

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
LightSquared Technical Working Group Report)	IB Docket No. 11-109
)	
LightSquared License Modification Application, IBFS File Nos. SAT-MOD-20120928-00160, -00161, SES-MOD-20121001-00872)	IB Docket No. 12-340
)	
New LightSquared License Modification Applications IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091)	IB Docket No. 11-109; IB Docket No. 12-340
)	
Ligado Amendment to License Modification Applications IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091)	IB Docket No. 11-109
)	

**NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
REPLY TO LIGADO NETWORKS LLC’S OPPOSITION TO PETITIONS FOR
RECONSIDERATION OR CLARIFICATION**

The National Telecommunications and Information Administration (NTIA), on behalf of the executive branch and pursuant to 47 C.F.R. § 1.106(h), hereby replies to the Opposition to Petitions for Reconsideration or Clarification submitted by Ligado Networks LLC (Ligado) in the above-captioned proceeding.¹ Ligado’s error-prone opposition to NTIA’s Petition for Reconsideration or Clarification and weak defense of the *Ligado Order* confirm that the Commission must reconsider Ligado’s grant.² Deployment of Ligado’s terrestrial network

¹ Ligado Opposition to Petitions for Reconsideration or Clarification, IB Docket Nos. 11-109 and 12-340 (June 1, 2020) (*Ligado Opposition*).

² See *Petition for Reconsideration or Clarification of the National Telecommunications and Information Administration*, IB Docket Nos. 11-109 and 12-340 (May 22, 2020) (*NTIA Petition*); *Ligado Amendment to License Modification Applications IBFS File Nos. SES-MOD-20151231-*

should not be permitted until NTIA’s petition, along with the seven other petitions in this proceeding, are adequately addressed. Executive branch concerns of harmful interference to civil and federal government Global Position Service (GPS) operations and the Mobile Satellite Service (MSS) must be satisfactorily resolved first.

In this Reply, NTIA corrects serious errors and misperceptions in Ligado’s portrayal of the longstanding dual system of federal/non-federal spectrum management. Notwithstanding basic procedural provisions of the 2003 Memorandum of Understanding (MOU) between the two agencies, the Commission committed in 2005 to coordinate – not merely “consult” – with NTIA and other government agencies if “any change” is requested by a MSS licensee under Ancillary Terrestrial Component (ATC) authorization in the L-Band, including Ligado. NTIA also reiterates and clarifies some of its recommendations set forth in its petition and recent submissions on the record that Ligado’s opposition misconstrues, misunderstands, or ignores.

I. UNDER THE STATUTORY SCHEME ESTABLISHED BY CONGRESS, NTIA AND THE FCC ARE CO-REGULATORS OF THE L-BAND, REQUIRING CAREFUL COORDINATION – ESPECIALLY WHEN NATIONAL DEFENSE AND SAFETY OF LIFE SERVICES ARE IMPACTED

The *Ligado Opposition* incorrectly interprets Title III of the Communications Act (and the Commission’s *Ligado Order*) to argue that the Commission has and asserts “exclusive authority to regulate non-federal uses of spectrum” and “absolute” jurisdiction over technical matters associated with radio frequency interference.³ The Commission’s *Ligado Order* (at para. 122, n. 399), but not the *Ligado Opposition*, recognized the statutory exemption in Section 305 of the

00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091, Order and Authorization, IB Docket No. 11-109, FCC 20-48 (Apr. 22, 2020) (*Ligado Order*).

³ *Ligado Opposition* at 7 (citing *Ligado Order* at para. 122, 47 U.S.C. §§ 151, 301-303, and *Head v. New Mexico Bd. of Examiners in Optometry*, 374 U.S. 424, 430 n. 6 (1963)). The *dicta* quoted by Ligado is not applicable here as that case concerned whether a state’s ability to regulate radio advertising was preempted by the Communications Act. See *Head*, 374 U.S. at 429.

