

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

In the Matter of	)	
	)	
Progeny LMS, LLC	)	
	)	WT Docket No. 11-49
Petition for Waiver of the Rules	)	
And Request for Expedited Treatment	)	

**REPLY COMMENTS OF ITRON, INC. ON  
PROGENY TEST REPORT**

Itron, Inc. (“Itron”), by its attorneys, hereby responds to the comments filed regarding the Demonstration of Compliance with Section 90.353(d) of the Commission’s Rules (“Test Report”), filed by Progeny LMS, LLC (“Progeny”) in the above-referenced proceeding.<sup>1</sup>

All parties filing comments made clear that Progeny’s testing was not conducted properly and does not support a conclusion that Progeny’s operations will not cause unacceptable levels of interference to Part 15 users. Moreover, commenters uniformly objected to Progeny beginning operations without additional testing. All and all, the comments make clear that Progeny has not met the requirements of the Waiver Order<sup>2</sup> and cannot be allowed to begin operations.

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<sup>1</sup> *In the Matter of 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 (filed Jan. 27, 2012) (“Test Report”).

<sup>2</sup> *In the Matter of Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules*, Order, 2011 FCC Lexis 5263, WT Docket No. 11-49 (rel. Dec. 20, 2011) (“Progeny Waiver”).

## DISCUSSION

Itron demonstrated in its comments and in the report prepared by RKF Engineering Solutions (“RKF”), which was submitted with the comments, that:

- Progeny failed to engage the Part 15 user community, as the Commission intended;
- The Test Report lacked information so that it is unclear whether the testing was valid or sufficient;
- The numbers and types of devices tested was so limited so as to make the test results meaningless;
- The field testing methodology was wholly inadequate;
- The assumptions about how and where Part 15 devices operate were wrong, so that the testing done was meaningless; and
- Progeny’s overall conclusions are unsupported.<sup>3</sup>

The other parties came to the same conclusions, as detailed below.

*Working with the Part 15 Community:* In terms of Itron’s first point that Progeny did not engage the Part 15 community in conducting the tests, both Cellnet Technology Inc. (“Cellnet”) and the Wireless Service Providers Association (“WISPA”) state that, despite being parties to this or related Progeny proceedings, they were never contacted about being involved with the testing.<sup>4</sup> As Cellnet concludes, “Progeny thus did not satisfy the requirement for ‘cooperative testing.’”<sup>5</sup> Skybridge agrees that Progeny should have engaged in cooperative testing with the Part 15 community, but did not.<sup>6</sup>

*Lack of Valid Testing Procedures:* The other parties also uniformly support the fact that Progeny did not employ valid testing procedures. As WISPA summarized,

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<sup>3</sup> Comments of Itron, Inc. (filed March 15, 2012) and attached RKF Engineering Solutions, LLC, *Analysis of Progeny Part 15 Test Report* (March 15, 2012) (“RKF Report”).

<sup>4</sup> Comments of Cellnet Technology, Inc., a Landis +Gyr Company at 4 (filed March 15, 2012) (“Cellnet Comments”); Comments of the Wireless Internet Service Providers Association at 9-10 (filed March 15, 2012) (“WISPA Comments”).

<sup>5</sup> Cellnet Comments at 4.

<sup>6</sup> See Attachment to Skytel Comments on Progeny Test Report (filed March 15, 2012) (“Skybridge Technical Comments”).

Progeny's testing is "riddled with incompleteness, poor testing parameters and flawed assumptions" and "was conducted so as to skew the results in favor of Progeny instead of being based on real-world testing conditions that may have revealed unacceptable interference to Part 15 outdoor devices in the 902-928 MHz band."<sup>7</sup> And IEEE states that it supports the comments filed by Itron and Cellnet that challenge the adequacy of Progeny's test plan.<sup>8</sup>

*Limited Number of Devices Tested:* Cellnet agrees with Iron's critique of Progeny testing just one AMR device, noting that it "is not representative of the quantity or operation of typical AMR/AMI solutions that operate in the band."<sup>9</sup> Similarly, WISPA noted that Progeny tested only one broadband wireless access ("BWA") device, failing to account for different types of equipment, network architecture and operating environments of WISP devices.<sup>10</sup> As well, WISPA notes that, given the widespread availability of BWA devices, Progeny's claims that it was not able to obtain a sufficient number of devices for testing are "untrue" and "do not excuse Progeny's obvious lack of testing rigor."<sup>11</sup> WISPA also explains that the BWA device tested was more robust than others, which "likely leads to an understatement of the level of interference that would be experienced industry-wide if Progeny commercially deploys."<sup>12</sup> This supports Itron's conclusions regarding the inadequacy of the testing of commercial/industrial Part 15 technologies.

*Poor Choice of Test Location:* In addition, commenters support Itron's view that Progeny did not employ adequate test locations for its testing. As WISPA explains, the chosen test location was not adequate, as it the location lacked high buildings and terrain restrictions, which means that the tested Progeny system was much less

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<sup>7</sup> WISPA Comments at 1 and 10.

