

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

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended	)	WT Docket No. 99-87
	)	
Promotion of Spectrum Efficient Technologies On Certain Part 90 Frequencies	)	RM-9332
	)	

**REQUEST FOR WAIVER**

Pursuant to Sections 1.3 and 1.925 of the Commission’s rules,<sup>1/</sup> the International Municipal Signal Association (“IMSA”)<sup>2/</sup> hereby requests that the Commission waive its rules to extend, to January 1, 2020, the deadline for compliance with Sections 90.203(j)(4)-(5) of the regulations. Those provisions state that, in order to be certified, private land mobile radio (“PLMR”) equipment in the 150.8–162.0125 MHz, 173.2–173.4 MHz, and/or 421–512 MHz bands must be capable of operating in a 6.25 kHz mode or with equivalent efficiency. Mandating 6.25 kHz equipment is contrary to the public interest because it will create unnecessary costs for Part 90 licensees. To the contrary, the Commission recently required that public safety entities use equipment with analog FM capabilities on interoperability channels.<sup>3/</sup> Because public safety radios are required to have this capability, it is not in the public interest for the Commission to require all radios to also offer digital

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<sup>1/</sup> 47 C.F.R. §§ 1.3, 1.925.

<sup>2/</sup> IMSA is a non-profit organization dedicated to the development and use of signaling and communication systems in furtherance of public safety. IMSA’s approximately 12,000 members include representatives of Federal, state, county, city, township, and borough governmental bodies, as well as representatives of governmental bodies of foreign nations. IMSA works to improve the efficiency, installation, construction, and maintenance of public safety equipment and systems by increasing the knowledge of its members in several diverse technical fields, including public safety communications. Its members use equipment manufactured by entities affected by the current 6.25 kHz mode requirements.

<sup>3/</sup> *Emission Mask Requirements for Digital Technologies on 800 MHz NPSPAC Channels; Analog FM Capability on Mutual Aid and Interoperability Channels*, Report and Order, 31 FCC Rcd. 4250, ¶¶ 62-65 (2016) (“*Analog FM Capability Order*”).

capabilities, which will drive up costs. Accordingly, the Commission should waive its rules and reassess prior to January 1, 2020, whether a 6.25 kHz requirement is still necessary.

## I. BACKGROUND AND SUMMARY

In 1995, the Commission modified its rules to require that PLMR equipment in the 150–174 MHz and 421–512 MHz bands be able to operate on channels with increasingly narrow bandwidths.<sup>4/</sup> Specifically, the Commission decided that it would no longer certify PLMR equipment that could only operate in wideband (25 kHz) mode, and it adopted rules that set dates by which manufacturers would be required to ensure that new equipment could operate on 12.5 kHz and/or 6.25 kHz channels. The Commission later modified the rules to (1) prohibit the certification of equipment that includes a 25 kHz mode, and (2) require that by January 1, 2013 licensees migrate to 12.5 kHz channel bandwidth, or utilize a technology that achieves equivalent efficiency.<sup>5/</sup> However, the Commission deferred the date by which it would no longer accept applications for certification of equipment incapable of operating in even narrower 6.25 kHz mode, or with equivalent efficiency, to January 1, 2011,<sup>6/</sup> a deadline that the Commission later postponed twice more – once until January 1, 2013,<sup>7/</sup> and again until January 1, 2015.<sup>8/</sup>

Some users have deployed or plan to deploy Part 90 radios that are compliant with the new 6.25 kHz rules. Others – particularly those like volunteer emergency communications personnel –

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<sup>4/</sup> *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Service*, Report and Order and Further Notice of Proposed Rulemaking, 10 FCC Rcd. 10076, ¶ 7 (1995).

<sup>5/</sup> *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies*, Order, 28 FCC Rcd. 2811, ¶ 3 (2013) (“2013 PLMR Equipment Order”).

<sup>6/</sup> *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies*, Third Report and Order, 22 FCC Rcd. 6083, ¶ 1 (2007).

<sup>7/</sup> *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies*, Order, 25 FCC Rcd. 8861, ¶ 11 (2010) (“2010 PLMR Equipment Order”).

