

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

In the Matter of	)	IB Docket No. 11-109
	)	
Ligado’s Modification Applications	)	IB Docket No. 12-340
	)	
	)	

**COMMENTS OF COMPETITIVE CARRIERS ASSOCIATION**

Competitive Carriers Association (“CCA”) hereby submits the following comments in response to the Federal Communication Commission’s (“FCC” or “Commission”) Public Notice in the above-captioned proceeding<sup>1</sup> seeking comment on Ligado Networks LLC’s (“Ligado”) applications to modify the ancillary terrestrial component (“ATC”) of its L-band mobile-satellite service (“MSS”) networks (“Applications”), and proposing additional operational conditions and restrictions.

**I. INTRODUCTION AND SUMMARY**

CCA is the nation’s leading association for competitive wireless providers and stakeholders across the United States. CCA’s membership includes nearly 100 competitive wireless providers ranging from small, rural carriers serving fewer than 5,000 customers to regional and national providers serving millions of customers. CCA also represents approximately 200 associate members including vendors and suppliers that provide products and services throughout the mobile communications supply chain. CCA members have a keen interest in additional spectrum resources including the spectrum at issue in these Applications.

---

<sup>1</sup> *Comment Sought on Ligado’s Modification Applications*, Public Notice, IB Docket Nos. 11-109 &12-340, DA 16-442 (rel. Apr. 22, 2016) (“*Public Notice*”).

CCA applauds the FCC for initiating a comment cycle on Ligado's license modifications.<sup>2</sup> CCA has joined the rest of the telecommunications industry in calling for the Commission to unleash additional spectrum for wireless connectivity, both in the name of a competitive mobile broadband ecosystem and to address growing capacity concerns given expected growth in consumer demand for high-bandwidth mobile service. Allowing interested parties to test the validity of Ligado's proposal, as well as Ligado's separate petition for allocation of the 1675-1680 MHz band for mobile use,<sup>3</sup> is the latest in a series of laudable actions taken by the Commission to foster growth and innovation in the mobile wireless marketplace.<sup>4</sup>

Considering the ongoing preparations for 5G network deployment by competitive carriers, CCA continues to stress the importance of providing new opportunities to optimize both new and licensed spectrum. Ligado's efforts to provide a robust data set supporting its modification requests have been ongoing for more than a decade. Ligado is committed to developing competitive mobile wireless operations and next generation technologies. CCA therefore urges the Commission to carefully consider the full scope of Ligado's application.

---

<sup>2</sup> Letter from Rebecca Murphy Thompson, EVP & General Counsel to CCA, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 11-109 et al. (Feb. 11, 2016).

<sup>3</sup> *See Comment Sought to Update the Record on Ligado's Request that the Commission Initiate a Rulemaking to Allocate the 1675-1680 MHz Band for Terrestrial Mobile Use Shared with Federal Use*, Public Notice, RM-11681, DA 16-443 (rel. April 22, 2016).

<sup>4</sup> *See, e.g.*, Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, GN Docket No. 14- 177, et al., *Notice of Proposed Rulemaking*, 30 FCC Rcd 11878 (2015) ("*Spectrum Frontiers NPRM*"); *see also* Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, *Report and Order*, 29 FCC Rcd 6567 (2014) ("*Incentive Auction Report and Order*"); *see also* Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band, GN Docket No. 12-354, *Order on Reconsideration and Second Report and Order*, FCC 16-55 (rel. May 2, 2016) ("*3.5 GHz Report and Order*"); *see also* Letter from Hon. Comm'r Tom Wheeler, Chairman of the FCC, to Rep. Gerald E. Connolly, Congressman, U.S. House of Representatives (Apr. 20, 2016) (notifying the Congressman that Ligado's petitions will shortly be examined via formal rulemaking "in the context of [the Commission's] ongoing efforts to make additional spectrum available for mobile broadband services...").

## **II. APPROVAL OF LIGADO'S LICENSE MODIFICATION APPLICATION IS IN THE PUBLIC INTEREST**

Ligado's mid-band spectrum is well-positioned to play a critical role, among others, in both the development and advancement of 5G. While there are multiple factors for the FCC to consider when reallocating spectrum, including freeing up additional low-, mid-, and high- band spectrum resources for mobile broadband services and fixing the broken business data services market,<sup>5</sup> Ligado's proposal represents one step closer to deploying new networks capable of supporting the rapidly growing Internet of Things. Granting Ligado's petition would make 30 MHz of spectrum immediately available on a nationwide basis to support the transition to next-generation communications networks.

Unlocking 30 MHz of spectrum will generate significant consumer benefits, and the presence of an innovative competitor will only enrich the mobile wireless marketplace. A positive outcome in this proceeding would provide permanent protections for neighboring GPS, while helping to achieve the President's goal of unleashing 500 MHz of spectrum for mobile broadband use, bringing final resolution after over a decade of regulatory proceedings and benefitting all consumers.

## **III. THE REGULATORY PROCEEDING AT ISSUE IS RIPE FOR RESOLUTION**

Ligado has been working with key industry stakeholders and the Commission for over a decade to successfully conclude this rulemaking. Considering both the substance of the data on

---

<sup>5</sup> See *Spectrum Frontiers NPRM; 3.5 GHz Report and Order*; Wireless Telecommunications Bureau Seeks Comment on Proposed Amended Nationwide Programmatic Agreement for the Collocation of Wireless Antennas, WT Docket No. 15-180, *Public Notice*, DA 16-519 (rel. May 12, 2016); Business Data Services in an Internet Protocol Environment, WC Docket No. 16-143, 15-247, 05-25, RM-10593, *Tariff Investigation Order and Further Notice of Proposed Rulemaking*, FCC 16-54 (rel. May 2, 2016) ("*BDS FNPRM*").