Communications Act for “stations belonging to and operated by the United States” (which are not subject to Sections 301 and 303 of the Act) and the authority delegated to NTIA to regulate such stations and classes of stations. Nowhere in the *Ligado Order* (or any controlling document) did the Commission assert exclusive or absolute jurisdiction over the “L-Band” or radio frequency interference within the band, which is allocated for a variety of shared federal/non-federal uses on a shared, non-exclusive basis from 1435 MHz to 1670 MHz.⁴

Under this statutory scheme, as the Commission has recognized, “the FCC and NTIA are co-regulators of the spectrum and work together to ensure that spectrum policy decisions promote efficient use of the spectrum consistent with both the economic interests and national security of the nation.”⁵ Hence, the 2003 FCC/NTIA MOU sets forth the following “Purpose” in

Section III:

The FCC and the NTIA are charged with managing the nation’s radio spectrum resources in the public interest. Both agencies are committed to performing their respective responsibilities in a cooperative, diligent, and professional manner to ensure that the spectrum is used for its highest and best purpose whether by the private sector, state and local government, or Federal agencies. The FCC and NTIA are required to work together to ensure that spectrum policy decisions promote efficient use of the spectrum consistent with both the economic interests and national security of the nation. This MOU is intended to formalize this cooperative relationship in a manner that reflects the spectrum management policies and practices of the agencies.⁶

⁴ See 47 C.F.R. § 2.106 (Table at pp. 33-35); *id.* § 2.105(d)(2) (“When the Federal Table and the non-Federal Table are exactly the same for a shared band, the line between columns 4 and 5 is deleted and the allocations are shown once.”).

⁵ *Promoting Expanded Opportunities for Radio Experimentation and Market Trials Under Part 5 of the Commission’s Rules*, Notice of Proposed Rulemaking, ET Docket No. 10-236, 25 FCC Rcd. 16544, 16548 n. 25 (Nov. 30, 2010); see also *Amendment of Part 2 of the Commission’s Rules for Federal Earth Stations Communicating with Non-Federal Fixed Satellite Service Space Stations*, Notice of Proposed Rulemaking, ET Docket No. 13-115, 28 FCC Rcd. 6698, 6719 para. 11 and 6719 para. 53 (May 9, 2013).

⁶ Memorandum of Understanding between the FCC and NTIA at 2 (Jan. 31, 2003), <https://go.usa.gov/xwDrg>.

In its opposition, Ligado makes much ado about the MOU and the Commission’s compliance therewith even though NTIA has not asserted otherwise. Indeed, the Commission’s staff went above and beyond to “meet regularly to exchange information” about this proceeding in a variety of bilateral and interagency fora such as the Interdepartment Radio Advisory Committee (IRAC) (to which the FCC has appointed a Liaison Representative since the early 1950s), IRAC technical working groups, NTIA’s Policy and Plans Steering Group, and the National Executive Committee for Space-Based Positioning, Navigation, and Timing (PNT EXCOM).⁷ Moreover, as the *Ligado Opposition* mentions repeatedly, the Commission provided NTIA and the IRAC with an extended review period as, per the MOU, “agreed to by NTIA’s Associate Administrator for Spectrum Management and the FCC’s Chief of the Office of Engineering and Technology.”⁸

Notwithstanding the MOU and the extensive staff-level collaboration that had taken place, as explained in NTIA’s petition, the Commission did not keep its commitment to coordinate “any change” requested by the MSS/ATC licensee with NTIA and other government agencies “to assure adequate protection of the GPS.”⁹ In its most recent filing on April 10, 2020, NTIA conveyed to the Commission its good faith understanding and expectation that coordination and

⁷ The PNT EXCOM was established in 2004 by a Presidential National Security Policy Directive (NSPD) which, *inter alia*, invited the Chairman of the FCC to participate as a liaison. *See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, IB Docket No. 01-185, Memorandum Opinion and Order and Second Order on Reconsideration, 20 FCC Rcd. 4616, 4642, para. 70 (Feb. 25, 2005) (*Second Order on Reconsideration*) (citing U.S. Space-Based Positioning, Navigation, and Timing Policy, *Fact Sheet* (Dec. 15, 2004)). *See also NTIA Petition*, Declaration of Edward Drocella (discussing the IRAC Technical Focus Group efforts); Letter from Karl Nebbia, Assoc. Adm’r, Office of Spectrum Mgmt., NTIA, to Julius Knapp, Chief, Office of Eng’g and Tech., FCC, IB Docket Nos. 11-109 and 12-340 (July 1, 2014) (describing the outcome of joint IRAC/FCC efforts to evaluate LightSquared’s “Assessment of Uplinks”).

⁸ NTIA/FCC MOU at Sec. IV(3).

⁹ *See NTIA Petition* at 3 (citing *Second Order on Reconsideration*, 20 FCC Rcd. at 4642, para. 70).