<sup>8/</sup> *2013 PLMR Equipment Order*, ¶¶ 1, 4.

may not require the additional features that these new radios offer and would otherwise be able to rely on lower-cost radios that only offer 12.5 kHz analog voice capabilities. Unfortunately, those radios may soon be unavailable at current price points – adding 6.25 kHz digital capabilities will cause prices to rise dramatically. Yet, the Commission recently adopted rules requiring all public safety radios to use a common analog FM modulation on mutual aid and interoperability channels.<sup>9/</sup> This technology is in place today and radios using it can be produced inexpensively. For some market segments, that capability is all that is necessary. Requiring manufacturers to produce equipment with 6.25 kHz channels or the equivalent for all radios – regardless of application – is both burdensome and unnecessary. The Commission should therefore postpone the 6.25 kHz capability requirement until January 1, 2020, at which time it should reassess the decision to impose the 6.25 kHz capability requirement.

## **II. THE COMMISSION SHOULD POSTPONE THE REQUIREMENT THAT PLMR EQUIPMENT BE CAPABLE OF OPERATING IN A 6.25 KHz MODE OR WITH EQUIVALENT EFFICIENCY**

### **A. Requiring 6.25 kHz-Capable Equipment Is Not Consistent With Other FCC Or Market Requirements, And It Has No Corresponding Benefit**

For important segments of the public safety marketplace, the 6.25 kHz capability requirement will have the unwanted effect of significantly raising equipment prices, burdening licensees, and reducing deployment. Many of the individuals who serve as first responders are volunteers, often in dangerous or unstable environments that place their own lives and health at risk.<sup>10/</sup> In fact, volunteers constitute large portions of local emergency services. Of the over 1.1 million local firefighters in the U.S., for instance, approximately 70% are volunteers.<sup>11/</sup> Strikingly, 85% of all

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<sup>9/</sup> *Analog FM Capability Order*, ¶¶ 62-65.

<sup>10/</sup> For instance, of the 91 firefighters who died in the line of duty in 2014, 56 were volunteers. *Firefighter Fatalities in the United States in 2014*, U.S. FIRE ADMIN. (Aug. 2015), [https://www.usfa.fema.gov/downloads/pdf/publications/ff\\_fat14.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/ff_fat14.pdf).

<sup>11/</sup> *U.S. Fire Department Profile*, NAT'L FIRE PROTECTION ASSOCIATION (Jan. 2016), <http://www.nfpa.org/research/reports-and-statistics/the-fire-service/administration/us-fire-department-profile>.

local fire departments are either all or mostly volunteer, and these volunteer departments are responsible for protecting about a third of the nation’s population.<sup>12/</sup> The time these volunteers donate also saves local governments an estimated \$139.8 billion per year.<sup>13/</sup> Volunteers likewise make up the majority of ski patrols, which provide emergency medical and rescue services to on-snow sports participants. National Ski Patrol – a professional organization for registered ski patrols, patrollers, and others – estimates that of its 28,000 members, 24,000 are volunteers.<sup>14/</sup> Rural ambulance services, which constitute 80% of U.S. ambulance services, also primarily use volunteers.<sup>15/</sup>

These segments of the public safety community often purchase their own radios, which are deployed for localized, on-site communications. Yet these radios also generally support public safety interoperability communications in order to provide the greatest utility and coordination with other agencies where required. The Commission recently determined that radios that incorporate interoperability channels must use a common analog FM modulation.<sup>16/</sup> In establishing this requirement, the Commission observed that “analog FM is already the *de facto* interoperability standard on the mutual aid and interoperability channels and will be for some time.”<sup>17/</sup> While the new rules apply only to mobile and portable stations, the Commission recommended that base stations on the interoperability and mutual aid calling channels be operated with FM modulation as well.<sup>18/</sup>

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<sup>12/</sup> *Id.*

<sup>13/</sup> *Volunteer Fire Service Fact Sheet*, NATIONAL VOLUNTEER FIRE COUNCIL (last visited May 31, 2016), <http://www.nvfc.org/wp-content/uploads/2016/02/Fire-Service-Fact-Sheet-2016.pdf>.

