

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

In the Matter of	)	
	)	File Nos. 0006729503 <i>et al.</i> <sup>1</sup>
Request of Progeny LMS, LLC	)	
	)	WT Docket No. 12-202
For Waiver and Extension of Time	)	

**REPLY OF  
PROGENY LMS, LLC**

Progeny LMS, LLC (“Progeny”), by its attorneys, hereby replies to the comments that were filed in response to the Commission’s Public Notice addressing Progeny’s Amendment and Restatement to Requests for Waiver and Extension of Time (“Extension Request”), as amended.

No party objected to Progeny’s Extension Request.<sup>2</sup> Therefore, given the Commission’s recognition of the critical public safety need for the emergency indoor location services that Progeny’s network will provide,<sup>3</sup> the Commission should promptly grant Progeny’s Extension.

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<sup>1</sup> The FCC file numbers applicable to this application are provided as Exhibits A and B of the FCC’s Public Notice regarding Progeny’s Application and are incorporated herein by reference. *See* Wireless Telecommunications Bureau Seeks Comment on Requests by Progeny LMS, LLC for Waiver and Extension of Time to Construct 900 MHz Multilateration Location and Monitoring Service Licenses, WT Docket No. 12-202, *Public Notice*, 30 FCC Rcd 7267 (July 14, 2015) (“*Public Notice*”).

<sup>2</sup> *See* Comments of PG&E Corporation, WT Docket No. 12-202, at 1 (Aug. 3, 2015) (“*PG&E Comments*”) (explaining that “PG&E does not oppose the Progeny Request”), Comments of the American Petroleum Institute, WT Docket No. 12-202. At 1 (Aug. 3, 2015) (“*API Comments*”) (explaining that API “does not take a position” on Progeny’s Extension Request); Comments of PCS Partners, L.P., WT Docket No. 12-202 (Aug. 3, 2015) (“*PCS Partners Comments*”).

<sup>3</sup> *See* Wireless E911 Location Accuracy Requirements, PS Docket No. 07-114, *Fourth Report and Order*, FCC 15-9, ¶ 19 n.36 (2015) (“*Indoor Location Accuracy Order*”) (discussing critical need for accurate, rapid, and reliable location capabilities in “challenging indoor environments” such as deep inside large and multistory buildings).

Progeny is the only company that has demonstrated in industry-wide testing that it can meet the Commission's 50 meter horizontal and floor-level vertical accuracy goals of wireless E911 calls made from urban indoor environments. The public interest will therefore be greatly served by coupling Progeny's construction milestones with the location technology coverage requirements identified in the Commission's Indoor Location Accuracy Order.

Rather than comment on Progeny's Extension Request, the three parties that responded to the Commission's Public Notice discuss unrelated matters that were previously considered and addressed by the Commission. Progeny, nevertheless, responds to these issues below.

**I. NO NEED EXISTS FOR PROGENY TO CONDUCT SYSTEMATIC TESTING OF ITS M-LMS NETWORK WITH PG&E'S LICENSED AND UNLICENSED SYSTEMS**

As the Commission is aware, beginning in 2009 and continuing into the fall of 2012, Progeny constructed a commercial-grade M-LMS network in the San Francisco Bay Area, which is by far the largest population center in the PG&E service territory.<sup>4</sup> In completing this build out, Progeny and PG&E worked cooperatively on their respective 900 MHz networks.<sup>5</sup> Progeny fully expects that this cooperation will continue.

Since Progeny initiated the construction of its San Francisco Bay Area network, only one event of interference has been identified between Progeny and PG&E's respective networks.<sup>6</sup> In

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<sup>4</sup> PG&E's service territory covers most of the populated portions of California north of (and including) Santa Barbara and Bakersfield.

<sup>5</sup> See *PG&E Comments* at 1 (acknowledging that PG&E has engaged Progeny in discussions); see *id.* at 2 (describing the cooperation between Progeny and PG&E in resolving the lone interference event between their licensed systems).

<sup>6</sup> See *id.* at 2.

October 2012, PG&E determined that a Progeny beacon transmitter had been inadvertently installed on a tower on the same horizontal plane less than three feet from a PG&E Part 90 SCADA transceiver and was interfering with its operations. PG&E contacted Progeny and Progeny immediately shut down its beacon transmitter. PG&E and Progeny engineers subsequently agreed that a vertical separation distance of just 10 feet was sufficient between the two devices to avoid interference. As PG&E notes,<sup>7</sup> however, Progeny moved its transmitter 40 feet because that was the closest open position available on the tower.

In the three years since that event, the PG&E and Progeny engineering teams have been in communication with each other, but no subsequent interference events or concerns have been identified. Despite this fact, PG&E's regulatory affairs office now requests that the Commission require Progeny to "systematically test" its network with both PG&E's licensed and unlicensed systems "before full-scale deployment of Progeny's M-LMS system in PG&E's service territory."<sup>8</sup> Progeny, however, already completed a robust deployment of its M-LMS network in the San Francisco Bay Area in 2012 (in advance of the CSRIC field test process).<sup>9</sup> Given that both Progeny's and PG&E's networks have been operating harmoniously without interference across an expansive and densely populated territory for many years, there is little rationale for the Commission to establish a new program of systematic testing.

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<sup>7</sup> *See id.*

<sup>8</sup> *Id.* at 2 and 4.

<sup>9</sup> See CSRIC III WG3, Indoor Location Accuracy Test Bed Report, at 28 (Mar. 13, 2013) (documenting the indoor location tests that were conducted in the San Francisco Bay Area in November and December of 2012).

