

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of )  
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Wireless Telecommunications Bureau ) RM-11755  
Seeks Comment on M2M Spectrum )  
Networks Petition for Rulemaking to )  
Allow Specialized Mobile Radio Services )  
Over 900 MHz Business/Industrial Land )  
Transportation Frequencies )

To: The Wireless Telecommunications Bureau

**COMMENTS OF THE LOWER COLORADO RIVER AUTHORITY**

The Lower Colorado River Authority (“LCRA”) hereby submits its comments in response to the *Public Notice* issued by the Wireless Telecommunications Bureau (“Bureau”) requesting comment on a Petition for Rulemaking filed by M2M Spectrum Networks, LLC (“M2M” or “Petitioner”) to allow Specialized Mobile Radio (“SMR”) services over 900 MHz Business/Industrial Land Transportation (“B/ILT”) channels.<sup>1</sup>

**I. Background**

The LCRA is a governmental agency originally established by a charter of the State of Texas to manage floodwater and to safeguard the residents and property situated on the lower portion of the Colorado River. The LCRA has since expanded its floodwater control operations to include numerous other utility services, such as sewage treatment, water sales, and electrical generation and transmission. The LCRA’s service area covers 50,000 square miles, stretching across the Colorado River and abutting Mason to the west, Houston to the east, Temple to the north, and San Antonio to the south. Within this area, the LCRA serves approximately one

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<sup>1</sup> *Wireless Telecommunications Bureau Seeks Comment on M2M Spectrum Networks Petition for Rulemaking to Allow Specialized Mobile Radio Services Over 900 MHz Business/Industrial Land Transportation Frequencies*, RM-11755, Public Notice, DA 15-944 (rel. August 21, 2015).

million customers. The LCRA's underlying mission is to provide public services that improve the quality of life for people in central Texas.

## **II. LCRA's 900 MHz Land Mobile System**

The LCRA owns and operates a 900 MHz land-mobile radio system throughout Central Texas for emergency voice communication and daily operations. The system has recently been upgraded and provides critical two-way digital voice and data services throughout approximately 50,000 square miles, which is nearly one-fifth of the size of Texas.

In addition, and pursuant to section 90.179 of the FCC's rules,<sup>2</sup> the LCRA engages in non-profit shared use of its 900 MHz land-mobile radio system with a variety of public safety and other entities in the lower Colorado River region, resulting in highly efficient use of the spectrum. Shared use of the LCRA's system has given these entities access to state-of-the-art wireless communications capability that would probably not be available to them otherwise. As such, the LCRA's system serves a vital role in the community.

The LCRA operates a state-of-the-art digital system. The LCRA communications network is a shared system and is providing critical communications to many different entities and thousands of users on a cost-sharing basis. Users include power generation, transmission, and distribution companies, as well as, public safety, police, fire, EMS, emergency management, school districts, transit authorities, bus management, and flood management/warning systems. The system is also a critical component to statewide public safety interoperability. The system is hardened incorporating high-reliability backhaul and power backup systems. The system is designed to be operating when everything else is not, and covers both urban and rural areas.

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<sup>2</sup> 47 C.F.R. § 90.179.

The LCRA network is a narrow-band 12.5 kHz system using hundreds of channels. LCRA holds licenses for over 180 distinct frequencies. The LCRA incorporates frequency reuse, so the 180 distinct frequencies are licensed and reused at multiple site locations.

**III. The Commission Should Deny M2M’s Petition Because It Would Not Be in the Public Interest**

The LCRA opposes amending Section 90.617(c) of the Commission’s rules to permit SMR systems on the 900 MHz B/ILT channels and urges the Commission to deny the Petition for Rulemaking. The LCRA does not believe that the use of 900 MHz B/ILT channels to provide a for-profit service to B/ILT eligibles is desirable. The rule change proposed by M2M and its parent company, Spectrum Networks Group, LLC (“SNG”) would have an adverse effect on the availability of 900 MHz B/ILT spectrum for traditional B/ILT users. The 900 MHz B/ILT spectrum should not be assigned to for-profit operations because it is scarce and is needed by B/ILT users, especially critical infrastructure industry (“CII”) entities.

**A. M2M’s Petition Would Create Channel Scarcity for Traditional B/ILT Incumbents**

When the Commission adopted the prohibition in Section 90.617(c) on SMR systems using B/ILT channels, it correctly determined that allowing SMR use of the B/ILT channels “could cause a scarcity of frequencies” for Private Mobile Radio Service (“PMRS”) operations.”<sup>3</sup> The Commission explained that if the B/ILT channels remained available to SMR licensees, but are not subject to auction, “demand for the channels by SMR applicants seeking to avoid auctions may render them unavailable to other eligible Part 90 services.”<sup>4</sup> Thus, the Commission revised its rules to “establish a clear demarcation between our spectrum allocation

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<sup>3</sup> *Amendment of Part 90 of the Commission’s Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band*, First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rulemaking, PR Docket No. 93-144, 11 FCC Rcd 1463, 1537 ¶ 141 (1995) (“*SMR Services Rules Order*”).