<sup>8</sup> Reply Comments of IEEE 802 at 2 (filed March 23, 2012).

<sup>9</sup> Cellnet Comments at 4.

<sup>10</sup> WISPA Comments at 4-5 and 8-9.

<sup>11</sup> WISPA Comments at 5.

<sup>12</sup> WISPA Comments at 6.

densely deployed than it is likely to be.<sup>13</sup> WISPA also critiques Progeny's failure to test in rural areas.<sup>14</sup>

*Limited Information on Testing Performed:* Other parties agreed with Itron that Progeny did not provide sufficient information on how it performed the testing and the test results. Cellnet sets out a number of instances where the test results were not clear.<sup>15</sup> And Skybridge explains that "the test results should have included the achieved location accuracy."<sup>16</sup>

*Poor Test Parameters:* Cellnet notes, like Itron, that the "break case" tests conducted "does not address the actual 'worse case scenario'" of a smart meter within line of sight and 50 feet of the beacon.<sup>17</sup> Skybridge agrees that Progeny failed to do multi-device testing, failed to test its vehicle location service against Part 15 devices, and made poor choices regarding the Part 15 devices tested.<sup>18</sup>

*Progeny Impact on Part 15:* All parties voiced concern about the impact of Progeny's proposed system on Part 15 technologies. Cellnet notes that Progeny's intention to install its beacons "at the highest available points" poses a risk that its beacons will overwhelm lower-powered Part 15 devices.<sup>19</sup> Kapsch Trafficcom IVHS Inc. ("Kapsch") agrees:

By using beacon antennas placed at such heights to enable such coverage, Progeny's interference contour will be much larger than more individual transmitters placed at lower heights, and there will be increased probability that there will be line-of-sight or near-line-of-sight paths from Progeny's beacons to the NM-LMS sites.<sup>20</sup>

Kapsch further agrees with Itron that, for Progeny to penetrate indoors to provide indoor location service, it would have to send higher signals outdoors than if it were providing only a vehicle location service, creating higher interference

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<sup>13</sup> WISPA Comments at 7.

<sup>14</sup> *Id.*

<sup>15</sup> Cellnet Comments at 6.

<sup>16</sup> Skybridge Technical Comments at 4.

<sup>17</sup> Cellnet Comments at 5.

<sup>18</sup> Skybridge Technical Comments at 2 and 16.

<sup>19</sup> Cellnet Comments at 5.

<sup>20</sup> Comments of Kapsch Trafficcom IVHS Inc. at 6 (filed March 15, 2012) ("Kapsch Comments").

outdoors.<sup>21</sup> Kapsch also notes that, “refraining from using return path transmissions limits localized interference by transmitters that may be close to receivers of other systems, but it does nothing to address the wide area broadcast interference caused by Progeny’s base station transmitters.”<sup>22</sup>

Additionally, Cellnet and Skybridge express concern with Progeny’s plan to transmit two slots per second, which would provide for two potential instances of interference.<sup>23</sup> As Skybridge explains: “While the duty cycle is 20%, the continuous transmission of beacons for 100 ms is problematic for both speech and data whenever strong WASP signals and the Part 15 device signals are co-channel . . . the physical layer cannot overcome a long burst of errors.”<sup>24</sup>

*Failure to Demonstrate No Unacceptable Interference:* Finally, all parties agree that Progeny failed to demonstrate that its system would not cause unacceptable levels of interference to Part 15. Cellnet explains that the “Progeny tests focus primarily on Part 15 consumer devices and devices used indoors; and the results from those tests cannot be extrapolated to extend to the millions of AMR/AMI devices already deployed . . .,” noting that consumer devices are more tolerant to interference.<sup>25</sup> WISPA agrees with Itron that Progeny wrongly assumed that many Part 15 devices use frequency hopping or automatic frequency selection.<sup>26</sup> And WISPA explains that Progeny’s conclusions were erroneous because they fail to consider the impact of retransmission and lower throughput on the performance of Part 15 devices, factors that would detrimentally impact end users.<sup>27</sup> Kadsch calls Progeny’s argument about its duty cycle “specious” because the individual bursts are long enough to cause degradation or loss of service.<sup>28</sup> Skybridge concludes that “the Test and the Test Report fail to meet the FCC’s stated

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<sup>21</sup> Kapsch Comments at 4.

<sup>22</sup> Kapsch Comments at 4.

<sup>23</sup> Cellnet Comments at 5-6.; Skybridge Technical Comments at 5.

<sup>24</sup> Skybridge Technical Comments at 5.

<sup>25</sup> Cellnet Comments at 4.

<sup>26</sup> WISPA Comments at 6.

<sup>27</sup> WISPA Comments at 6.

<sup>28</sup> Kapsch Comments at 5.

