December 16, 2019

The Hon. Ajit Pai
Chairman
Federal Communications Commission
445 12th St., SW
Washington, D.C. 20554

Re: *Ligado License Modification Applications*, IB Docket No. 11-109; 12-340

Dear Chairman Pai:

The undersigned write in response to the letter from Acting Deputy Assistant Secretary Douglas Kinkoph filed in the above captioned proceedings on December 6, 2019. The letter states that NTIA "is unable to recommend the Commission's approval of the Ligado applications."[1] Fortunately, NTIA's recommendation is neither required or necessary. Consistent with previous filings by Public Knowledge and others in support of Ligado's application for license modifications,[2] the undersigned urge you to circulate the proposed resolution for a vote by the full Commission. Not only would grant of Ligado's application serve the public interest, it would finally grant some measure of certainty to licensees who have consistently and in good faith followed the Commission's rules and procedures, only to once again have the federal agencies respond with vague and unjustified interference concerns predicated on an unprecedented and unworkably fragile proposed definition of "harmful interference."

The Decision on Whether to Move Forward Lies Exclusively With the FCC. Neither NTIA Nor Any Other Federal Agency Have Veto Authority. To the Extent Their Opinion's Lack Support, the FCC Should Ignore Them.

Ligado seeks a major modification of its licenses pursuant to Sections 308 and 309 of the Communications Act.[3] Because the spectrum access rights at issue are entirely covered by existing Commission licenses, and are not subject to federal use, federal agencies have no special status in these proceedings. Certainly, the Commission has a responsibility to protect all users, especially federal users, from harmful interference; and no one, of course, disputes the vital importance of maintaining reliability of GPS for both federal and commercial purposes. Sections

[1] Letter from Douglas W. Kinkoph, Deputy Assistant Secretary for Communications and Information (Acting), to The Hon. Ajit Pai, Chairman, Chairman, FCC, IB Docket No. 11-109 (Dec. 6, 2019), at 2 ("NTIA Letter").
[2] *See Comments of Public Knowledge and X-Lab*, IB Docket No. 11-109 (filed July 9, 2018) ("July 2018 Comments"); *Comments of Public Knowledge, New America's Open Technology Institute, and Common Cause*, IB Docket Nos. 12-340, 11-109 (filed May 23, 2016) ("May 2016 Comments").
[3] *See* 47 U.S.C. §§ 308, 309.

308 and 309 require the Commission to take public comment from all potentially interested parties so that these concerns may be properly addressed on the record.

NTIA's letter, however, appears to suggest that it – or perhaps the other agencies whose correspondence it attaches – are the arbiters of what constitutes adequate protection for GPS rather than the Commission. Congress, however, entrusted the ***FCC*** with exclusive jurisdiction over all commercial use of spectrum in the United States, and made the Commission sole arbiter of what does and does not constitute "harmful interference" under federal law. [4]

The current situation demonstrates the wisdom of Congress' decision to entrust these judgments to the FCC. With no disrespect to federal agencies, this appears to be a classic case of spectrum "NIMBY" ("not in my backyard") rather than a case of legitimate engineering concerns. The failure of federal agencies to provide any additional technical justification for their concerns, beyond the continued insistence on the illegal and impractical "1 db" measure of harmful interference, underscores this point.

The Commission should therefore take NTIA's latest submission into the record for what it's worth – a simple recitation of already addressed objections with no new supporting evidence. Having extended to NTIA the appropriate courtesy due a sister agency, the Commission has no further obligation beyond the general requirements of the Communications Act and the Administrative Procedure Act to weigh the evidence in the record and determine whether grant of the requested modifications would serve the public interest.

Ligado's Proposal Would Serve the Public Interest.