<sup>4</sup> *Id.*

for SMR and other Part 90 services and eliminate the risk of SMR encroachment on non-auctionable PMRS spectrum.”<sup>5</sup>

In 2008, the Commission retained the site-based licensing scheme for the 199 channels allocated to the B/ILT Pool in the 900 MHz band.<sup>6</sup> The Commission concluded that “dedicated spectrum allotted to B/ILT licensees at 900 MHz represents one of the few remaining opportunities for such licensees to obtain much-needed spectrum.”<sup>7</sup> The Commission acknowledged “the vital communications role that 900 MHz B/ILT spectrum plays in enabling traditional B/ILT licensees to safeguard our nation’s critical infrastructure industries.”<sup>8</sup> The Commission stated that 900 MHz B/ILT licensees “must ensure that they have access to communications pathways to meet the essential communications needs of such varied and critical industries as utilities, land transportation, manufacturers/industry, and petro-chemical.”<sup>9</sup> The Commission noted that the 900 MHz B/ILT spectrum is used to “respond to emergency situations and outages” and also by a range of licensees “in a variety of ways to facilitate their efficient operations, to enable the cost-effective production of goods and services offered to the public, and to promote the safety of employees.”<sup>10</sup>

Thus, it is clear that there is a strong public interest in maintaining the current allocation in the 900 MHz band between traditional B/ILT users that use the spectrum to control and

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<sup>5</sup> *Id.*

<sup>6</sup> *Amendment of Part 90 of the Commission’s Rules to Provide for Flexible Use of the 896-901 MHz and 935-940 MHz Band Allotted to the Business and Industrial Land Transportation Pool*, Report and Order, WT Docket No. 05-62, 23 FCC Rcd 15856 (2008) (“*900 MHz Report and Order*”).

<sup>7</sup> *Id.* at 15863 ¶12.

<sup>8</sup> *Id.* at 15864 ¶ 13.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

operate their own systems to address their own private, internal communications needs and for-profit SMR entities. The Commission should preserve the B/ILT channels for their intended purpose and protect the 900 MHz B/ILT band from for-profit seeking entities.

The LCRA strongly supports the Bureau’s decision to deny SNG’s waiver request to obtain 900 MHz spectrum that is set aside for traditional B/ILT operations as against the public interest because it would “blur the demarcation between B/ILT and SMR spectrum . . . .” CII entities and others opposed SNG’s waiver request because it would exacerbate the shortage of available B/ILT frequencies.<sup>11</sup> The Utilities Telecom Council (“UTC”) explained that use of the 900 MHz B/ILT channels by SNG “will fundamentally remove available channels that could be used for PMRS and instead use them on a commercial basis to third parties.”<sup>12</sup> UTC stated that allowing SMR use of the 900 MHz B/ILT channels will “exacerbate the current shortage of available spectrum for utilities and CII to meet their increasing communications needs.”<sup>13</sup>

The LCRA strongly agrees that eliminating Section 90.617(c) – whether through waiver or by eliminating the rule entirely – would enable for-profit SMR entities to apply for all of the available channels in a given area, which would leave no spectrum available for traditional B/ILT eligible entities for legitimate PMRS. As UTC pointed out, SNG (or its subsidiary M2M) “would monopolize all of the available frequencies in a given area and force utilities and CII to pay to use these frequencies.”<sup>14</sup> The LCRA agrees with UTC that utilities and CII entities “with

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<sup>11</sup> Comments of the Utilities Telecom Council, WT Docket No. 14-100 (July 30, 2014) (“UTC Comments”); Reply Comments of UTC, WT Docket No. 14-100 (Aug. 11, 2014) (“UTC Reply Comments”); Comments of Motorola Solutions, WT Docket No. 14-100 (July 30, 2014); Reply Comments of the American Petroleum Institute, WT Docket No. 14-100 (Aug. 11, 2014) (“API Reply Comments”).

<sup>12</sup> UTC Comments at 4.

<sup>13</sup> UTC Comments at 5.

