

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
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Amendment of the Commission’s Part 90 Rules in ) WT Docket No. 06-49  
the 904-909.75 and 919.75-928 MHz Bands ) (Terminated)  
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ORDER

Adopted: June 9, 2014

Released: June 10, 2014

By the Commission:

I. INTRODUCTION

1. By this Order, we terminate the above-captioned Multilateration Location and Monitoring Service (M-LMS) rulemaking proceeding, and conclude that the various proposals for broad revisions of the applicable rules do not merit further consideration at this time.<sup>1</sup>

II. BACKGROUND

2. In 1995, the Commission established Location and Monitoring Service (LMS) as a new radio service to be licensed in the 902-928 MHz band.<sup>2</sup> LMS shares this band with a variety of users: Federal radiolocation systems; Industrial, Scientific, and Medical (ISM) equipment use;<sup>3</sup> amateur operations; and Part 15 devices. LMS is secondary to Federal users and to ISM devices and may not cause interference to and must tolerate interference from these users and devices.<sup>4</sup> Amateur radio operations are secondary to LMS.<sup>5</sup> Unlicensed Part 15 devices are also authorized in the 902-928 MHz band, although such devices are not afforded interference protection rights and may not cause harmful interference to any licensed systems.<sup>6</sup>

<sup>1</sup> See generally Amendment of the Commission’s Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, WT Docket No. 06-49, *Notice of Proposed Rulemaking*, 21 FCC Rcd 2809 (2006) (*M-LMS NPRM*).

<sup>2</sup> See Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, *Report and Order*, 10 FCC Rcd 4695 (1995) (*LMS Report and Order*); Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, *Order on Reconsideration*, 11 FCC Rcd 16905 (1996) (*LMS Order on Reconsideration*); Amendment of Part 90 of the Commission’s Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, *Memorandum Opinion and Order and Further Notice of Proposed Rule Making*, 12 FCC Rcd 13942 (1997) (*LMS MO&O*). See also *M-LMS NPRM*, 21 FCC Rcd at 2811-14 ¶¶ 5-9.

<sup>3</sup> 47 C.F.R. §§ 2.106, 18.301, 18.111(c).

<sup>4</sup> *Id.* § 90.353(a).

<sup>5</sup> 47 C.F.R. § 97.301.

<sup>6</sup> See 47 C.F.R. § 90.361.

3. In establishing M-LMS,<sup>7</sup> the Commission placed certain limitations on M-LMS operations to facilitate sharing of the 902-928 MHz band by multiple licensed services as well as unlicensed devices.<sup>8</sup> The Commission also adopted certain provisions to facilitate the co-existence of M-LMS operations and Part 15 devices in the 902-928 MHz band.<sup>9</sup> In particular, the Commission adopted a safe harbor rule for unlicensed devices and amateur operations in the band<sup>10</sup> and required that M-LMS licensees demonstrate through actual field tests that “their systems do not cause unacceptable levels of interference to Part 15 devices.”<sup>11</sup> In 1999 and 2001, the Commission auctioned M-LMS licenses.<sup>12</sup>

4. In 2006, noting that there had been “very limited development of M-LMS service under the existing rules,” the Commission initiated the instant proceeding to examine various new approaches that potentially could make for more effective use of the M-LMS spectrum in the 904-909.75 and 919.75-928 MHz portions of the 902-928 MHz band.<sup>13</sup> The Commission sought to evaluate whether to revise rules applicable to M-LMS operations and provide licensees greater flexibility to respond to market conditions while continuing to protect federal and other licensed users and also avoiding any significant increased interference to unlicensed users in the band.<sup>14</sup> The record in this proceeding closed on June 30, 2006.<sup>15</sup>

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<sup>7</sup> See generally *LMS Report and Order*, 10 FCC Rcd 4695. There are two types of LMS systems, M-LMS and non-multilateration LMS. M-LMS systems have been envisioned to track and locate objects over a wide geographic area by measuring the difference in time of arrival or phase of signals transmitted from a unit to a number of fixed points, or from a number of fixed points to the unit that is to be located, and are licensed on a geographic area basis. See 47 C.F.R. §§ 90.7, 90.353(d). Non-multilateration LMS systems transmit data to and from objects passing through particular locations, and are licensed site-by-site. See 47 C.F.R. §§ 90.7, 90.353(i).

<sup>8</sup> See *LMS Report and Order*, 10 FCC Rcd 4695.

<sup>9</sup> See *M-LMS NPRM*, 21 FCC Rcd at 2813 ¶ 9.

<sup>10</sup> See 47 C.F.R. § 90.361; *LMS Report and Order*, 10 FCC Rcd at 4715-16 ¶ 36 (adopting rules “that define and clarify what constitutes harmful interference from . . . secondary operations”).