“consultation with NTIA” would need to continue since, under the 2011 LightSquared *Order and Authorization*, both agencies could not reasonably conclude that the harmful interference concerns have been resolved.¹⁰ Instead, on April 16th, it was publicly announced that Chairman Pai circulated a draft order to approve Ligado’s MSS/ATC application.¹¹ Then, on April 19th, the Commission adopted the *Ligado Order*, which for the first time imposed upon NTIA, without any prior notice or explanation by the Commission, a new burden of production and proof to provide “new technical data,” or as Ligado suggested on April 12th, “specific relevant information about affected receivers.”¹²

Ligado emphasizes in its opposition that NTIA had the opportunity to supplement the record (and indeed it did so twice in response to the FCC’s draft *Ligado Order*). But Ligado and the Commission ignore the necessary nature of the interagency deliberative process as, for example, embedded in the “shared jurisdiction” exception to the Commission’s *ex parte* rules and the “deliberative process” exemption in the Freedom of Information Act (FOIA) that prevents

¹⁰ See Letter from Douglas W. Kinkoph, Acting Deputy Assistant Sec’y for Commc’ns and Info., NTIA, to Hon. Ajit Pai, Chairman, FCC, IB Docket Nos. 11-109 and 12-340, at 2 (Apr. 10, 2020) (*NTIA April 2020 Letter*).

¹¹ See *FCC News Release*, “Chairman Pai Circulates Draft Order To Approve Ligado’s Application to Facilitate 5G and Internet of Things Services” (Apr. 16, 2020).

¹² *Ligado Order* at paras. 46, 125-26, and n. 420 (citing Ligado Apr. 12, 2020 Ex Parte at 7, which quotes, out of context, from a Bureau/Office *Public Notice, Comment Sought on Ligado’s Modification Applications*, IB Docket Nos. 11-109 and 12-340, 31 FCC Rcd. 3802, 3809 (IB, OET, WTB Apr. 22, 2016). Similarly, in three footnotes, the *Ligado Order* rejected inputs from the Secretary of Defense because they “do not provide any mention or discussion of any technical analyses in the record in this proceeding.” *Id.* at nn. 176, 409, and 418. At the same time, it appears the Commission gave extra weight to certain agencies’ public statements that did not discuss any data or technical analyses in the record. See *News Release*, “What They Are Saying About Chairman Pai’s Order on L-Band Spectrum” (Apr. 20, 2020); Statement of Comm’r Carr, “FCC Approval of Ligado L-Band Application to Facilitate 5G & IoT” (Apr. 22, 2020). Congress delegated to NTIA the “responsibility to ensure that the views of the executive branch on telecommunications matters are effectively presented to the Commission.” 47 U.S.C. § 902(b)(2)(J).

agencies from sharing non-public information.¹³ FCC staff was well aware of the available data and analyses conducted by the IRAC Technical Focus Group and the impacts on GPS they show.

Yet, as if connected at the hip, Ligado and the Commission simply “disagree” with the contention of multiple executive branch departments and agencies that repair or replacement of potentially affected legacy equipment is not feasible, affordable, or technically executable because they wrongly assume this contention is based on Ligado’s initial higher power proposal. In the nine days between NTIA’s April 10, 2020 filing and the adoption of the *Ligado Order* (or maybe more time, as the FCC IRAC Liaison had access to the five-page, single-spaced multi-agency memo in mid-February), the Commission was obviously unable to carefully take into account the many legitimate reasons clearly articulated in the enclosure to NTIA’s submission for questioning the feasibility of the unspecified repair and replacement program.¹⁴ This unusual breach of the unique and traditional collaboration among co-regulators is especially troublesome in matters impacting national defense and safety of life services – even if no new technical data are available.

¹³ See 47 C.F.R. § 1.1204(a)(5) and Note 1 to para. (a); see also *Amendment of the Commission’s Ex Parte Rules and Other Procedural Rules*, Report and Order, GC Docket No. 10-43, 26 FCC Rcd. 4517, 4529 (Feb. 2, 2011). Here, the Commission rejected a proposed rules change that would have required disclosure of all interagency *ex parte* contacts because such a change “may not only affect another agency’s jurisdictional responsibilities . . . but could also adversely affect the Commission’s ability to render timely decisions based on the best information possible.” *Id.* The FCC’s *ex parte* rules and FOIA also include exemptions for presentations and information that are classified or otherwise involve a military or foreign affairs function of the United States. See 47 C.F.R. § 1.1204(a)(4) and 5 U.S.C. § 552(b)(1).

