

**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)	
)	
Progeny LMS, LLC Demonstration of)	
Compliance with Section 90.353(d) of the)	
Commission's Rules)	

**REPLY OF
THE UTILITY TRADE ASSOCIATIONS**

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SUMMARY

In its Opposition to petitions for reconsideration in this proceeding, Progeny mistakenly relies on isolated passages from the Commission's June 6, 2013 Order for the proposition that Part 15 operations must accept any and all interference from all other operations in the band. This position is indefensible in the face of Commission precedent and Section 90.353(d) of the Commission's rules which imposes additional obligations on M-LMS licensees to protect Part 15 devices and to conduct collaborative tests to promote interference protection. Yet the "unacceptable interference" standard applied by the Commission in its Order upsets this balance between LMS and Part 15 operators, undermines Section 90.353(d), and opens the door for inconsistent interpretation. This newly-applied standard represents a change in policy by the Commission without adequate justification or explanation, which is particularly troubling to the Utility Trade Associations whose member-utilities operate critical supervisory control and data acquisition ("SCADA") devices that in fact have suffered interference as a result of Progeny's operation of its M-LMS devices.

Despite Progeny's efforts in its Opposition to trivialize this interference by claiming that the disruption at issue impacted a licensed 928/952 MHz system, rather than an unlicensed SCADA system in the 902-928 MHz band, the fact remains that Progeny caused an unacceptable level of interference to relatively high powered licensed SCADA devices that are vital to utilities' critical operations. This should heighten – rather than allay – concerns regarding the level of interference Progeny's devices are sure to have on lower-powered unlicensed SCADA devices. Progeny attempts to dispel this concern by suggesting it can immediately shut down a transmitter producing interference when notified by a utility whose SCADA devices have been impacted. This is unavailing, since by the time a utility's SCADA system is impacted, and the

utility has traced the cause to a Progeny device, vital communications will have already been disrupted.

While the Utility Trade Associations continue to oppose commercial deployment of Progeny's systems, and the standard applied by the Commission in its Order, they alternatively urge the Commission to require that Progeny provide 30-day advance notice of any Progeny deployment in a new Economic Area. Advance notice is essential to protect mission critical communications, which ensure the safe, reliable, and secure delivery of essential electric, gas, and water services to the public at large. Otherwise, interference may go undetected for an extended period, increasing the potential for significant outages. Advance notice may also facilitate coordination to avoid interference altogether.

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The Edison Electric Institute (“EEI”),¹ Utilities Telecom Council (“UTC”),² American Public Power Association (“APPA”),³ and National Rural Electric Cooperative Association (“NRECA”)⁴ (collectively the “Utility Trade Associations”) hereby submit this Reply to the Opposition of Progeny LMS, LLC in the above-referenced proceeding.⁵

I. THE COMMISSION ARBITRARILY IGNORED THE POTENTIAL IMPACT OF INTERFERENCE FROM PROGENY’S OPERATION ON UTILITIES, CONTRARY TO THE RECORD IN THE PROCEEDING.

A. The “Unacceptable Levels of Interference Standard” Applied by the Commission Is Arbitrary and Contrary to Precedent.

¹ EEI is the association of the nation’s shareholder-owned electric utilities, international affiliates, and industry associates world-wide.

² UTC is an international association for the telecommunications and information technology interests of electric, gas and water utilities and other Critical Infrastructure Industries (“CII”), such as pipeline companies.

³ APPA is the national service organization representing the interests of not-for-profit, publicly owned electric utilities throughout the United States.

⁴ NRECA is the national service organization dedicated to representing the national interests of cooperative electric utilities and the consumers they serve. NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states or 12 percent of electric customers.

⁵ Opposition of Progeny LMS, LLC in WT Docket No. 11-49 (filed July 19, 2013) (“Opposition”). On July 8, 2013, the Utility Trade Associations filed a Petition for Reconsideration of the Commission’s June 6, 2013 Order in this proceeding.

The Utility Trade Associations agree with petitions for reconsideration filed in this proceeding that the Commission’s Order⁶ applies a standard for unacceptable interference that is arbitrary and at odds with its past pronouncements. When the Commission required that Multilateral Location and Monitoring Service (“M-LMS”) licensees “demonstrate through actual field tests that their systems do not cause unacceptable levels of interference to 47 CFR part 15 devices,”⁷ it “decided to balance the equities and value of each use [M-LMS and Part 15 devices] without undermining the established relationship between unlicensed operations and licensed services.”⁸ In its Opposition, Progeny disregards this essential fact when it takes out of context isolated excerpts from the Commission’s M-LMS Order stating that Part 15 operations “may not cause harmful interference to and must accept interference from all other operations in the band,” and that they “have no vested or recognizable right to continued use of any given frequency.”⁹

Progeny’s effort to stand on these discrete passages independent of the Commission’s broader findings in the M-LMS Order is misleading and betrays a misunderstanding of the Commission’s policy and precedent in this space. The Utility Trade Associations and other petitioners do not claim superior rights to Progeny, but argue instead that Section 90.353(d) of the Commission’s rules imposes additional obligations on M-LMS licensees to protect Part 15 devices and to conduct collaborative testing to promote interference protection. Contrary to Progeny’s assertions in its Opposition, the standard that the Commission now applies in its Order

⁶ *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules and 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 (rel. June 6, 2013) (“Order”).