<sup>11</sup> *LMS Report and Order*, 10 FCC Rcd at 4737 ¶ 82; 47 C.F.R. § 90.353(d) (codifying the field testing requirement). See also *LMS Order on Reconsideration*, 11 FCC Rcd at 16912 ¶ 16; *LMS MO&O*, 12 FCC Rcd at 13968 ¶ 69; *M-LMS NPRM*, 21 FCC Rcd at 2813-14 ¶ 9.

<sup>12</sup> “VHF Public Coast and Location and Monitoring Service Spectrum Auction Closes, Winning Bidders Announced,” *Public Notice*, 16 FCC Rcd 12509 (2001) (*Auction 39 Winning Bidders Public Notice*). See also *M-LMS NPRM*, 21 FCC Rcd at 2814 ¶ 10.

<sup>13</sup> *M-LMS NPRM*, 21 FCC Rcd at 2810 ¶ 1. The Commission noted that, at the time the instance proceeding was initiated, none of the six M-LMS license holders of the auctioned licenses were providing M-LMS services using their spectrum. *Id.* at 2814 ¶ 11.

<sup>14</sup> *Id.* at 2810-14 ¶¶ 1-4.

<sup>15</sup> We note that in a separate proceeding, the Commission stated that Warren Havens has had the opportunity to present his concerns relating to potential revisions to the M-LMS rules, including the operational relationship between M-LMS devices and Part 15 unlicensed devices, in the M-LMS rulemaking. See *Modification of Parts 2 and 15 of the Commission’s Rules for Unlicensed Devices and Equipment Approval, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, ET Docket No. 03-201, 22 FCC Rcd 11383, 11387 ¶ 12 (2007). Havens has submitted a number of documents into the record in this proceeding. However, in those filings Havens in a large part discusses the public interest benefits of M-LMS under the Commission’s existing rules, and he does not propose any specific revisions to the rules applicable to Part 15 users operating in the 902-928 MHz band.

5. Most M-LMS licensees supported having additional flexibility to provide services<sup>16</sup> and opposed any reduction in the power levels in which they could operate,<sup>17</sup> and some sought modification or elimination of the field testing requirement.<sup>18</sup> Commenters representing other users expressed concerns about allowing M-LMS operations additional flexibility,<sup>19</sup> generally supported reductions in the power levels for such operations but not in conjunction with an increase in flexibility,<sup>20</sup> and opposed elimination or supported retention of the Section 90.353(d) field testing requirement.<sup>21</sup>

6. *Recent M-LMS developments.* Over the past few years, Progeny LMS, LLC (Progeny), which holds multiple M-LMS licenses,<sup>22</sup> developed equipment and offers a service that operates in a manner generally consistent with the existing M-LMS framework. In March 2011, Progeny filed a petition seeking waiver of two existing M-LMS service rules to enable it to deploy an M-LMS network that utilizes a beacon system and advanced technologies not available when the M-LMS rules were adopted in 1995.<sup>23</sup> In December 2011, the Wireless Telecommunications Bureau and the Office of Engineering and Technology granted a limited waiver to permit Progeny to continue developing its proposed location service, based, in part, on the public interest benefits of facilitating the deployment of a multilateration location service that can provide more accurate location determinations, including more precise location information that can improve delivery of E911 emergency services.<sup>24</sup> The *Limited Waiver Order* applied the existing interference rules governing M-LMS operations in the 902-928 MHz

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<sup>16</sup> See, e.g., Progeny LMS, LLC (Progeny) Comments at 4-5; FCR, Inc. (FCR) Comments at 3; PCS Partners, LP (PCS Partners) Reply Comments at 2; Helen Wong-Armijo Comments at 2. Teletrac, Inc. (Teletrac) does not object to geographic-based M-LMS licensees offering a wider scope of services as long as site-based licensees can continue operations under the current rules. Teletrac Comments at 2, 4; Teletrac Reply Comments at 1, 6.

<sup>17</sup> See, e.g., Progeny Comments at 23-25; FCR Reply Comments at 4; PCS Partners Reply Comments at 5-6.

<sup>18</sup> See, e.g., Progeny Comments at 41-42; PCS Partners Reply Comments at 6. One M-LMS licensee, Telesaurus Holdings GB LLC, filed comments in response to the M-LMS NPRM and opposed changes to the M-LMS rules to allow a wider scope of service and reduction in power. Telesaurus Holdings GB LLC (Telesaurus) Amended Comments at 8-10 & n.5, 17-19.