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

a real need for available frequencies would be unable to increase capacity or expand coverage to support the safe, reliable and effective delivery of essential electric, gas and water services to the public at large.”<sup>15</sup>

M2M’s claim that adopting its proposal will not create channel scarcity for B/ILT eligible entities is false. In fact, if the request is granted, the FCC would be increasing eligibility to the 900 MHz B/ILT spectrum and opening the door to for-profit entities eager to capitalize on newly available spectrum. The Commission wisely denied SNG’s previous attempt to circumvent the prohibition on SMR services using B/ILT channels.<sup>16</sup> SNG filed well over 100 applications requesting “a total of more than two thousand channels in approximately 150 of the 186 Basic Economic Areas, including the last remaining 900 MHz B/ILT channels in most of the top-ten markets where channels are still available”<sup>17</sup> The Commission noted that SNG intended to seek additional 900 MHz B/ILT channels and that grant of its request for a waiver of Section 90.617(c) “could thus have a significant effect on the nature of the 900 MHz B/ILT band.”<sup>18</sup> Thus, M2M’s claim that its proposal will not create channel scarcity has already been thoroughly debunked by the Commission and by CII entities.

Similarly, the Commission has already determined that the main purpose of seeking to eliminate Section 90.617(c) is primarily to serve the business interests of the Petitioner. When the Commission denied SNG’s waiver request, it determined that “the primary benefit of utilizing 900 MHz B/ILT spectrum is that the channels can be obtained without competitive

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<sup>15</sup> UTC Reply Comments at 2.

<sup>16</sup> *Spectrum Networks Group, LLC Applications and Waiver Request to Allow It to Provide Private, Internal Machine-To-Machine Communications to Businesses on 900 MHz Business/Industrial/Land Transportation Channels*, Order, WT Docket No. 14-100, 30 FCC Rcd 3509 (rel. April 13, 2015).

<sup>17</sup> *Id.* at 3514 ¶ 10.

<sup>18</sup> *Id.*

bidding or participation in the secondary market, which would reduce SNG's start-up and operating costs.”<sup>19</sup> The Commission held that the fact that “SNG would prefer to acquire spectrum without purchasing it or leasing it wherever possible is hardly unique or unusual, and does not merit grant of a waiver.”<sup>20</sup>

For these same reasons, there is no basis for changing the Commission's rules to enable M2M to serve its own business interests. M2M wants to change the Commission's rules so that it can acquire spectrum without paying for it at auction or on the secondary market. If the Commission were to eliminate the rule prohibiting SMR use of the B/ILT channels, it would save M2M substantial licensing costs and put other entities that followed the Commission's rules at a competitive and financial disadvantage. The Commission should not open up the B/ILT spectrum to support M2M's proposed for-profit SMR use. The Commission should maintain the current division between B/ILT and for-profit SMR operations in the 900 MHz band and preserve the B/ILT spectrum for its intended purpose. If the Commission were to grant M2M's request, it would be impossible to undo the damage caused to traditional B/ILT users once SMR entities begin grabbing up any remaining available spectrum in the B/ILT band.

M2M asserts that numerous other entities are currently providing for-profit SMR services to third parties using the B/ILT channels in violation of the Commission's rules. If entities are doing so, this only provides additional evidence of the significant interest by for-profit SMR entities in the B/ILT band and supports the Commission's previous conclusion that demand for the channels by SMR applicants seeking to avoid auctions would render them unavailable to other eligible Part 90 services. If these entities are in fact providing for-profit SMR services, it is presumably to avoid the costs of obtaining frequencies in the SMR band at auction or on the

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<sup>19</sup> *Id.* at ¶ 9.

<sup>20</sup> *Id.*

secondary market or because of a lack of available SMR channels in their markets. If the Commission were to grant for-profit SMR entities access to the B/ILT spectrum, it would open up the flood gates and exacerbate the shortage of available spectrum for CII entities.

In any event, M2M's illogical position seems to be that pointing out a list of alleged violators of the Commission's rule should result in elimination of that rule. Using similar logic, one could advocate for elimination of the tax code just because some do not pay their taxes. If other entities are violating the Commission's rules, the proper remedy is to investigate and, if appropriate, take action against the alleged violators. It would not be to change the rules to conform to the alleged violations. The Commission should not punish traditional B/ILT eligible entities by taking away spectrum that would otherwise be available for legitimate PMRS.

#### **B. The LCRA Reiterates Its Objections to the EWA/PDV Proposal**

The Commission requested comment on whether the M2M proposal is compatible with the Enterprise Wireless Alliance ("EWA") and Pacific DataVision ("PDV") proposal to realign the 900 MHz band into a 3/3 MHz broadband segment and a 2/2 MHz narrowband segment. The LCRA reiterates its objections to the EWA/PDV proposal.<sup>21</sup> Regardless of whether the two proposals are compatible, the Commission should not adopt either of them.