The NTIA Letter states that delaying Ligado further "will not hold back timely deployment of 5G across the United States."[5] Not only is this statement contradicted by other filings in the record,[6] it has nothing whatsoever to do with the actual legal standard under which the Commission must consider Ligado's request for major modification: does the proposed modification serve the public interest? This is particularly true where, as here, the modifications

[4] *See* 47 U.S.C. §303. *See also Head v. New Mexico Bd. of Examiners in Optometry*, 374 U.S. 424, 430 n.6 (1963) (affirming that the jurisdiction of the FCC over technical matters associated with the transmission of radio signals "is clearly exclusive"); *New York SMSA Ltd. P'ship v. Town of Clarkstown*, 612 F.3d 97, 100 (2d Cir. 2010) (Congress "intended the FCC to possess exclusive authority over technical matters related to radio broadcasting"); *Broyde v. Gotham Tower, Inc.*, 13 F.3d 994, 997 (6th Cir. 1994) (discussing "the FCC's exercise of exclusive jurisdiction over the regulation of radio frequency interference").

[5] NTIA Letter at 2.

[6] *See, e.g.*, Letter from Steven K. Berry, President and CEO, Competitive Carriers Association to to The Hon. Ajit Pai, Chairman, Chairman, FCC, IB Docket No. 11-10 (Nov. 20, 2019).

requested by the licensee are to *reduce* power and allocate additional spectrum as guard band spectrum to protect GPS operations.

As Public Knowledge, *et al.* observed in the May 2016 Comments, Ligado's proposed network in 40 MHz of greenfield spectrum will facilitate the transition from 4G to 5G by making new spectrum available for immediate deployment.[7] This is about quality and speed to market, not about quantity of total released spectrum. More importantly, it is about creating potential for a new entrant with an intriguing hybrid satellite/terrestrial network architecture and a potentially IoT oriented business model that could compete in the new markets that 5G will enable. These benefits (and the subsequent scheduled auction of federal spectrum) will clearly serve the public interest, regardless of how much spectrum has already been released.

This is especially true as the alternative is to require 40 MHz of prime spectrum to lie fallow and unproductive. As the Commission has consistently affirmed, allowing spectrum to remain unutilized is inconsistent with the public interest. Yet it is clear that leaving 40 MHz of prime commercial spectrum unused is the only outcome NTIA and other federal agencies regard as acceptable. In the absence of any demonstrated threat of harmful interference to GPS, the grant of the application clearly serves the public interest.

The Standard for "Harmful Interference" Proposed By NTIA and DoD Is Contrary to Law.

The federal agencies have repeatedly reiterated in this proceeding that if there exists the possibility that operation by Ligado will result in a single db of out of band emission (OOBE) into the band used by GPS, then the Commission should prohibit operation of Ligado as creating "harmful interference."[8] This definition is contrary to well established Commission precedent.

[7] *See* Comments of Public Knowledge, New America's Open Technology Institute, and Common Cause, IB- Docket No. 11-109, 12-34 (May 23, 2016), at 2– 5. *See also* CCA Letter at 1.
[8] *See, e.g.*, National Space-Based Positioning, Navigation, and Timing National Engineering Forum, *Assessment to Identify Gaps in Testing of Adjacent Band Interference to the Global Positioning System (GPS) L1 Frequency Band* (Mar. 5, 2018), *attachment to* Letter from Dana A. Goward, President, Resilient Navigation and Timing Foundation to The Hon. Ajit Pai, Chairman, Chairman, FCC, IB Docket No. 11-109, 12-340 (Mar. 17, 2018).

As the Commission has previously stated'[9], and courts have affirmed[10], the Communications Act requires the Commission to protect users from ***harmful*** interference. As the Commission noted in its May 2016 PN, the FCC regulations define "harmful interference" as "[i]nterference which endangers the functioning of a radionavigation service or other safety of life services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with Radio Regulations." *May 2016 PN* at n.48 (citing 47 C.F.R. §2.1(c)). An OOBE of 1 db is small enough that the average commercial DBS receiver could not even reliably detect it, let alone experience significant enough interruption in its function to constitute harmful interference. Despite more than 3 years of opportunity to do so, federal agencies have provided no evidence that DBS receivers are the equivalent of a sleeping princess able to detect a 1 db spectrum "pea" through a 20 MHz guard band "mattress."