PG&E's regulatory affairs office also requests that the Commission require Progeny to work with PG&E to establish and implement a process to prevent and address potential interference.<sup>10</sup> Progeny believes that such a process already exists and any enhancements to that process would occur cooperatively as they have in past years without Commission action. PG&E provided to Progeny a complete list of its licensed SCADA transmitter sites and Progeny has used this list to coordinate the locations of its beacon transmitters. Further, Progeny provided to PG&E direct contact information for Progeny's responsible RF engineers in the San Francisco Bay Area. Progeny's RF engineers are under direction to respond immediately to any inquiry received from PG&E regarding potential interference to its communications systems.

Progeny also continues to maintain its website and toll-free help desk to address inquiries regarding interference, as required by the Commission's June 6, 2013 Order authorizing Progeny to begin commercial service.<sup>11</sup> Therefore, Progeny does not believe that any additional procedural measures are warranted to ensure that Progeny's licensed M-LMS operations do not result in unacceptable levels of interference to PG&E's unlicensed meter reading network, or harmful interference to PG&E's licensed SCADA monitoring network.

## **II. NO NEED EXISTS FOR THE COMMISSION TO EXTEND PROGENY'S INTERFERENCE REPORTING REQUIREMENTS**

As noted in the previous section, Progeny has been operating a full scale, commercial grade M-LMS network for about three years in the San Francisco Bay Area (and about five years

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<sup>10</sup> *PG&E Comments* at 1-2.

<sup>11</sup> *See* Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules Progeny LMS, LLC Demonstration of Compliance with Section 90.353(d) of the Commission's Rules, WT Docket No. 11-49, *Order*, FCC 13-78, ¶ 30 (June 6, 2013).

in Santa Clara County). For more than three years, Progeny has also been operating a sufficient number of M-LMS location beacons in 39 other major Economic Areas to provide multilateration services to at least one third of the populations in each of these communities.

Although it is impossible to calculate, it is fair to say that Progeny's M-LMS network is successfully sharing the 902-928 MHz band with tens of millions of Part 15 devices, and has been doing so successfully for many years. To help demonstrate this, the Commission required Progeny to file public reports covering the period from June 6 2013 until December 5, 2014 disclosing any inquiries that Progeny received regarding possible interference to other spectrum users. During this entire period, with literally hundreds of deployed beacons operating on a continuous basis, Progeny did not receive one verified complaint of interference to a Part 15 device.

Progeny still operates its website and toll free helpdesk today and still has not received any complaints of interference to a Part 15 device that resulted from Progeny's M-LMS network. Given this fact, no need exists for the Commission to renew or extend Progeny's public reporting requirements. The American Petroleum Institute ("API") provides no objective reason why an extension of these requirements would be appropriate. None of API's approximately 500 members have ever submitted a verified interference complaint to Progeny. Further, the conclusion of the public reporting process does not inhibit API's members from filing complaints with Progeny in the future, or disclosing such complaints to the Commission. Instead, the original purpose of the public reporting process has been fully served – documenting that the operation of Progeny's network does not prevent Part 15 devices from continuing to operate successfully in the 902-928 MHz band.

### **III. THE COMMISSION IS UNDER NO OBLIGATION TO PROVIDE EQUIVALENT BUILD OUT EXTENSIONS TO ALL M-LMS LICENSEES**

Finally, Progeny addresses the contention of PCS Partners that the Commission is somehow obligated to provide identical milestone extensions to all existing M-LMS licensees. PCS Partners rests its argument on a claim that each of the M-LMS licensees is “similarly situated.” Nothing could be further from the truth.

Progeny designed and arranged for the manufacture of its own M-LMS beacon transmitters, which Progeny installed at leased locations and is operating in 40 major Economic Areas in the United States, at a cost of many tens of millions of dollars. In doing so, Progeny developed technical innovations that will enable its licensed M-LMS spectrum to be used for a far more productive and beneficial purpose – providing highly accurate indoor location information, including floor level information, to support E911 emergency first responders.

Progeny, through its parent company, NextNav LLC, has participated actively in the Commission’s proceedings on the E911 indoor location problem. NextNav representatives have contributed to multiple charters of the Commission’s Communications Security, Reliability and Interoperability Council (“CSRIC”) including demonstrating the capabilities of its location technology in the CSRIC indoor location test bed. More recently, NextNav representatives have been participating in the CTIA working groups implementing the technology and network enhancements needed to meet the performance benchmarks in the Commission’s Indoor Location Accuracy Order.

NextNav representatives have met repeatedly with public safety organizations to ascertain the details of their indoor location requirements. NextNav representatives have also participated in the standards setting process for indoor location technologies, contributing to the deliberations of the Third Generation Partnership Project (“3GPP”) and the Open Mobile

Alliance (“OMA”). Finally, Progeny and NextNav have worked closely with handset and chipset manufacturers, and the major wireless carriers to expedite the inclusion of capabilities to support Progeny’s indoor location service in upcoming generations of wireless handsets.

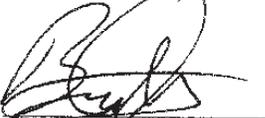
Progeny has satisfied its initial construction milestones in major markets, and has also demonstrated a tremendous financial and resource commitment to completing the construction of its M-LMS network and enabling the highly productive use of its M-LMS spectrum to support public safety. No other M-LMS licensee makes any similar claim. Therefore, identical treatment in the milestone review process is not warranted or appropriate.

#### **IV. CONCLUSION**

The Commission should promptly grant Progeny’s Extension Request. No party has objected to Progeny’s request. Further, the substantial public interest benefits of Progeny’s highly accurate indoor location service to support public safety warrants action by the Commission to directly link Progeny’s milestone buildout requirements with the location technology coverage requirements specified in the Commission’s indoor location accuracy rules.

Respectfully submitted,

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