¹⁴ See *Ligado Order* at paras. 100 and 127. The February 2020 memo is based on Ligado’s May 2018 amendments to its license modification applications and subsequent filings. See *NTIA April 2020 Letter* at 1 and enclosed *Memorandum for IRAC Chairman* at nn. 2 and 3.

In its opposition, Ligado cannot point to a single case or precedent where the Commission failed to defer to NTIA in such critical matters.¹⁵ Ironically, Ligado points out that the Commission, in IB Dockets 01-185 and 02-364, established the rules under which Ligado seeks to modify its license.¹⁶ It was also in that proceeding, in the 2005 *Second Order on Reconsideration* referenced and quoted in the *NTIA Petition* and above, that the Commission not only committed to coordinate all MSS/ATC applications but pledged to work with other agencies to “better understand what protection levels for GPS are warranted” and contemplated “future rulemaking proposals in order to ensure that all FCC services provide adequate protection to GPS, and produce a more complete record upon which to establish final GPS protection limits for MSS ATC licensees”¹⁷ It has been 17 years and still no rulemaking.

II. THE *LIGADO OPPOSITION* MISCONSTRUES, MISUNDERSTANDS, OR IGNORES NTIA’S CONCERNS AND RECOMMENDED PATHS FORWARD

In its petition, NTIA reiterated previously-transmitted executive branch concerns about harmful interference to federal and civil GPS and the expected detrimental impact to a range of national security systems. The petition challenged the cost and impracticality of many of the grant’s conditions that were adopted in a thin attempt to mitigate those concerns. Alternatively, the *NTIA Petition* provided recommendations for validating that Ligado’s actual terrestrial

¹⁵ Instead, the *Ligado Opposition* (at n. 4) argues that NTIA’s 100 percent success rate in such cases is due to the Commission agreeing with NTIA on the merits though it was apparently not bound to do so. Even if this were true, administrative agencies are required to provide a reasoned explanation why they are departing from prior precedents and disregarding the reliance of stakeholders to its previous commitments. See, e.g., *Nat’l Lifeline Ass’n v. FCC*, 921 F.3d 1102, 1114 (D.C. Cir. 2019); *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515-16 (2009). Nowhere in the *Ligado Order* does the Commission “display awareness that it is changing position” or address underlying “reliance interests”) (*Fox Television Stations*, 556 U.S. at 515, emphasis in original); i.e., departing from the policies developed in the 2005 *Second Order on Reconsideration* and other precedents referenced in the *NTIA Petition*.

¹⁶ *Ligado Opposition* at 8.

¹⁷ *Second Order on Reconsideration*, 20 FCC Rcd. 4616, 4642 para. 70 (Feb. 10, 2005).

network would not cause harmful interference to GPS and other authorized services through independent testing and improved conditions. The other petitioners echo and elaborate on the concerns the *NTIA Petition* raised regarding how Ligado’s operations would disrupt a wide range of civil GPS receivers.¹⁸

Without much support, the *Ligado Opposition* largely dismisses NTIA’s (and other petitioners’) arguments as rehashed, unsupported by the record, or adequately rejected in the FCC’s *Ligado Order*. The opposition misconstrues, misunderstands, or ignores most of the *NTIA Petition*’s salient points. For example, in addition to its misreading of the statutory scheme addressed above, Ligado labels NTIA’s critique of the Commission’s unprecedented performance-based interference metric as “preposterous” while quoting the wrong language in the “long-standing definition” of “harmful interference.”¹⁹ As NTIA’s petition explained, GPS is a “radionavigation service” and the applicable part of the actual definition and U.S. treaty obligations pose the question of whether interference (as defined separately) “endangers the functioning” of the service, going beyond simple “performance” impacts.²⁰ It does not seem

¹⁸ See Petitions for Reconsideration of Aerospace Indus. Assoc., *et al.*; Air Line Pilots Assoc.; Assoc. of Equip. Mfrs., *et al.*; Lockheed Martin Corp.; Resilient Navigation and Timing Found.; Trimble Inc. (May 22, 2020). The *Ligado Opposition* (at 18) misstates the adverse effects upon civil aviation and misrepresents the Department of Transportation’s (DoT) evaluation of this issue. As explained in DoT’s GPS Adjacent Band Compatibility (ABC) Assessment, the analysis conducted by the Federal Aviation Administration did not exhaustively consider Terrain Awareness Warning Systems and Unmanned Aerial Systems, concluding that concerns remain about operational and safety impacts in those contexts. See DoT ABC Assessment *Final Report* at 120 (Apr. 2018).

