

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Request by Progeny LMS, LLC for Waiver)
of Certain Multilateration Location and) WT Docket No. 11-49
Monitoring Service Rules)
)

To: Chief, Wireless Telecommunications Bureau

**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 the request of Progeny and other licensees in the Multilateration Location and Monitoring Service (“M-LMS”) for additional time to construct their licensed M-LMS networks.¹ Two comments were filed in response to the Commission’s public notice, one by the IEEE Local and Metropolitan Area Networks Standards Committee (“IEEE 802”)² and the other by three representatives of Part 15 spectrum users, Itron, Inc. (“Itron”), the Wireless Internet Service Providers Association (“WISPA”) and Landis+Gyr Company (“L+G”) (hereinafter, “the Part 15 parties”).³ Progeny responds to these comments to

¹ See *Wireless Telecommunications Bureau Seeks Comment On Requests By Progeny LMS LLC, FCR, Inc., Helen Wong-Armijo, and PCS Partners, L.P. For Waiver And Extension Of Time To Construct 900 MHz Multilateration Location And Monitoring Service Licenses*, WT Docket No. 12-202, Public Notice (rel. July 17, 2012) (“*Public Notice*”).

² See *Comments of IEEE 802*, WT Docket No. 12-202 (rel. August 1, 2012) (“*IEEE 802 Comments*”).

³ See *Joint Comments of Itron, Inc., WISPA, and Landis+Gyr Company*, WT Docket No. 12-202 (rel. August 17, 2012) (“*Part 15 Parties Comments*”).

the extent they address Progeny's request for additional time to complete construction of its M-LMS network.⁴

Only one of the commenting parties opposed the grant of Progeny's extension request and that party, IEEE 802, did so on grounds that are misinformed and irrelevant to the merits of Progeny's request. The other three parties do not oppose the grant of an extension to Progeny, but seek the imposition of a condition on Progeny that would be highly unprecedented, unnecessary, and counter to the public interest. Progeny therefore urges the Commission to further the public interest by promptly and unconditionally granting its extension request.

I. IEEE 802 IS INCORRECT IN CLAIMING THAT THE PUBLIC SAFETY COMMUNITY WOULD NOT BENEFIT FROM MORE ACCURATE AND RELIABLE INDOOR LOCATION TECHNOLOGY

IEEE 802 encourages the Commission to reject Progeny's extension request,⁵ but does so based on an argument that is both incorrect and irrelevant to this proceeding. Specifically, IEEE 802 claims that no need exists for more accurate and reliable position location service to support emergency first responders because existing technologies are adequate for this purpose.⁶

IEEE 802's claim is directly contradicted both by the Commission and by the experts who are working to resolve the indoor location accuracy problem. As the Commission explained in its E911 location accuracy proceeding, "we consider indoor location accuracy to be a significant public safety concern that *requires* development of indoor technical solutions and

⁴ See Request of Progeny LMS, LLC For Waiver and Limited Extension of Time, File Nos. 0005273211-0005273290, 0005273309-0005273348, 0005273354-0005273393, 0005273400-0005273459, 0005273491-0005273550, 0005273555-0005273602, 0005273607-0005273654, WT Docket No. 12-202 (rel. June 21, 2012).

⁵ See *IEEE 802 Comments* at 3, ¶ 10.

⁶ See *id.* at 2, ¶ 8 (arguing that cellular mobile or Wi-Fi technologies "have already resulted in cost effective, widely deployed location-based services, and future development of application software is likely to improve present performance over time for indoor environments").

testing methodologies to verify the effectiveness of such solutions.”⁷ In fact, the potential availability of Progeny’s service to provide highly accurate indoor location capabilities for emergency first responders was cited by the Commission as a justification for granting certain waivers of its M-LMS rules, explaining that “[t]he public interest benefits from improved position location service in areas where GPS is limited, such as in urban canyons and indoors, are substantial.”⁸

The Commission’s conclusions in this regard are supported by the findings of its Communications Security, Reliability, and Interoperability Council (“CSRIC”). Tasked with investigating the potential of various technologies to improve E9-1-1 location accuracy, CSRIC Working Group 4C concluded that “despite claims of certain technology proponents, [we have] not identified any location technology available to improve accuracy that does not require further research and development before implementation.”⁹ GPS, which IEEE 802 characterizes as “dominat[ing] the present geolocation market, especially outdoors,”¹⁰ nonetheless falls short in providing accurate location information in urban canyons, indoors, and in the vertical dimension. The location accuracy problem remains unsolved, particularly in challenging environments, with

