

**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
	)	

**PETITION FOR STAY OF THE  
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION**

The National Telecommunications and Information Administration (NTIA), on behalf of the executive branch and pursuant to 47 C.F.R. § 1.106(n), hereby respectfully submits this Petition for Stay of the Order and Authorization in the above-captioned proceeding in which the Commission granted Ligado Networks LLC’s (Ligado’s) mobile satellite service (MSS) license modification applications for ancillary terrestrial operations.<sup>1</sup> Ligado should not be permitted to deploy its network until NTIA’s Petition for Reconsideration or Clarification (Petition) is addressed and executive branch concerns of harmful interference to federal government and other GPS devices are satisfactorily resolved. Because the Commission relies upon a new and

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<sup>1</sup> *In the Matter of Ligado Amendment to License Modification Applications* IBFS File Nos. SES-MOD-20151231-00981, 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*).

unproven “harmful interference” metric and imposes unworkable conditions while still uncertain whether GPS receivers critical to national security and public safety would experience remediable harmful interference, the Commission should stay the *Ligado Order*. In this manner, the Commission can meaningfully and promptly consider the appropriate metrics and mitigation procedures – and their realistic application to Ligado’s actual terrestrial network – before coordination and deployment efforts under the current conditions commence.

### **STANDARD OF REVIEW**

When considering stay requests, the Commission employs a four-part test established by the D.C. Circuit Court of Appeals.<sup>2</sup> A stay is appropriate when a petitioner shows that: (1) it is likely to prevail on the merits; (2) it will suffer irreparable harm absent the grant of a stay; (3) grant of a stay will not injure other parties; and (4) the grant of a stay furthers the public interest.<sup>3</sup> The Commission’s consideration of each factor is weighed against the others, with no single factor dispositive.<sup>4</sup> Indeed, “[i]f there is a particularly overwhelming showing in at least one of the factors, the Commission may find that a stay is warranted notwithstanding the absence of another one of the factors.”<sup>5</sup> In the case of the *Ligado Order*, “maintaining the status quo

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<sup>2</sup> *Washington Metro. Area Transit Comm’n v. Holiday Tours, Inc.*, 559 F.2d 841, 843, (D.C. Cir. 1977); *Va. Petroleum Jobbers Ass’n v. Fed. Power Comm’n*, 259 F.2d 921, 925 (D.C. Cir. 1958). See also *Telecomms. Relay Servs. and Speech-to-Speech Servs. for Individuals with Hearing and Speech Disabilities*, Order, 23 FCC Rcd. 1705, 1706-07, para. 4 (2008) (*TRS Services Stay Order*); *City of Boston, Mass., and Sprint Nextel*, Order, 22 FCC Rcd. 2361, 2364, para. 8 (2007); *Comcast Cable Commc’ns, LLC Petition for Emergency Stay*, Order, 20 FCC Rcd. 8217, para. 2 (2005); *Brunson Commc’ns, Inc. v. RCN Telecom Servs., Inc.*, Memorandum Opinion and Order, 15 FCC Rcd. 12883, para. 2 (2000).

<sup>3</sup> See, e.g., *Protecting the Privacy of Customers of Broadband and Other Telecomms. Servs.*, Order Granting Stay Petition in Part, 32 FCC Rcd. 1793, 1796, para. 7 (2017).

<sup>4</sup> *AT&T Corp. v. Ameritech Corp.*, 13 FCC Rcd. 14508, 14515-16, para. 14 (1998).

<sup>5</sup> *TRS Services Stay Order*, 23 FCC Rcd. at 1707, para. 4.

would be appropriate when a serious legal question is presented, if little harm will befall others if the stay is granted and denial of the stay would inflict serious harm.”<sup>6</sup>