<sup>14/</sup> *National Ski Patrol Fact Sheet*, NATIONAL SKI PATROL (last visited May 31, 2016), [http://www.nsp.org/press/documents/NSP\\_Fact\\_Sheet.pdf](http://www.nsp.org/press/documents/NSP_Fact_Sheet.pdf).

<sup>15/</sup> Aaron Reinert, *The State of our Nation’s Rural EMS System* (2015), <http://the-aaa.org/wp-content/uploads/2015/11/AAA-2015-State-of-our-Nations-Rural-EMS-Systems.pdf>.

<sup>16/</sup> *Analog FM Capability Order*, ¶¶ 62-65.

<sup>17/</sup> *Id.*, ¶ 62.

<sup>18/</sup> *Id.*, ¶ 63.

In imposing the requirement, the Commission found that there would be little cost burden on public safety entities because “both older and newer equipment from multiple vendors” have analog FM capabilities.<sup>19/</sup> The opposite is not true. While equipment using analog, 12.5 kHz channels is commonplace, not all industry segments require or use today equipment capable of operating on 6.25 kHz wide channels. Use of 6.25 kHz channelization in most cases requires the use of digital emissions. As the Commission noted, these digital radios are more expensive to manufacture than analog radios.<sup>20/</sup> This difference in cost is due to, among other things, filtering requirements. Because the Commission has required public safety users to continue to use radios with FM analog capabilities, there is no operational need to mandate digital capabilities as well. Such a requirement will impose unnecessary burdens on some users.

IMSA recognizes that manufacturers can continue to produce equipment that has already been approved. However, the 6.25 kHz channelization requirement prevents manufacturers from improving current products without triggering the need to also add – at further expense to users – a 6.25 kHz mode that is not required for all applications. Manufacturers may wish to add important features to current low-cost radios that could enhance public safety capabilities. But when faced with the choice of foregoing the needed feature or adding it and securing new equipment approval – the latter of which would require 6.25 kHz capability and result in a dramatic price increase for the product – manufacturers may simply opt to leave products as-is, which is not in the public interest.

When prices for equipment with 6.25 kHz capability inevitably rise, public safety and B/ILT entities will be forced to either pay more or forgo additional equipment. This choice will be especially burdensome for individuals and public safety entities, which already operate under tight

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<sup>19/</sup> *Id.*, ¶ 64.

<sup>20/</sup> *See 2013 PLMR Equipment Order*, ¶ 11 (acknowledging “arguments that requiring applications for equipment certification to specify 6.25 kHz capability . . . would increase equipment cost” and would “compel[] the purchase of more expensive equipment” in granting a temporary extension of the waiver of the 6.25 kHz capability requirement).

budget constraints and can ill-afford to devote additional funds to purchasing digital radios for use in situations where less expensive analog radios would serve equally as well. The price increases caused by the 6.25 kHz capability requirement unfairly impacts small first responder organizations and others, such as National Ski Patrol members, who purchase their own communications equipment. This requirement will likely reduce the pool of these essential volunteers based on their inability to afford required equipment.

**B. The 6.25 Capability Requirement Could Harm Interoperability Capabilities Of Public Safety Radios**

Public safety is a significant driver of PLMR use and technological development, and it is vital that public safety radios are effective and interoperable. The public safety sector is currently working toward interoperability for 6.25 kHz channel conventional operations – further evidence that imposition of a 6.25 kHz channelization scheme is not yet appropriate. The Commission has twice granted waivers of the 6.25 kHz capability requirement to allow time for a 6.25 kHz standard to develop and to prevent harm to public safety interoperability.<sup>21/</sup> And, as noted above, the Commission has stressed the importance of analog FM capabilities for interoperability instead.

The ANSI 102 Project 25 Phase II standard (“P25 Phase II”) for 6.25 kHz is a single standard for the public safety sector that “will help ensure that public safety radios are interoperable, a critical goal of public safety communications.”<sup>22/</sup> This standard is developed for trunked equipment and there currently is no 6.25 kHz Phase II standard for conventional equipment. This lack of a standard for conventional operations is particularly problematic. Because many VHF and UHF

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<sup>21/</sup> See *2013 PLMR Equipment Order*, ¶ 10 (finding “that it is in the public interest to allow standards bodies to complete the P25 Phase II standard before imposing the requirement that radios be capable of operating on 6.25 kHz channels” and noting that the “standard will help ensure that public safety radios are interoperable”); *2010 PLMR Equipment Order*, ¶ 11 (“Because the [6.25 kHz public safety interoperability] standards still have not been finalized, we agree . . . that the deadline for complying with the 6.25 kHz requirement in Section 90.203(j)(5) should be delayed.”).