⁷ See *Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules*, GN Docket No. 11-117, *Wireless E911 Location Accuracy Requirements*; PS Docket No. 07-114, *E911 Requirements for IP-Enabled Service Providers*, WC Docket No. 05-196, *Notice of Proposed Rulemaking, Third Report and Order, and Second Further Notice of Proposed Rulemaking*, FCC 11-107, ¶ 86 (rel. July 13, 2011) (“*Second FNPRM*”) (*emphasis added*).

⁸ *Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules*, WT Docket No. 11-49, Order, FCC 11-2036, ¶ 20 (rel. Dec. 20, 2011) (“*Waiver Order*”); accord Communications Security, Reliability and Interoperability Council 4C Report, Technical Options for E9-1-1 Location Accuracy at 9.3.4 (“*CSRIC 4C Report*”) (noting that NG911 solutions must prove not just equivalent to existing methods, but superior in “certain environments” – which would include challenging environments like deep indoors and in urban canyons – before actual deployment is considered).

⁹ *CSRIC 4C Report* at 70.

¹⁰ *IEEE 802 Comments* at 2, ¶ 7.

the techniques and technologies currently in use.¹¹ CSRIC 4C concluded that despite marginal increases in existing location accuracy technologies, “[c]ontinuing research of new technologies is necessary” to achieve a system that satisfies all the criteria of a robust and reliable location system.¹²

In addition to being contrary to the conclusions of industry experts and the Commission’s own findings, IEEE 802’s arguments are beyond the scope of this proceeding. The M-LMS band has been duly allocated and licensed for operation of location services for more than a decade. Arguments regarding the wisdom of such an allocation are not properly raised in this context, and have no relevance to the Commission’s decision regarding Progeny’s extension request. The Commission should therefore disregard IEEE 802’s opposition.

II. NO NEED EXISTS TO CONDITION THE GRANT OF PROGENY’S EXTENSION REQUEST

The other commenting parties, the Part 15 Parties, do not object to the grant of Progeny’s extension request. They seek, however, to condition the grant of Progeny’s extension on ceasing further construction until cooperative testing has concluded.¹³ The imposition of such a condition would be counter to the public interest and an unprecedented barrier to a licensee’s ability to fulfill its buildout obligations, as well as being logically unnecessary.

First, it bears repeating that there is a major public interest concern in robust and reliable indoor location service. As discussed above, despite advances in location accuracy, current location technologies still have significant weaknesses and drawbacks that make them unsuitable as a single solution. Commission proceedings have repeatedly acknowledged that wireless

¹¹ *CSRIC 4C Report* at 71.

¹² *Id.* at 72.

¹³ *Part 15 Parties Comments* at 5.

calling from indoor locations has risen dramatically, and those indoor locations pose particular challenges for first responders, where current location technologies are often unable to deliver accurate enough information to assist emergency personnel.¹⁴ Progeny's M-LMS system responds to the consensus of the Commission and the public safety community that new location technologies are needed to meet the needs of first responders and the expectations of an increasingly wireless public.¹⁵ The construction cessation sought by the Part 15 Parties would delay availability of one such service and would be counter to the public interest.

Further, there is no need to suspend construction to accommodate the test process. The Part 15 testing does not determine whether Progeny may operate its M-LMS service in the 902-928 MHz band; the Commission adopted the M-LMS allocation in 1995 and granted M-LMS licenses to Progeny in 2000 based on "substantial technical analysis supporting the plan."¹⁶ Instead, the purpose of testing, as the Part 15 Parties acknowledge, is to "provide users of the band with data that could contribute to 'fine-tuning' system operations."¹⁷

Progeny, on its own initiative, has already incorporated technical refinements that the Commission considered as part of such fine-tuning, such as employing a 20 percent duty cycle,

¹⁴ *Wireless E911 Location Accuracy Requirements, E911 Requirements for IP-Enabled Service Providers*, Further Notice of Proposed Rulemaking and Notice of Inquiry, FCC 10-177, ¶ 14 (rel. Sept. 23, 2010); Statement of Chairman Julius Genachowski, Statement of Commission Meredith A. Baker; *Second FNPRM*, ¶ 86.