NTIA respectfully submits that this Petition satisfies the Commission’s four-part standard and urges the Commission to stay the *Ligado Order* while it addresses the issues raised in NTIA’s concurrently filed Petition, which is incorporated herein by reference. First, as detailed in that petition, there will be substantial irreparable harm if Ligado commences preparation for its terrestrial buildout pursuant to the impractical conditions and new “performance-based” interference metric set forth in the *Ligado Order*. Second, the public interest would be furthered best if the Commission evaluates this new harmful interference metric under more scientific rigor before applying it to a large number of GPS devices relied upon for national security and public safety, including civil GPS receivers owned and operated by emergency first responders and others for a variety of critical functions. Third, such a stay would cause no injury to Ligado or its prospective customers given that, according to press reports, Ligado does not expect to commence the contemplated service within the next eighteen months.<sup>7</sup> All stakeholders have a strong incentive to conduct additional testing promptly, possibly by an independent GPS expert organization, or, at a minimum, develop more realistic license conditions. Fourth, because the *Ligado Order* not only relies on an unproven harmful interference metric and inadequate operational conditions, but also disregards executive branch concerns about the risks of

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<sup>6</sup> *Fla. Pub. Serv. Comm’n Request for Interpretation of the Applicability of the Limit on Change in Interstate Allocation, Section 36.154(f) of the Commission’s Rules*, Order Granting Motion for Partial Stay, 11 FCC Rcd. 14324, 14326, para. 3 (1996) (*Florida Public Service Commission*).

<sup>7</sup> “Ligado Deployment Could Come Late Next Year, CEO Says,” *Communications Daily*, at 1 (Apr. 30, 2020) (“Ligado hopes to have its L-band spectrum deployed terrestrially within 18 months”). In any event, 47 U.S.C. § 343 prohibits Ligado from commencing operations until 90 days after widespread interference concerns are resolved.

interference to federal GPS operations and detailed evidence in support thereof, the Petition is likely to succeed on the collective merits.

## ARGUMENT

### **I. THE NEW AND UNPROVEN PERFORMANCE-BASED HARMFUL INTERFERENCE METRIC SHOULD BE TESTED SCIENTIFICALLY BEFORE LIGADO CAN DEPLOY A POTENTIALLY HARMFUL TERRESTRIAL NETWORK**

NTIA appreciates the Commission's tremendous wealth of expertise, with staff members from each agency routinely bearing witness to it whether through formal Interdepartment Radio Advisory Committee (IRAC) coordination or numerous instances of informal collaboration. NTIA accordingly has confidence that the Commission, based on the advice of its expert staff, will in fact recognize the full merit of considering the issues raised in NTIA's petition.

The *Ligado Order* unfortunately reflects a level of uncertainty that is incommensurate with the amount of harm that could be caused to GPS receivers, including the some 1 million in the Department of Defense's inventory. The *Ligado Order* places great weight on the Commission's conclusion that harmful interference to GPS devices is unlikely.<sup>8</sup> However, as the text of the *Ligado Order* and the several conditions therein disturbingly but correctly imply, harmful interference will arise.<sup>9</sup> Furthermore, NTIA's concurrently-filed Petition explains that the *Ligado Order* relies enormously upon an essentially new and unproven harmful interference

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<sup>8</sup> See, e.g., *Ligado Order*, para. 60 ("Our focus on *harmful* interference is important, and necessary to ensure that the spectrum resource is managed efficiently and effectively.") (emphasis in original); *id.*, para. 105 ("the conditions we adopt . . . obviate these concerns [about potential effects to GPS receivers]").

<sup>9</sup> See, e.g., *id.*, para. 89 ("high-precision receivers *should* be able to co-exist with Ligado's modified ATC network operations") (emphasis added); *id.*, para. 127 ("the potential for harmful interference to U.S. Government GPS receivers is limited and manageable").

metric.<sup>10</sup> The *Ligado Order* claims that its new approach more closely aligns with the Commission’s “harmful interference” definition and is more reliable,<sup>11</sup> but it is not directly correlated with the definition of “harmful interference,” particularly since “performance degradation” is an element of the definition of “interference” – not “harmful interference.”<sup>12</sup> Then, several of the conditions hinge upon affected GPS users ability to show “harmful interference” as apparently reinterpreted under this new metric.<sup>13</sup>

These uncertainties combine to form a serious legal matter, and the Commission accordingly should stay the *Ligado Order* and have this interference theory soundly tested – and apply it to the actual manner in which Ligado would deploy and operate its network.

Under the Commission’s standard for reviewing a petition for stay, “maintaining the status quo would be appropriate when a serious legal question is presented, if little harm will befall others if the stay is granted and denial of the stay would inflict serious harm.”<sup>14</sup> Because a stay would harmlessly allow for validation of the performance-based interference metric, and because denial of a stay could result in serious harm to the national security and the public safety, grant of a stay would be appropriate.