¹⁹ See *Ligado Opposition* at 11 (citing *Ligado Order*, para. 60, and quoting from a portion of the definition of “harmful interference” contained in 47 C.F.R. § 2.1(c) that applies to every other non-safety radiocommunication service). See also *Opposition to Petitions for Reconsideration or Clarification of Roberson and Associates, LLC*, at 4 (June 1, 2020) (revealing that its test criteria was whether “the devices continue to work and perform as expected by the user,” which are also not elements of the applicable part of the definition).

²⁰ *NTIA Petition* at 10-11 (quoting 47 C.F.R. § 2.1(c) and *International Telecommunication Union Radio Regulations*, Art. 4, § 4).

preposterous for the FCC to apply the correct language from its rules or to expect compliance with international agreements (per 47 U.S.C. § 303(r), (y)(1)).²¹ Even data from the Ligado-funded studies showed that Ligado’s proposed network would cause adverse impacts to GPS receiver functions, raising a substantial and material question of fact as to whether interference from the network will endanger the functioning of GPS – a question that the FCC has not explored in this proceeding, but could through independent testing or, as required by the Communications Act, through a hearing.²²

As for NTIA’s proposed revisions and clarifications of the FCC’s conditions, Ligado’s opposition says – without much elaboration – that they are “unnecessary and largely inappropriate.”²³ While neither NTIA nor the FCC are expert agencies in fiscal law, Ligado criticized NTIA’s suggestion to seek guidance from the Comptroller General, the designated expert agency. NTIA and IRAC member agencies flagged this legal issue for the FCC IRAC Liaison in 2018, after Ligado first proposed it. Such a step would be appropriate in order to provide agencies with more certainty and reduced risk should the program go forward and they were to later discover, for example, that they could not accept new or repaired devices because their equipment was not “damaged” under the applicable precedents. Moreover, it is not unprecedented for the FCC to rely on the Comptroller General’s advice in spectrum matters that raise questions under the Miscellaneous Receipts Act.²⁴

²¹ See *Ligado Order*, para. 49 (citing and quoting 47 C.F.R. § 2.1(c)).

²² See *NTIA Petition* at 12; see also *Petition for Reconsideration of Lockheed Martin Corp.* at 21-22. In response to another one of misperceptions in the *Ligado Opposition* (at n. 15), NTIA would encourage additional testing through the National Advanced Spectrum and Communications Test Network or another entity, so long as it is not funded by, or appears to be influenced by, Ligado or any interested party in this proceeding.

²³ *Ligado Opposition* at 15-16.

²⁴ See, e.g., *Improving Public Safety Communications in the 800 MHz Band*, *Memorandum Opinion and Order*, 20 FCC Rcd. 16015, 16049-50 para. 76 (Oct. 5, 2005).

III. CONCLUSION

For the reasons set forth above, NTIA respectfully requests that the Commission reject Ligado’s arguments, stay the *Ligado Order*,²⁵ and consider NTIA’s Petition for Reconsideration and Clarification along with the other petitions filed in this proceeding.²⁶

Respectfully submitted,



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²⁵ See Coalition Letter in Support of a Stay of the Ligado Order, IB Docket Nos. 11-109 and 12-340 (June 3, 2020)

²⁶ The *Ligado Opposition* (at 21 n. 23) states that it was “noteworthy” that the *NTIA Petition* “does not even mention Iridium.” Nor did it mention any other party by name because the “petition focuses on the problems in the *Ligado Order* that are uniquely related to the interests of [the Department of Defense] and other federal agencies and their mission-critical users of GPS.” *NTIA Petition* at iv. Iridium’s interference concerns are distinct from those raised by the federal and non-federal GPS communities. Nevertheless, NTIA agrees that the *Ligado Order* does not sufficiently address the interference issues raised in the petition submitted by Iridium, *et al.* Iridium’s satellite network has supported several federal agencies for nearly twenty years and continues to be a critical resource for many federal users. As with GPS, the Commission must properly address Iridium’s interference concerns, especially in light of the critical services provided to the Department of Defense and other federal agencies.

CERTIFICATE OF SERVICE

I, Kathy Smith, hereby certify that on this 8th day of June, 2020, I caused a copy of the foregoing Reply to be served on the following:

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