If commercial GPS units really were such frail and delicate creatures, it is difficult to see how they could function in the noisy RF environment of a modern car, chock full of radiating electrical devices and operating under unpredictable atmospheric conditions. This objection goes double for the critical systems discussed by the NTIA letter, or at least one certainly hopes it does. If the guidance systems employed by the DoD, DoT and other federal agencies are so fragile that a single db OOBE fluctuation constitutes harmful interference, then we have far greater worries than whether or not to grant Ligado's requested license modification.

Federal Agencies Cannot Have Endless Veto Power Over Non-Federal Spectrum Uses.

No one disputes the importance of protecting federal spectrum use, or the importance of GPS. But Congress explicitly delegated the responsibility to making the determination on non-federal spectrum use to the Commission. Had Congress intended for federal agencies to exercise authority over non-federal spectrum use, it certainly could have chosen to do so. But Congress made the opposite choice, providing to the FCC explicit authority to make the determination on whether expanded commercial use would or would not create a substantial risk of harmful interference – to either non-federal users or federal users.

Here, the FCC has provided federal agencies with repeated opportunities to participate in the process in good faith. The agencies in question have declined. Rather than work in good faith to identify genuine risks of harmful interference and find mutually acceptable ways to alleviate

[9] *See, e.g.*, *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems, First Report and Order*, 17 FCC Rcd. 7435 (rel. Apr. 22, 2002); *In the Matter of Creation of A Low Power Radio Serv.*, 14 FCC Rcd. 2471 (1999).
[10] *See, e.g.*, *Northpoint Tech., Ltd. v. FCC*, 414 F.3d 61, 66 (D.C. Cir. 2005); *AT&T Wireless Servs., Inc. v. FCC*, 365 F.3d 1095, 1097 (D.C. Cir. 2004); *AT&T Wireless Servs.*, Inc. v. FCC, 270 F.3d 959, 964 (D.C. Cir. 2001).

them, the federal agencies have simply sought to stall and delay until Ligado and its investors give up in despair.

It is not only Ligado's application at stake here, and the benefits to the public their proposed new network would bring. The Commission is currently considering numerous other proceedings involving non-federal licensees where federal users have sought to intervene to protect the status quo without providing meaningful engineering analysis. These proceedings have likewise dragged on interminably as federal agencies have repeatedly declined to engage in the Commission's stakeholder processes in good faith. It is imperative, therefore, that the Commission send a strong message that it will not reward bad faith efforts to undermine our national federal spectrum policy, our global competitiveness, and our digital future. By acting swiftly to resolve Ligado's pending application, the Commission will not only move a step closer to putting more spectrum into productive use and encouraging an innovative potential new entrant. It will protect the integrity of the spectrum reallocation process going forward, discouraging federal agencies from seeking endless delays on the basis of vague concerns, impractical standards, and an utter absence of substantive engineering analysis.

We therefore urge you to move as quickly as possible to circulate an Order resolving Ligado's longstanding Application for license modifications.

Sincerely,

Harold Feld
Senior V.P.
Public Knowledge

Sean Taketa McLaughlin
Executive Director
Access Humboldt

Andrew Jay Schwartzman
Senior Counselor
Benton Institute for Broadband & Society[11]

[11] The Benton Institute for Broadband & Society is a non-profit, operating foundation, which believes that communication policy – rooted in the values of access, equity, and diversity - has the power to deliver new opportunities and strengthen communities to bridge our divides. Our goal is to bring open, affordable, high-capacity and competitive broadband to all people in the U.S. to ensure a thriving democracy. This letter reflects the institutional view of the Benton Institute for Broadband & Society, and, unless obvious from the text, is not intended to reflect the views of its individual officers, directors, or advisors.

Michael Calabrese
Director, Wireless Future Program
Open Technology Institute at New America Foundation

cc:
The Hon. Michael O'Reilly
The Hon. Brendan Carr
The Hon. Jessica Rosenworcel
The Hon. Geoffrey Starks