record and the length of time interested parties have been allotted to provide feedback, the instant proceeding is sufficient to fully resolve any outstanding issues and ultimately grant Ligado's request.<sup>6</sup>

Ligado has harnessed its resources and engineering data to validate its requests of the Commission and the GPS industry. Most recently, Ligado filed the results of extensive testing conducted by Roberson & Associates ("RAA") examining whether LTE deployment in bands adjacent to the 1526-1536 MHz portion of the MSS L-band, the 1627.5-1637.5 MHz, and 1646.5-1656.5 MHz portions of the MSS uplink band, would prevent GPS devices from producing accurate location information.<sup>7</sup> Notably, the RAA testing was designed to assess *actual harm* to consumer devices, rather than theoretical harm.<sup>8</sup> This practical data enables the Commission to resolve interference concerns by ensuring protection for consumer devices without needlessly restricting innovative deployment of spectrum. It also allows any outstanding opponents to bring forth specific, data-driven concerns which Ligado may promptly address.

Technical parameters aside, Ligado has accomplished the likely more difficult task of engendering compromise and goodwill among former political and policy opponents. Ligado has negotiated with Deere & Company ("Deere"), Garmin International, Inc. ("Garmin"), and Trimble Navigation Limited ("Trimble") to produce terms and conditions of use that will allow

---

<sup>6</sup> Much like the BDS proceeding, Ligado's application is part of a longstanding proceeding wherein delays and uncertainty hamper network development. The Commission should not allow important proceedings to linger, especially where the biggest stakeholders take such an active role in providing a thorough record.

<sup>7</sup> See Letter from Gerard J. Waldron, Counsel to Ligado, to Marlene H. Dortch, FCC Secretary, IB Docket No. 11-109, IB Docket No. 12-340 (with attachment "Results of GPS and Adjacent Band Co-Existence Study") filed May 11, 2016 ("*RAA Study*").

<sup>8</sup> *Id.*

Ligado, GPS operators, and the federal government to successfully coexist in the same bands.<sup>9</sup> The testing parameters examined by RAA and included in the Applications, based on very low power levels, were produced by extensive brokering with the aforementioned GPS companies. Deere has stated it will not object to Ligado's applications,<sup>10</sup> Garmin filed to reiterate its commitment to the Settlement Agreement,<sup>11</sup> and Trimble filed in explicit support of Ligado's proposal.<sup>12</sup> Ideally, Ligado's success will have precedential value, alleviating long-standing concerns over device interference and resulting in more efficient spectrum allocations.

Further, Ligado's commitment to comply with Federal Aviation Administration safety guidelines and Ligado's voluntary condition to do so reflects enormous progress and good faith efforts to make this spectrum available as soon as possible. With these compromises and public interest benefits in mind, the FCC should grant Ligado's proposed license modification.

#### IV. CONCLUSION

Competitive carriers and American consumers alike will benefit from the Commission's grant of Ligado's Applications. After over a decade of building consensus among interest-holders and investing heavily in formulating new service rules, Ligado is poised to maximize

---

<sup>9</sup> See Letter from Gerard J. Waldron, Counsel to New LightSquared LLC, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 11-109 (filed Dec. 17, 2015) ("Dec. 17, 2015 Ex Parte and Garmin Agreement"); Letter from Gerard J. Waldron, Counsel to New LightSquared LLC, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 11-109 (filed Dec. 8, 2015) ("Dec. 8, 2015 Ex Parte and Deere Agreement"); Letter from Gerard J. Waldron, Counsel to New LightSquared LLC, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 11-109 (filed Feb. 3, 2016) ("Feb. 3, 2016 Ex Parte and Trimble Agreement").

<sup>10</sup> See Letter from Catherine Wang, Morgan, Lewis & Bockius, to Marlene H. Dortch, Secretary, FCC, RM-11681, IB Docket No. 12-340, IB Docket No. 11-109, IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, SAT-MOD-20151231-00091, WC Docket No. 10-90, WT Docket No. 10-208, GN Docket No. 14-126, and ET Docket No. 15-184 (filed Mar. 7, 2016).

<sup>11</sup> See Letter from M. Anne Swanson, Counsel to Garmin, to Marlene H. Dortch, Secretary, FCC, RM-11681, IB Docket No. 12-340, IB Docket No. 11-109, IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091 (filed Mar. 9, 2016).

<sup>12</sup> See Letter from Russel H. Fox, Counsel for Trimble Navigation Limited, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 11-109, IBFS File Nos. SES-MOD-20151231-00981, SAT-MOD-20151231-00090, and SAT-MOD-20151231-00091 (filed May 20, 2016).

efficient use of its spectrum and reinvent itself as a next generation mobile broadband services provider. It is time for the Commission to bring this proceeding, along with the BDS proceeding, to a close to ensure the United States remains a leader in 4G and leads in 5G deployments.<sup>13</sup> Ligado has filed a wide body of data through which interested parties can fully address the merits of Ligado's proposal. CCA is pleased to support Ligado in its efforts and accordingly urges the Commission to grant Ligado's Applications.

Sincerely,

*/s/ Rebecca Murphy Thompson*

Rebecca Murphy Thompson  
EVP & General Counsel  
COMPETITIVE CARRIERS ASSOCIATION  
805 15<sup>th</sup> Street NW, Suite 401  
Washington, DC 20005

May 23, 2016

Cc: Robert Nelson  
Paul Murray  
Charles Mathias

---

<sup>13</sup> See Hon. Comm'r Tom Wheeler, Chairman of the FCC, *Out with the Old, In with the New*, FCC Blog (Apr. 8, 2016), <http://apps.fcc.gov/ecfs/document/view?id=60001997164> (explaining dependence on backhaul will only increase as wireless carriers move into 5G wireless).