⁷ 47 C.F.R. §90.353(d)

⁸ Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicular Monitoring Systems, *Report and Order*, 10 FCC Rcd 4695 at 4714 ¶ 35 (1995) (“M-LMS Order”).

⁹ *Id.*

upsets the balance that it previously sought to achieve between LMS and Part 15 operators and renders Section 90.353(d) effectively meaningless, because “unacceptable interference” is subject to multiple, inconsistent interpretations.

The Commission further departs meaningfully from its LMS policy by limiting interference protection when it states in the Order that “[t]he field test requirement does not create an obligation that M-LMS licensees protect particular unlicensed devices or models from interference, and it does not require an M-LMS licensee to avoid causing interference to particular unlicensed systems or to particular circumstances of their operation.”¹⁰ According to the Commission, “[t]o require this would elevate the status of Part 15 operations in the band and undermine the established relationship between licensed and unlicensed operations.”¹¹ Yet the Commission proffers no further justification for this conclusion or for its change in course. While Progeny points to this language in its Opposition, it fails to acknowledge the fundamental departure in Commission policy that has occurred. The new limitation on “unacceptable interference” represents a change in policy by the Commission without adequate explanation, which in turn requires the Commission to initiate a new rulemaking proceeding, and to provide notice and an opportunity for comment on the issue. The Utility Trade Associations agree with other petitioners in this docket that the Commission must conduct such a rulemaking to define “unacceptable interference” before arbitrarily limiting it, as it did in the Order.

Neither is there any weight to Progeny’s claim that the Commission was correct to conclude that the design of Progeny’s network reduced the potential for interference to Part 15 devices. The issue here is not one of system design, but whether the system actually does not

¹⁰ Order at ¶19.

¹¹ *Id.*

cause unacceptable interference. While there are arguably design characteristics that would reduce the potential for interference, there are equally valid concerns that the duty cycle, deployment density, and the relative power of Progeny's operations will cause unacceptable interference, notwithstanding the system design. Progeny attempts to obfuscate this point by raising procedural arguments to avoid the substantive issues raised by petitioners.

Its substantive arguments, too, are also unavailing. For example, it asserts without basis that the overwhelming majority of Part 15 devices are not placed in proximity with Progeny transmitters, and that the Commission correctly concluded that “[e]ach beacon in the Progeny network will not be transmitting continuously, thus providing opportunities for other spectrum users to access the network.”¹² Perhaps sensing the weakness of its own argument, Progeny also protests that the Commission's rules do not limit its duty cycle. While it is true that there is no specific rule that limits the duty cycle, the Commission previously reasoned that no such limit was necessary because the testing requirement would serve to protect against interference.

And that is the point. Network design is of secondary importance to whether the system actually causes harmful interference. This requires actual testing of M-LMS operations. While the low-bit rate and broadcast transmission design are laudable, they ultimately are insufficient to conclude that LMS operations actually do not cause unacceptable interference to Part 15 operations.

B. The Commission Arbitrarily Ignored the Results and Methodology of Progeny's Testing.

Progeny's argument that collaborative testing is not required by rule is unavailing. The question is not whether it is required, but whether the testing upon with the Commission based its decision was sufficient – which it was not. Progeny initially conducted its testing without

¹² Opposition of Progeny at 15, *citing* Order at ¶23.

Part 15 stakeholders, who were not included until the Commission strongly advised Progeny to do so. Moreover, this testing was insufficient both in terms of a description of the test methods and the analysis of the results. Contrary to Progeny's assertion, this is not hearsay but widespread agreement on the record that Progeny does not adequately address in its Opposition.

Among other things, there was an insufficient description of the test set-up and environment in which it was conducted. Petitioners know only that the testing was ON/OFF and included break case samples. Moreover, the test results were analyzed in a very favorable light, claiming non-interference by virtue of the capability of some devices to avoid Progeny's signal through techniques such as frequency hopping, rather than necessarily any action or technology implemented by Progeny. Finally, further testing of Progeny's devices should have been conducted prior to commercial deployment.

Contrary to Progeny's assertions, there was no need to rush to judgment here, as many more Part 15 devices should have been tested, including SCADA systems, as more fully described below. Progeny, still, is far from being able to offer commercial 911 location services that will meet performance requirements, as documented by the Communications Security Reliability and Interoperability Council ("CSRIC") in its report. The Commission should have required Progeny to undertake further testing while it continued to work towards meeting the functional requirements for 911 location accuracy.

