by ancillary MSS ATC operations ... the MSS ATC operator must resolve any such interference.”
 - This rule reflects the FCC’s determination that the ATC operator bears a duty to resolve harmful interference. The FCC has previously interpreted Section 25.255 as placing an “absolute obligation” to “resolve any ... interference” to any “other services” on the ATC operator itself – not on the entity whose operations will face interference.
 - The Order mentions Section 25.255 only once, merely to assert (without support) that Ligado will cure any interference caused to other services, transforming Section 25.255 from legal obligation into mere aspiration.
 - The Order grants Ligado’s waiver of the integrated service rule (which requires MSS ATC licensees to offer an integrated satellite and terrestrial service), but fails to satisfy the FCC’s criteria for such a waiver.
 - For such a substantial deviation from its ATC rules, the FCC should have conducted a rulemaking, as it did in other cases like Globalstar and AWS-4.



THE ORDER'S PUBLIC INTEREST ANALYSIS IS DEFICIENT

- The Order offers no substantive assessment of the public interest benefits of Ligado's terrestrial operations.
 - The 74-page Order allocates a scant 6 paragraphs to the critical question of whether grant of Ligado's proposals will serve the public interest.
 - The Order relies largely on Ligado's self-serving rhetoric while disregarding the significant costs raised by stakeholders on the record.
- The Order is completely devoid of a rigorous cost-benefit analysis, despite the clear impact of the Ligado Order on satellite services which contribute tens-of-billions of dollars to the U.S. economy each year.
 - The FCC disregarded evidence of economic harms from Ligado's operations and focused only on speculative benefits presented by Ligado itself.
- While Ligado asserts that it will advance 5G in the U.S., this is mere puffery—there is no evidence that Ligado will meaningfully do anything to help the U.S. win the race to 5G.



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