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<sup>10</sup> See Petition at section II.a.

<sup>11</sup> See *Ligado Order*, para. 36.

<sup>12</sup> *Ligado Order*, para. 49 (“harmful interference” is “[i]nterference which *endangers the functioning of a radionavigation service* or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with [the ITU] Radio Regulations.”) (emphasis added) (quoting 47 C.F.R. § 2.1(c)).

<sup>13</sup> See *Ligado Order*, para. 144. “Ligado shall expeditiously replace or repair as needed any U.S. Government GPS devices that experience or are likely to experience *harmful interference* from Ligado’s operations.” *Id.* (emphasis added). Government agencies are burdened with anticipating which of its GPS devices may be “affected by Ligado’s ATC operations” and evaluating “whether there would be *harmful interference* from Ligado’s operations.” *Id.* (emphasis added).

<sup>14</sup> *Florida Public Service Commission*, 11 FCC Rcd. 14324, para. 3.

## **II. THE PRESENT CONDITIONS SET FORTH IN THE *LIGADO ORDER* WILL NOT PREVENT HARM TO GPS**

A stay also would be appropriate on the separate grounds that, in the event interference arises, significant and irreparable harm will result because the conditions presently set forth in the *Ligado Order* largely are ineffective. As detailed in NTIA's Petition, the conditions, for example, take little account of the large number of federal GPS devices that Ligado's network potentially would impact, so requirements to repair or replace government receivers are infeasible.<sup>15</sup> Many of these conditions are based on privately negotiated agreements between Ligado and a handful of commercial GPS manufacturers, who are positioned very differently than federal agencies (and which are not parties to those agreements). The set of conditions addressing repair or replacement<sup>16</sup> also are unworkable because they overlook the classified nature of military GPS use, the number of government receivers and military platforms affected, and the fact that many of these receivers are embedded within a wide range of hardware and weapons systems. These conditions cannot be implemented without significant mission impact and harm. A stay would prevent application of these potentially harmful conditions and permit workable and effective conditions to be crafted – and again without harm to Ligado or its potential customers.

## **III. THE *LIGADO ORDER* FAILS TO SATISFACTORILY ADDRESS AND RESOLVE EXECUTIVE BRANCH CONCERNS ABOUT THE RISKS OF HARMFUL INTERFERENCE TO GPS**

A third basis for granting a stay is that the *Ligado Order* disregards legitimate federal agency concerns about the risks of GPS interference as well as a broad stock of valuable

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<sup>15</sup> See Petition at section II.c.

<sup>16</sup> See *Ligado Order*, paras. 99-106.

information and data developed and analyzed by the IRAC, as detailed in the Petition.<sup>17</sup> The *Ligado Order* pays no heed to previously recognized concerns about overload interference, the resulting new interference environment from dense deployment of terrestrial base stations, or the impact on a number of GPS devices even with the adopted guard band and reduced power.<sup>18</sup> Combining this aspect with the unproven harmful interference metric and the inadequate conditions previously discussed demonstrates the likelihood that NTIA's petition will succeed on the merits.

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<sup>17</sup> *See* Petition at section II.a.

<sup>18</sup> *See id.*

For the reasons set forth above, NTIA respectfully requests that the Commission stay the *Ligado Order* so that it can consider NTIA's Petition while federal GPS operations remain protected. This petition satisfies each of the four factors of the Commission's standards for granting a stay, especially given the magnitude of the potential harm to GPS and the lack of harm posed to Ligado. A stay thus would allow the Commission to consider the appropriate interference metrics and mitigation procedures – and their realistic application to the actual terrestrial network – before Ligado's deployment commences.

Respectfully submitted,



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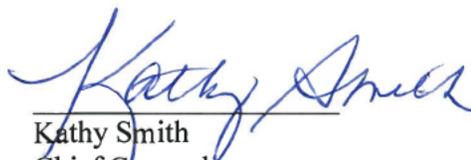
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May 22, 2020

**CERTIFICATE OF SERVICE**

I, Kathy Smith, hereby certify that on this 22nd day of May, 2020, I caused a copy of the foregoing Petition for Stay to be served on the following:

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