As the Utility Trade Associations emphasized in their petition, among the most glaring gaps in the testing is Progeny's failure to test SCADA devices operating in the 902-928 MHz band. Progeny attempts to argue that its testing of meters is sufficient, because meter manufacturers also produce SCADA devices, meters use the same modulation and transmission approaches as SCADA devices, and some meters use the same transmitters and receivers as these

devices. Progeny offers no proof of its assertion, which even if true, overlooks the fundamental point that SCADA devices are subject to more stringent performance requirements, and therefore there is less tolerance for interference on SCADA devices. Moreover, the Commission cannot justifiably conclude that the tests of meters were “adequate to assess the spectrum sharing capabilities of Progeny’s M-LMS network with unlicensed SCADA communications equipment.”¹³ There is simply no basis for the Commission to reach this conclusion, and in fact the Commission may have been misled to believe that Progeny actually tested SCADA devices.

According to Progeny, “the simple fact is that the joint tests have proven that the same mitigation techniques required to deal effectively with the interference by other Part 15 devices are effective as well in the presence of Progeny’s network signals.”¹⁴ In support, it cites to tests that show that Itron’s devices continued to transmit and receive data on channels that were directly co-frequency with Progeny’s M-LMS beacons.¹⁵ Even if one test could serve as a basis for this claim, which it does not, it says nothing of the ability of SCADA devices to meet their stringent performance requirements – particularly low-latency communications. In addition, the fact that there are other sources of interference in the 902-928 MHz band that may be worse than Progeny says nothing about whether Progeny’s signal does not cause unacceptable interference, as well. If anything, it only goes to show that the presence of Progeny’s signal would make a hostile RF environment worse.

Progeny shows blatant disregard for the impact that interference to SCADA operations would have on utility systems. While utilities may be forced to replace millions of devices, Progeny’s response is that the *only* devices that might need to be replaced are those that cannot

¹³ Opposition at 26.

¹⁴ *Id.* at 27.

¹⁵ *Id.*

shift frequencies. Even assuming this is true, there are still millions of utility devices that do not have frequency hopping capabilities, and those that do may still need to be replaced if they are unable to use the remaining spectrum in the 902-928 MHz due to other sources of interference in the band. As Progeny repeatedly notes, the 902-928 MHz band is subject to interference from other Part 15 operations, which can make it difficult or impossible for utilities to operate in a given area without access to Progeny's part of the band.

In fact, Progeny's devices have interfered with SCADA and utility metering devices, as the Utility Trade Associations described in its petition. Progeny attempts to downplay these instances of interference, claiming that interference to PG&E's SCADA system was to PG&E's licensed 928/952 MHz system, rather than an unlicensed SCADA system in the 902-928 MHz band. Yet the fact that Progeny was able to cause unacceptable interference to relatively high powered licensed SCADA devices should *raise* interference concerns with regard to low power unlicensed SCADA devices, not diminish them.

Progeny also downplays the delay in resolving this interference, claiming that it immediately shut down its transmitter when notified by PG&E, and explaining that "what required several additional months was the scheduling of an opportunity to reinstall the Progeny transmitter at another location on the tower before it could be turned back on."¹⁶ But the Commission should bear in mind that interference was occurring for an uncertain amount of time until it was reported by PG&E, and Progeny had to shut down operation for months to resolve the interference. This situation could have been much worse had the interference led to an outage on the electric network before it was reported. Alternatively, if Progeny had been operating commercially, it would have been much more problematic for Progeny to remain shut

¹⁶ *Id.* at 24.

down for months.

II. IN THE ALTERNATIVE, THE FCC SHOULD REQUIRE PROGENY TO NOTIFY ENTITIES 30 DAYS IN ADVANCE OF DEPLOYMENT.

While the Utility Trade Associations continue to oppose commercial deployment of Progeny's systems, they alternatively urge the Commission to require that Progeny provide 30-day advance notice of any Progeny deployment in a new Economic Area ("EA"). As illustrated by the example of the interference with PG&E's SCADA system, advance notice is essential to protect mission critical communications, which ensure the safe, reliable, and secure delivery of essential electric, gas, and water services to the public at large. Otherwise, interference may go undetected for an extended period, increasing the potential for significant outages. Advance notice may also facilitate coordination to avoid interference altogether.

As the Utility Trade Associations previously argued in their petition, utilities cannot afford to be notified after the fact, due to the criticality of the communications systems that could be affected by interference from Progeny. Conversely, Progeny's concerns about disclosure of sensitive proprietary information about the location of their transmitters are baseless, particularly if Progeny is only required to disclose the EA rather than the specific location of its transmitters. On its face, those concerns are clearly outweighed by the larger public interest in maintaining safe and reliable electric, gas and water service. Therefore, the Commission should reject Progeny's opposition and adopt a requirement for Progeny to provide 30 days advance notice for any new deployments.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on this 2nd day of August, 2013, caused copies of the foregoing “Reply of the Utility Trade Associations” to be placed in the U.S. Postal Service, first class postage prepaid, addressed to the following parties:

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