As demonstrated by the LCRA in its comments, it will be impossible under the EWA/PDV proposal to provide "comparable facilities" to incumbents such as the LCRA that would have to be relocated to the 2/2 MHz narrowband segment. First, Section 90.699(d)(2) of the Commission's existing rules and Section 90.1413(c)(1)(ii) of EWA/PDV's proposed rules provide that comparable facilities means that the replacement facilities provide equivalent

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<sup>21</sup> Comments of the Lower Colorado River Authority, RM-11738 (Jan. 12, 2015) ("The LCRA Jan. 12 Comments"); Comments of the Lower Colorado River Authority, RM-11738 (June 29, 2015) ("The LCRA June 29 Comments").

channel capacity.<sup>22</sup> As the LCRA discussed in its comments, if the bare minimum combiner spacing of 150 kHz is used for all channels in the system, there would be 26 sets of six frequencies to use in the proposed 2/2 MHz band.<sup>23</sup> The LCRA has approximately 30 sites within a 65 mile radius of Austin, Texas. It would be impossible for the LCRA's existing channel quantity and site density to be accommodated in the new 2/2 MHz band and there would be no room for expansion. The LCRA does not believe that it would be physically possible to be relocated to the new 2/2 MHz band with equivalent channel capacity.

Second, Section 90.699(d)(3) of the Commission's existing rules and Section 90.1413(c)(1)(iii)(A) of EWA/PDV's proposed rules provide that comparable facilities means that the replacement facilities must provide the same "quality of service."<sup>24</sup> However, EWA/PDV's proposed -88/-85 dBm interference threshold would have an immediate adverse impact on voice quality for a system that is currently operating as low as -109 dBm.<sup>25</sup> In order to compensate, the LCRA would need to increase the density of its sites, which would further exacerbate the lack of available frequencies under the EWA/PDV proposal.

Moreover, because the LCRA and other incumbents would be receiving wideband interference, there would be no way to tune away or filter the on channel interference. Traditionally, interference to a B/ILT system from narrowband operations can often be tuned away or filtered. However, interference from wideband operations, combined with the lack of a guard band under the EWA/PDV proposal, will result in a far more degraded experience within

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<sup>22</sup> 47 C.F.R. 90.699(d)(2); *See also* Letter from Elizabeth R. Sachs, Esq., counsel for Enterprise Wireless Alliance and Pacific DataVision, Inc., to Marlene H. Dortch, Secretary, FCC, dated May 3, 2015 at 11 ("EWA/PDV Ex Parte Letter").

<sup>23</sup> The LCRA Jan. 12 Comments at 5.

<sup>24</sup> 47 C.F.R. § 90.699(d)(3); *See also* EWA/PDV Ex Parte Letter at 11.

<sup>25</sup> The LCRA June 29 Comments at 6.

the B/ILT band. The interference would be constant and could not be tuned away from, rendering the outer portions of the newly consolidated 2/2 MHz band unusable.<sup>26</sup>

Combining the EWA/PDV and M2M proposals would be dangerous for the entire 896-901/935-940 MHz band because it would set the groundwork for an entity such as PDV to further re-design the band to support its for-profit interests. Relocated B/ILT incumbents, hampered by interference from wideband operations, would be forced to vacate the band. This would enable PDV to stockpile B/ILT channels until they have access to the whole 5 MHz. There would be nothing to prevent PDV from procuring spectrum in the B/ILT band, strengthening its position as the majority user in the 896-901/935-940 MHz band, and then seeking additional changes to the Commission's rules as the majority holder in both portions of the band.

PDV has previously indicated that it believes that "licensees in the Part 90 900 MHz band and in the adjacent NPCS band have enjoyed unusually low noise levels to date."<sup>27</sup> These comments suggest that PDV understands that its operations will interfere with incumbents and that PDV is willing to do so in order to develop its for-profit system. PDV also implies that B/ILT incumbents may have made a business decision not to design their systems with a -85 dBm noise floor. The LCRA believes that this is an unrealistic expectation and that it is not in line with the systems hardware that manufacturers have developed and designed for years. B/ILT entities have no say in what system limitations manufacturers design into their products and it does not make sense to limit a system capable of operating 30 dB below a threshold.

The LCRA believes that incumbent B/ILT users have been encouraged to address interference below FCC-mandated levels amongst themselves without burdening the

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<sup>26</sup> *Id.*

<sup>27</sup> Reply Comments of EWA and PDV, RM-11738 (July 14, 2015).

Commission with complaints. If anything, perhaps the currently mandated threshold has not been challenged by B/ILT entities because of a history of successful good faith negotiations between parties. The EWA/PDV proposal would very likely put an end to these good faith efforts among licensees to address interference. All foreseeable interference would be above the mandated threshold and B/ILT entities already squeezed into limited spectrum would have no choice but to inundate the Commission with complaints or vacate the band because their systems become unusable.

**WHEREFORE, THE PREMISES CONSIDERED**, the Lower Colorado River Authority respectfully requests the Commission to take action in this docket consistent with the views expressed herein and deny the Petition for Rulemaking.

Respectfully submitted,

**LOWER COLORADO RIVER AUTHORITY**

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