<sup>22/</sup> *2013 PLMR Equipment Order*, ¶ 10.

channels are shared, conventional operation often best fits the spectrum environment in those channels.

The Commission has noted that “proliferation of 6.25 kHz equipment that is incompatible with the P25 Phase II standard could undermine interoperability.”<sup>23/</sup> Recognizing that the P25 Phase II standards are not yet complete for conventional operations, the Commission has in the past waived implementation of the 6.25 kHz capability requirement in order to prevent harm to interoperability and to the public interest in effective and advanced public safety radio.<sup>24/</sup>

In addition, as the Commission has acknowledged, requiring applications for equipment certification to specify 6.25 kHz capability before completion of the P25 Phase II standards for conventional operations could burden public safety resources by compelling the purchase of equipment that may need to be replaced once the conventional operations standard is developed.<sup>25/</sup> Because there is no current P25 Phase II standard for 6.25 kHz conventional operations, the Commission need not require use of equipment with that bandwidth today. To the contrary, because the Commission has required analog FM capabilities, there is no reason to mandate digital operations for those entities that do not require it and for whom it would be an economic burden.

Indeed, the lack of completed 6.25 kHz standards also led, in part, the Commission to eliminate the 6.25 kHz narrowbanding requirement for certification of public safety equipment in the

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<sup>23/</sup> *Id.*, ¶ 11.

<sup>24/</sup> *See id.*, ¶ 10 (finding “that it is in the public interest to allow standards bodies to complete the P25 Phase II standard before imposing the requirement that radios be capable of operating on 6.25 kHz channels” and noting that the “standard will help ensure that public safety radios are interoperable”); *2010 PLMR Equipment Order*, ¶ 11 (“Because the [6.25 kHz public safety interoperability] standards still have not been finalized, we agree . . . that the deadline for complying with the 6.25 kHz requirement in Section 90.203(j)(5) should be delayed.”).

<sup>25/</sup> *See 2013 PLMR Equipment Order*, ¶ 11 (noting the argument “that compelling the purchase of more expensive equipment that may need to be replaced once a public safety standard [is] developed would burden public safety resources” and concluding that a temporary extension of the waiver of the 6.25 kHz capability requirement was appropriate); *2010 PLMR Equipment Order*, ¶ 11 (citing the argument that it would burden public safety resources to compel the purchase of equipment that may need to be replaced after standards are developed and granting a waiver of the 6.25 kHz capability requirement).

700 MHz band.<sup>26/</sup> Significantly, the Commission time-limited the second 6.25 kHz implementation waiver so that it would correspond with the 6.25 kHz narrowbanding requirement for public safety equipment in the 700 MHz band.<sup>27/</sup> Because the Commission has since eliminated the 6.25 kHz requirement for the 700 MHz band, this rationale for time-limiting the 6.25 kHz implementation waiver applicable to other bands is no longer relevant.

### **III. THE COMMISSION SHOULD WAIVE THE 6.25 KHZ EQUIPMENT REQUIREMENT**

Section 1.3 of the rules allows the Commission to waive its rules for “good cause[.]”<sup>28/</sup> Similarly, Section 1.925 of the regulations allows the Commission to waive its rules where the underlying purpose of the rule would not be served or would be frustrated by application to the instant case and grant of the waiver would be in the public interest.<sup>29/</sup>

Here, immediate application of the 6.25 kHz requirement would drive up equipment prices – particularly for those that can least afford it and may not need the additional capabilities that it offers. Instead of imposing those requirements now, the Commission should postpone their application until January 1, 2020, when the Commission can better assess whether 6.25 kHz compatible products can be manufactured at prices closer to those volunteers are paying today for low cost analog 12.5 kHz FM radios. As noted above, digital radios are more expensive than analog radios, meaning that

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<sup>26/</sup> See *Proposed Amendments to the Service Rules Governing Public Safety Narrowband Operations in the 769-775/799-805 MHz Bands*; *National Public Safety Telecommunications Council Petition for Rulemaking on Aircraft Voice Operations at 700 MHz*; *National Public Safety Telecommunications Council Petition for Rulemaking to Revise 700 MHz Narrowband Channel Plan*; *Region 24 700 MHz Regional Planning Committee Petition for Rulemaking*; *State of Louisiana Petition for Rulemaking*, 29 FCC Rcd. 13283, ¶¶ 9-10, 12 (2014) (“[W]e share the concerns expressed by many commenting parties about the maturity of 6.25 kilohertz-capable equipment, including the lack of developed open standards governing major system components. We further conclude that rather than extending the deadline to a subsequent date, the better course is to eliminate the narrowbanding requirement altogether.”).

<sup>27/</sup> *2013 PLMR Equipment Order*, ¶ 12 (“We note that as of January 1, 2015, the Commission will no longer accept applications for certification of Public Safety equipment in the 700 MHz band that cannot operate in a 6.25 kHz mode or with equivalent efficiency. We therefore grant a waiver until that date, rather than the indefinite waiver requested[.]”).

<sup>28/</sup> 47 C.F.R. § 1.3.

<sup>29/</sup> 47 C.F.R. § 1.925(b)(3)(i).

equipment costs will increase as a result of compliance with the current rules, forcing public safety and B/ILT entities to pay more or to forgo additional equipment and adversely affecting volunteer public safety organizations. Moreover, as also noted above, by requiring that public safety interoperability channels operate on FM analog technologies, the Commission has recognized that this feature is currently more important than 6.25 kHz channel capability. There is no reason to require users to add this further capability when they may not require it and the Commission has determined it is not a critical feature for public safety communications.

Application of the current rule may also threaten public safety interoperability efforts. As discussed above, the 6.25 kHz Phase II standard for conventional operations is not yet developed. If the Commission does not grant an interim waiver of the 6.25 kHz capability requirement, there may be a proliferation of 6.25 kHz equipment that is incompatible with the final standard. Such an outcome would undermine interoperability efforts and potentially compel the purchase of equipment that may need to be replaced once standards are developed. To avoid all of these negative outcomes, the Commission should waive the requirement.

Conversely, waiver of the rules will not impact the introduction of spectrum-efficient technologies capable of using 6.25 kHz channels. Many public safety and other PLMR users require more fully-featured, spectrum-efficient equipment. In fact, public safety entities have already begun to deploy P25 Phase II trunked equipment that supports 6.25 kHz channel capabilities, and more will likely migrate to this equipment soon. Licensees using Industrial/Business pool channels that are not required to maintain analog equipment to support interoperability have also begun to migrate to 6.25 kHz digital equipment. As many users require more sophisticated equipment, they will naturally purchase radios with 6.25 kHz channel capabilities and a robust market for that equipment will develop. However, requiring all users to have capabilities they do not require is not in the public interest.

#### IV. CONCLUSION

Current application of the requirement in Sections 90.203(j)(4)-(5) of the rules that, in order to be certified, Part 90 PLMR equipment in the 150.8–162.0125 MHz, 173.2–173.4 MHz, and/or 421–512 MHz bands be capable of operating in a 6.25 kHz mode or with equivalent efficiency (1) is not consistent with the Commission’s recent decision to require *analog* capability for public safety interoperability channels; (2) is not consistent with market needs and provides no market benefits; and (3) could harm interoperability of public safety radios. Therefore, the Commission should waive its rules to extend, to January 1, 2020, the deadline for compliance with Sections 90.203(j)(4)-(5) of its regulations.

Respectfully submitted,

**INTERNATIONAL MUNICIPAL SIGNAL  
ASSOCIATION**

By: /s/ Russell H. Fox

Russell H. Fox  
Radhika U. Bhat  
MINTZ, LEVIN, COHN, FERRIS,  
GLOVSKY AND POPEO, P.C.  
701 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
(202) 434-7300

Its Attorneys

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