¹⁵ *Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications*, PS Docket No. 11-153, *Framework for Next Generation 911 Deployment*, PS Docket No. 10-255, Notice of Proposed Rulemaking, FCC 11-153, ¶ 25 (rel. Sep. 22, 2011) ("*NG-911 NPRM*"); *see also CSRIC 4C Report* at 29 (concluding that "unmistakably the expectation among consumers and public safety entities is that highly accurate location needs to be provided when calling 9-1-1 from any service").

¹⁶ *In the Matter of Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicular Monitoring Systems*, Report and Order, FCC 95-41, 4737 ¶ 82 (rel. Feb. 6, 1995).

¹⁷ *Id.*; *Part 15 Parties Comments* at 6.

and has also employed other measures not originally contemplated by the Commission, such as forgoing return path transmissions.¹⁸ The success of these interference mitigation techniques are evident in the Part 15 tests that Progeny filed with the Commission on January 27, 2012, and are also evident in the additional Part 15 tests that Progeny has been completing this summer in cooperation with the Part 15 Parties. In the highly unlikely event that the Commission concludes that further fine-tuning of Progeny's network would be appropriate, Progeny's continued buildout will not prevent Progeny from making adjustments.

The imposition of a new condition on the construction and operation of Progeny's network is also unnecessary because the existing Part 15 testing condition establishes that Progeny will not begin commercial service until cooperative testing has been completed and Progeny has demonstrated that its M-LMS service will not cause unacceptable levels of interference to Part 15 devices.¹⁹ This threshold requirement differentiates construction from commercial operation, and promotes administrative efficiency by permitting the Commission to consider the results of Progeny's testing in parallel with Progeny's ongoing efforts toward satisfying its construction obligations.

In contrast, an interruption in construction would pose a substantial financial burden on Progeny (forcing it to idle its network construction teams), and would constitute an unprecedented imposition of a condition directly opposing a licensee's efforts to achieve its buildout goals and obligations. Progeny's phased construction schedule is closely calculated to meet Progeny's proposed service benchmarks as outlined in its extension request, and is based

¹⁸ Letter from Bruce A. Olcott, Counsel to Progeny, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 11-49 (Apr. 18, 2012).

¹⁹ *Waiver Order*, ¶¶ 18 and 26 (granting conditional waivers of Sections 90.155(e) and 90.353(g) of the Commission's rules).

on an aggressive, continuous, nationwide construction effort.²⁰ The timely completion of each phase of this staged buildout is critical to maintaining Progeny's proposed construction schedule and the satisfaction of its service requirements; any break in construction would require a further extension request.

Contrary to the Part 15 Parties' concerns, there is no risk that Progeny will "use its fulfillment of its construction obligations as the basis for relief from the more significant testing obligations it must complete on its existing facilities."²¹ Indeed, Progeny is actively cooperating with the Part 15 Parties in completing additional testing of its system in fulfillment of its license condition, the results of which will be presented to the Commission shortly. Therefore, no need exists for the Commission to impose a further condition on the grant of Progeny's milestone extension request.

III. CONCLUSION

The Commission should promptly grant Progeny's request for extension of its milestone requirements. The arguments presented by IEEE 802 do not justify denial of the request because IEEE 802's arguments ignore voluminous Commission record and public-safety community consensus regarding the urgent need for improved location accuracy, particularly indoors where current generation technologies are insufficient. Furthermore, IEEE 802's assertions about the state of the location technology market are ultimately irrelevant to the merits of Progeny's extension request and should be disregarded.

²⁰ See *Progeny LMS, LLC Request for Waiver and Extension of Time*, at i, 2-3 (filed June 21, 2012) ("*Progeny Waiver Request*").

²¹ *Part 15 Parties Comments* at 5.

The Part 15 Parties do not oppose the grant of an extension to Progeny, but their proposed condition requiring Progeny to cease construction during the pendency of the Part 15 testing is contrary to the public interest and not necessary to ensure that the underlying purpose of the Part 15 test process. Progeny therefore urges the Commission to further the public interest by promptly and unconditionally granting its extension request.

Respectfully submitted,

PROGENY LMS, LLC

By: 

Bruce A. Olcott
Squire Sanders (US) LLP
1200 19th Street, N.W.
Washington, D.C. 20036
(202) 626-6615

Its Attorneys

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