<sup>19</sup> See, e.g., American Water Works Association (AWWA) Comments at 1; Cellnet Technology, Inc. (Cellnet) Comments at 3; Piedmont Natural Gas Co. Comments at 3; Consumer Electronics Association (CEA) Comments at 2-5; FreeWave Technologies, Inc. (FreeWave) Reply Comments at 1-2; IEEE 802.18 Radio Regulatory Technical Advisory Group (IEEE 802.18) Comments at 2; Itron, Inc. (Itron) Comments at 5-6; Motorola, Inc. (Motorola) Comments at 4-5,8; Silver Spring Comments at 1; Mt. Vernon Net, Inc. (Mt. Vernon Net) Comments at 2-3; Southern Company Services, Inc. (Southern Company) Comments at 3,8-9; Telecommunications Industry Association (TIA) Comments at 7; Wireless Internet Service Providers Association (WISPA) Comments at 1.

<sup>20</sup> See, e.g., Bay State Gas Co. (Bay State Gas) Comments at 3; CEA Comments at 5-6; Motorola Comments at 6; United Telecom Council (UTC) Reply Comments at 2-3; see also Mt Vernon Net Comments at 2-4 (commenting that M-LMS licensees should operate under Part 15 rules or Part 15 operators should be given a chance to operate at a higher power).

<sup>21</sup> See, e.g., Cellnet Comments at 1-2; CEA Comments at 8; Itron Comments at 13; Motorola Comments at 6; Silver Spring Networks, Inc. (Silver Spring) Comments at 1; TriSquare Communications, Inc. (TriSquare) Comments at 4.

<sup>22</sup> Progeny has significant M-LMS holdings. It is one of six M-LMS licensees that obtained licenses auctioned in 1999 and 2001, and holds 228 of the 614 M-LMS licenses. See Request by Progeny LMS, LLC for Waiver of Certain Multilateration Location and Monitoring Service Rules, WT Docket No. 11-49, *Order*, 26 FCC Rcd 16878, 16880 ¶ 5 (WTB/OET 2011) (*Limited Waiver Order*).

<sup>23</sup> See Petition for Waiver of the Rules and Request for Expedited Treatment, Progeny LMS, LLC, WT Docket No. 11-49 (Mar. 8, 2011).

<sup>24</sup> See generally *Limited Waiver Order*, 26 FCC Rcd 16878.

band and required Progeny to satisfy the field testing requirement by submitting field testing for Commission review prior to commencing commercial operations.<sup>25</sup> In June 2013, following review of field tests submitted by Progeny in January and October of 2012, the Commission concluded that Progeny could commence commercial operations of its position location service network.<sup>26</sup> In approving these M-LMS operations in the 902-928 MHz band, the Commission applied the original M-LMS framework – including the interference-related requirements, the power limits permitted licensed M-LMS operations, and the field testing requirement – that the Commission established when it authorized the service in 1995.<sup>27</sup>

### III. DISCUSSION

7. Based on the record before us, and on recent developments pertaining to M-LMS operations in the 902-928 MHz band, we conclude that the various proposals for wholesale revisions of the applicable rules do not merit further consideration at this time. Accordingly, we terminate this proceeding.

8. In initiating the rulemaking in 2006, the Commission sought to evaluate whether to make various significant changes of the rules applicable to M-LMS to ensure that this service can be deployed in an effective and efficient manner. The Commission stated that “[o]ur goal in this proceeding is to consider whether greater opportunity can be afforded M-LMS licensees to provide services while ensuring continued access for other licensed and unlicensed uses that share this band.”<sup>28</sup> We find that wholesale changes to existing M-LMS framework that the Commission sought comment upon in the *M-LMS NPRM* are not warranted and that the types of revisions that the Commission sought comment are not necessary to provide sufficient flexibility to M-LMS licensees to provide their location services. Based on recent developments pertaining to M-LMS operations in the 902-928 MHz band, we believe that the existing M-LMS framework can provide M-LMS licensees with sufficient opportunities to provide service offerings. As discussed above, the Commission concluded that Progeny could commence commercial operations of its M-LMS position location service network, within the framework that the Commission initially had established to promote the co-existence of M-LMS operations and unlicensed operations in the band.<sup>29</sup> Accordingly, we conclude that terminating this rulemaking serves the public interest at this time.

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<sup>25</sup> See *id.* at 16887-89 ¶¶ 24-29. The order also established a specific process by which Progeny would submit its field testing results for Commission review prior to being allowed to commence commercial operations. *Id.* at 16889 ¶ 29.

<sup>26</sup> See generally 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*, 28 FCC Rcd 8555 (2013) (*Progeny Order*).

<sup>27</sup> *Progeny Order*, 28 FCC at 8557-69, ¶¶ 4-31.

<sup>28</sup> *M-LMS NPRM*, 21 FCC Rcd at 2811 ¶ 4.

<sup>29</sup> See generally *Progeny Order*.

**IV. ORDERING CLAUSE**

9. Accordingly, IT IS ORDERED, pursuant to the authority contained in Sections 4(i) and 4(j) of the Communications Act, as amended, 47 U.S.C. §§ 154(i) and (j), that the proceeding in WT Docket No. 06-49 is HEREBY TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary