

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

In the Matter of )  
 )  
 Amendment of Part 90 ) WP Docket No. 07-100  
 of the Commission's Rules )

**REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING**

**Adopted: April 7, 2009**

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**Reply Comment Date: (90 days after publication in the Federal Register).**

By the Commission: Acting Chairman Copps issuing a statement.

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## I. INTRODUCTION AND BACKGROUND

1. In this *Report and Order and Further Notice of Proposed Rulemaking*, we address several proposed amendments to Part 90 of the Commission's rules<sup>1</sup> that were raised in the *Notice of Proposed Rulemaking (NPRM)*, relating to private land mobile radio (PLMR) services and particularly public safety operations.<sup>2</sup> The other issues in the *NPRM* pertaining to non-public safety PLMR services, or to all PLMR services in general, will be addressed separately. This proceeding is part of our continuing effort to provide clear and concise rules that facilitate the use of new wireless technologies, devices and services, and that are easy for the public to understand.<sup>3</sup>

2. In this *Report and Order*, we first address two proposals originally made by M/A-COM, Inc. (M/A-COM), a manufacturer of radio equipment,<sup>4</sup> and raised in the *NPRM*.<sup>5</sup> In this regard, we: (1) amend Section 90.1207 of the Commission's rules,<sup>6</sup> which governs licensing of the 4.9 GHz band, to grant primary status to stand-alone permanent fixed links that are used to deliver broadband service and permanent fixed links that connect 4.9 GHz base and mobile stations that are used to deliver broadband services, as well as other public safety networks using spectrum designated for broadband use; and (2) amend Section 90.1215 of the Commission's rules<sup>7</sup> to require the same output power measurement procedures for 4.9 GHz technology as those required for devices using digital modulation techniques.<sup>8</sup> We next make the following decisions concerning miscellaneous PLMR rule amendments also raised in the *NPRM*: (1) to continue to permit paging operations on Very High Frequency (VHF) public safety frequencies;<sup>9</sup> (2) to modify the existing language in Section 90.243(b)(1) to clarify that cross-band repeaters are permitted for all public safety systems;<sup>10</sup> and (3) to decline to amend Section 90.20 to authorize privately-run metropolitan transit systems to use frequencies in the Public Safety Pool.<sup>11</sup> In the *Further Notice of Proposed Rulemaking*, we seek comment on proposals to: (1) reinstate into Section 90.175 an exemption for 4.9 GHz band applications from coordination via a certified frequency coordinator; (2) impose a more formal licensee-to-licensure coordination requirement on primary fixed links in the 4.9 GHz band; (3) correct and clarify the 4.9 GHz band plan; and (4) make three "clean-up"

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<sup>1</sup> See 47 C.F.R. Part 90.

<sup>2</sup> See Amendment of Part 90 of the Commission's Rules, *Notice of Proposed Rulemaking and Order*, WP Docket No. 07-100, 22 FCC Rcd 9595 (2007) (*NPRM*). A list of commenters and reply commenters is included in Appendix A.

<sup>3</sup> See, e.g., 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 98-182, 15 FCC Rcd 16673 (2000) (*Biennial Review R&O*); see also Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27 and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, *Notice of Proposed Rulemaking*, WT Docket No. 03-264, 19 FCC Rcd 708 (2004).

<sup>4</sup> Petition for Clarification or, in the Alternative, Petition for Rulemaking of M/A-COM, Inc. at 10-12 (filed July 22, 2005) (Petition); Amended Petition for Clarification or, in the Alternative, Petition for Rulemaking of M/A-COM, Inc. (Amended Petition) at 10-12 (filed Aug. 23, 2005).

<sup>5</sup> *NPRM*, 22 FCC Rcd at 9603-04 ¶¶ 19-22.

<sup>6</sup> 47 C.F.R. § 90.1207.

<sup>7</sup> 47 C.F.R. § 90.1215.

<sup>8</sup> See 47 C.F.R. § 15.407(a).

<sup>9</sup> See *NPRM*, 22 FCC Rcd 9595 at 9604 ¶ 4; 47 C.F.R. § 90.22.

<sup>10</sup> See *NPRM*, 22 FCC Rcd at 9597 ¶ 7; 47 C.F.R. § 90.243(b)(1).

<sup>11</sup> See *NPRM*, 22 FCC Rcd at 9600-9601 ¶ 12; 47 C.F.R. § 90.20.

amendments to Section 90.20 of the Commission's rules relating to the Public Safety Pool Frequency Table and associated limitations.<sup>12</sup>

## II. REPORT AND ORDER

### A. 4.9 GHz Band

3. In the *NPRM*, the Commission sought comment on two proposals by M/A-COM to modify the Commission's rules regarding the 4.9 GHz band.<sup>13</sup> First, M/A-COM asks the Commission for an amendment to Section 90.1207(c)<sup>14</sup> that would "clarify that point-to-point and point-to-multipoint fixed links in the 4.9 GHz public safety networks are co-primary with mobile links" and "grant primary status to fixed links connecting public safety networks with each other using the 4940-4990 MHz band."<sup>15</sup> Second, M/A-COM proposes to add "a new Section 90.1215(d)" thereby updating this section "consistent with changes the Commission ... made to Section 15.407(a) of its rules" (*i.e.*, reflecting the same revised measurement procedures adopted by the Commission for devices that use digital modulation techniques regulated by Part 15).<sup>16</sup>

4. *Primary Status to Certain Fixed Links.* Section 90.1207 currently provides 4.9 GHz licensees with authority to "operate base and mobile units (including portable and handheld units) and operate temporary (1 year or less) fixed stations,"<sup>17</sup> but not to "operate permanent fixed point-to-point stations."<sup>18</sup> Further, Section 90.2107 provides that "[l]icensees choosing to operate [permanent fixed point-to-point stations] must license them individually on a site-by-site basis" and "will be authorized only on a secondary, non-interference basis to base, mobile and temporary fixed operations."<sup>19</sup> In its petition seeking clarifications regarding the 4.9 GHz band rules, M/A-COM states that "the Commission did not define ... [the] allocation status of hot spots or temporary fixed links, *i.e.*, whether such hot spots and links have primary or secondary status, and the Commission's Part 90 rules do not address the allocation status of such links."<sup>20</sup> Therefore, M/A-COM states that the "present Part 90 rules create regulatory uncertainty—as they are vague or potentially inconsistent with the *Third Report and Order*—and could discourage public safety users and first responders from deploying ... broadband networks."<sup>21</sup> M/A-COM states that "public safety users and first responders will need integrated networks with scalable network architectures that allow for dynamic routing of traffic over both fixed and mobile links,"<sup>22</sup> and thus proposes that the Commission amend its Part 90 rules to "grant primary status to point-to-point and point-to-multipoint fixed links that are part of a 4.9 GHz public safety network."<sup>23</sup> M/A-

<sup>12</sup> 47 C.F.R. § 90.20.

<sup>13</sup> *NPRM*, 22 FCC Rcd at 9603-04 ¶¶ 19-23.

<sup>14</sup> 47 C.F.R. § 90.1207(c).

<sup>15</sup> Petition at 10; Amended Petition at 10.

<sup>16</sup> Petition at 12; Amended Petition at 12.

<sup>17</sup> 47 C.F.R. §§ 90.1207(c).

<sup>18</sup> 47 C.F.R. §§ 90.1207(d).

<sup>19</sup> *Id.*

<sup>20</sup> Petition at 3; Amended Petition at 3.

<sup>21</sup> Petition at 5; Amended Petition at 5. The *Third Report and Order* refers to 4.9 GHz Band Transferred from Federal Government Use, *Memorandum Opinion and Order and Third Report and Order*, WT Docket No. 00-32, 18 FCC Rcd 9152 (2003) (*4.9 GHz Third Report and Order*).

<sup>22</sup> Petition at 5; Amended Petition at 5.

<sup>23</sup> Amended Petition at 5.

COM adds that “the Commission should continue to grant secondary status to traditional, stand-alone point-to-point links for purposes such as backhaul.”<sup>24</sup>

5. The Commission sought comment on “M/A-COM’s proposal to expressly afford primary status to certain permanent fixed links,” while also asking if, “given the limited amount of spectrum in the 4.9 GHz band, permitting fixed operations on a primary basis may result in severely limiting the spectral availability and reliability of both permanent and *ad hoc* mobile networks.”<sup>25</sup> The Commission asked whether “adoption of M/A-COM’s proposal would compromise the ability of public safety agencies to utilize the band for temporary ‘incident scene’ operations, a use that received overwhelming support in the record of WT Docket No. 00-32.”<sup>26</sup> Finally, the Commission asked if the M/A-COM proposal would “provide more flexible use of this band,” and whether “such flexibility would come at the expense of maintaining adequate spectrum for mission-critical public safety mobile operations.”<sup>27</sup>

6. Most commenters, including several public safety organizations, indicate that the Commission should clarify its rules to afford primary status to fixed point-to-point and point-to-multipoint links operating as part of an integrated 4.9 GHz public safety broadband network.<sup>28</sup> “[T]o the extent the Commission decides to make any clarification on fixed links that are an integrated part of a 4.9 GHz public safety network,” Cisco Systems, Inc. (Cisco) requests that its “clarification not adversely affect public safety’s ability to take advantage of innovative mesh technologies as a primary use in this band.”<sup>29</sup> Similarly, Motorola, Inc. (Motorola) “supports use of the 4.9 GHz band for fixed links in cases where the links can be implemented without negatively impacting use of the spectrum for mobile services.”<sup>30</sup> The American Association of State Highway and Transportation Officials (AASHTO) “supports the clarification of the 4.9 GHz rules to allow fixed links deployed in support of an area wide 4.9 GHz broadband network be considered as primary.”<sup>31</sup> The International Association of Fire Chiefs, Inc. and International Municipal Signal Association (IAFC/IMSA) state that “[f]ixed links which operate as part of an integrated public safety network should be licensed on a primary basis” but that the “Commission should clarify that secondary status for fixed links in the 4.9 GHz attaches only to links used for stand-alone point-to-point systems.”<sup>32</sup> The Land Mobile Communications Council (LMCC) states that stations “deployed in support of an area-wide 4.9 GHz broadband system” and “deployed in support of the overall 4.9 GHz infrastructure, ... should be [considered] primary. If, on the other hand,

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<sup>24</sup> *Id.* at 6.

<sup>25</sup> See *NPRM*, 22 FCC Rcd at 9604 ¶ 22. In the *NPRM*, we noted, “[t]he Commission addressed this issue in the *Third Report and Order* by limiting license availability, thereby reducing the possibility of interference to mission-critical operations.” *Id.* at 9604 n.66, citing *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9160 ¶¶ 18-19.

<sup>26</sup> See *NPRM*, 22 FCC Rcd at 9604 ¶ 22. See also *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9166 ¶ 33.

<sup>27</sup> See *NPRM*, 22 FCC Rcd at 9604 ¶ 22.

<sup>28</sup> See, e.g., Motorola, Inc. (Motorola) Comments at 12; International Association of Fire Chiefs and International Municipal Signals Association (IAFC/IMSA) Comments at 9; Land Mobile Communications Council (LMCC) Comments at 18; American Association of State Highway and Transportation Officials (AASHTO) Comments at 17; Telecommunications Industry Association (TIA) Comments at 3; Radiosoft Comments at 6; Tropos Networks (Tropos) Comments at 4; Tennessee Emergency Management Agency (TEMA) Comments at 2; Airspan Networks, Inc. (Airspan) Comments at 1; and National Association of Regional Planning Committees (NARPC) Comments at 5.

<sup>29</sup> Cisco Comments at 6.

<sup>30</sup> Motorola Comments at 12.

<sup>31</sup> AASHTO Comments at 17.

<sup>32</sup> IAFC/IMSA Comments at 9.

they are used as traditional backhaul for other services ... then they should be [considered] secondary.”<sup>33</sup> LMCC “believes that such an approach would be consistent with the FCC’s original goals to make the 4.9 GHz band available for mobile broadband data ...”<sup>34</sup> The National Public Safety Telecommunications Council (NPSTC) states, “[w]e feel primary status should be afforded to all functions that support and contribute to the overall development of delivering 4.9 GHz user-based service as envisioned by the implementing agency.”<sup>35</sup> NPSTC continues, “[o]ther point-to-point links not resulting in the direct deliverance of 4.9 GHz service to support broadband public safety user applications should remain secondary under the rules and require separate licensing as currently required by the rules.”<sup>36</sup> M/A-COM argues that the “record in this proceeding leaves no doubt that permanent fixed links are crucial to the effective operation of 4.9 GHz broadband public safety networks and the Commission must clarify its rules to make certain such links operate on a primary basis.”<sup>37</sup>

7. Exalt Communications, Inc. (Exalt) “agrees that permanent fixed [point-to-point] installations that are part of an integrated network with scalable network architecture that allow for dynamic routing of traffic over both fixed and mobile links should be granted primary status.”<sup>38</sup> In addition, it states that there should be no distinction between fixed links that are part of an integrated network with a scalable network architecture that allow for dynamic routing and any fixed [point-to-point] application that meets the requirements of the band.”<sup>39</sup> Exalt states that “[p]ermitting network expansion to include installations that meet the requirements of the band would reduce the need for emergency and incident scene installations”<sup>40</sup> and that “[n]ot permitting fixed [point-to-point] installations as primary in the band would cause licensees to use the already congested license bands for applications.”<sup>41</sup>

8. In an April 22, 2008 *ex parte* letter, M/A-COM states that further clarification of Section 90.1207 is needed because “[p]ublic safety users are concerned about running mission-critical applications on spectrum that has secondary status because of fears that they could be forced to relinquish frequency used for a particular application if their system interferes with a primary status user in the same geographic area.”<sup>42</sup> M/A-COM further notes that the Commission has shared this concern in the past.<sup>43</sup>

<sup>33</sup> LMCC Comments at 18.

<sup>34</sup> *Id.*

<sup>35</sup> National Public Safety Telecommunications Council (NPSTC) Comments at 17.

<sup>36</sup> *Id.*

<sup>37</sup> M/A-COM Reply Comments at 4.

<sup>38</sup> Exalt Comments at 1.

<sup>39</sup> Exalt Comments at 1.

<sup>40</sup> *Id.* at 1-2.

<sup>41</sup> *Id.* at 2.

<sup>42</sup> See Letter from Kent D. Bressie, Patricia J. Paoletta, Damon C. Ladson, and Christopher P. Nierman, Counsel for M/A-COM, Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission (dated Apr. 22, 2008) (M/A-COM April 22, 2008 *Ex Parte*) at 2.

<sup>43</sup> *Id.* at 2 n.5, citing 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, *Second Report and Order and Second Further Notice of Proposed Rule Making*, WT Docket No. 99-87, RM-9332, 18 FCC Rcd. 3034, 3043 ¶ 20 (2003). Specifically, M/A-COM states that in rejecting a suggestion that any public safety licensee failing to meet its narrowband migration deadline be permitted to continue to operate on a secondary basis, the Commission noted its concerns about whether it would be in the public interest to compel a secondary public safety licensee to discontinue operations immediately because it was causing interference to a primary licensee. M/A-COM April 22, 2008 *Ex Parte* at 2, n.5.



M/A-COM provides several examples of how fixed links may be used for mission-critical operations.<sup>44</sup> M/A-COM adds that “[f]ixed links are ... an integral part of providing broadband applications in both daily operations and disaster response.”<sup>45</sup> M/A-COM states that “[p]ublic safety users must be able to ensure that mission-critical systems ... will work all the time,” and that “[s]econdary status of permanent fixed links undermines that assurance.”<sup>46</sup>

9. We find that it is in the public interest to clarify whether certain fixed links in the 4.9 GHz band are primary or secondary in order to facilitate public safety broadband use of the band and to minimize confusion in the marketplace. In this regard, we modify our rules to accord primary status to fixed links that connect 4.9 GHz base and mobile stations that are used to deliver broadband service, as well as other public safety networks using spectrum designated for broadband use. We also accord primary status to stand-alone permanent fixed 4.9 GHz links that are used to deliver broadband service, such as a fixed video surveillance link used to monitor a high-risk target or environment. In contrast, fixed 4.9 GHz links that only connect narrowband base stations operating in public safety bands not designated for broadband (i.e., public safety UHF, VHF, narrowband 700 MHz, and 800 MHz) to other networks, or serve to backhaul narrowband traffic originating from narrowband base stations, will remain secondary. We limit primary status to fixed links in this manner to preserve and ensure the use of the 4.9 GHz public safety band in serving broadband needs.<sup>47</sup> We believe that proper frequency coordination among public safety agencies in a given location will ensure that different services and technologies can operate unimpeded without causing interference. We want to make certain that public safety can reliably establish broadband networks (e.g., permanent or temporary hot-spot networks) to transmit broadband data without concern of interference. Consistent with existing rules, permanent fixed point-to-point and to point-to-multipoint links accorded primary status must use directional antennas with gains over 9 dBi up to 26 dBi. Permanent fixed links used for traditional backhaul that only carry narrowband traffic remain secondary and must be licensed separately, as specified in Section 90.1207(d).

10. We find that this rule change is consistent with the Commission’s vision for the 4.9 GHz band and is supported by public safety commenters.<sup>48</sup> The Commission endeavored to provide 4.9 GHz band public safety licensees with the maximum operational flexibility practicable consistent with its vision for the 4.9 GHz band.<sup>49</sup> We believe that providing primary status for fixed links as described above will provide additional flexibility for public safety and thereby lead to expanded use of 4.9 GHz broadband networks.<sup>50</sup> Finally, we find that the rule change addresses concerns about the uncertainty that secondary status may introduce in 4.9 GHz broadband networks utilizing fixed point-to-point or point-to-

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<sup>44</sup> M/A-COM April 22, 2008 *Ex Parte* at 2-3 (fixed links may be used for mission-critical operations by: a fire service for monitoring the security of a nuclear power plant for threats; a port authority for detecting weapons of mass destruction as cargo is unloaded; police for real-time monitoring of a threat at a local high school; or police for carrying traffic from a mobile/mesh network back to headquarters for analysis).

<sup>45</sup> *Id.* at 3.

<sup>46</sup> *Id.*

<sup>47</sup> See *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9160 ¶ 19 (“it is critical that traditional public safety entities have immediate and reliable access to the spectrum” in the 4.9 GHz band). See also *id.* at 9153 ¶ 2 (“we seek to promote effective public safety communications and innovation in wireless broadband services in support of public safety. ... [T]he rules for the 4.9 GHz band that we adopt today are intended to accommodate a variety of new broadband applications ...”).

<sup>48</sup> See, e.g., IAFC/IMSA Comments at 9; TEMA Comments at 2; and NARPC Comments at 5.

<sup>49</sup> See *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9153 ¶ 3.

<sup>50</sup> See California Comments at 5 (seeking greater flexibility within the band, which would translate into an escalation in 4.9 GHz public safety deployments); LMCC Comments at 18 (added flexibility would best help meet local needs).

multipoint links. In sum, we find that this rule change serves the public interest by encouraging public safety users to more fully utilize the 4.9 GHz band in support of broadband communications.

11. Next, we address licensing issues for primary permanent fixed stations. The record in this proceeding contains support for licensing all permanent fixed stations on an individual, site-by-site basis. M/A-COM proposes an amendment to Section 90.1207(d) stating that “[l]icensees choosing to operate permanent fixed point-to-point stations must license them individually on a site-by-site basis.”<sup>51</sup> NPSTC states that “the current licensing rules for fixed point-to-point links [should] be retained . . .”<sup>52</sup> We agree, as individual licensing of permanent fixed stations would ensure that adequate data is readily available to facilitate interference protection and resolution. Accordingly, we shall license permanent fixed stations, both designated as primary or secondary, on an individual, site-by-site basis. However, as we explain *infra* in the *Further Notice of Proposed Rulemaking*, we have concerns about ensuring interference protection among primary permanent fixed stations, and we tentatively conclude therein that a more formal licensee-to-licensee coordination process may be necessary for such stations.<sup>53</sup> Accordingly, until the Commission resolves a potential new coordination requirement, applicants seeking primary status for 4.9 GHz permanent fixed stations must ensure that they meet the minimum requirements of Section 90.1209(b).<sup>54</sup>

12. Further, we believe it prudent to distinguish between primary permanent fixed stations and secondary stations in our licensing database. The Commission has established station class codes in the past to distinguish between licensees that are subject to different regulatory requirements on the same set of frequencies.<sup>55</sup> Similarly, in this instance, establishing a new class code for primary permanent fixed stations will assist interested stakeholders as well as the Commission’s licensing staff to distinguish between primary and secondary permanent fixed stations. Accordingly, we delegate to the Chief, Public Safety and Homeland Security Bureau, authority to issue a public notice announcing the establishment of a new 4.9 GHz primary permanent fixed station class code. The public notice also will provide licensees holding permanent fixed stations with instructions for modifying their authorizations to reflect the new station class code.

13. We next address two related proposals. First, California states that M/A-COM’s proposal should be predicated on setting aside restricted spectrum for “mission critical public safety mobile

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<sup>51</sup> M/A-COM Comments at 8; M/A-COM Reply Comments at 3.

<sup>52</sup> See NPSTC Comments at 16-17.

<sup>53</sup> See *infra*, *Further Notice of Proposed Rulemaking*.

<sup>54</sup> “All licensees shall cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations concerned. Further, the Commission may prohibit the use of any 4.9 GHz channel under a system license at a given geographical location when, in the judgment of the Commission, its use in that location is not in the public interest.” 47 C.F.R. § 90.1209(b).

<sup>55</sup> See, e.g., 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 - Private Land Mobile Radio Services; 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 Services, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 98-182, RM-9222, PR Docket No. 92-235, 15 FCC Rcd 16673, 16686 ¶ 26 (2000). The Commission agreed that from a spectrum management perspective, it is important to identify which, if any, frequencies in a trunked system are exempt from monitoring requirements (e.g., applicant/licensee has obtained necessary consent or, if operating in the 470-512 MHz band, has exclusive use), and that the class of station associated with each frequency must be provided. *Id.*

operations” to avoid interference with point-to-point links.<sup>56</sup> We decline to do so. First, we find this request to be beyond the scope of the *NPRM*, as the Commission did not seek comment on allotting certain spectrum within the 4.9 GHz band for particular uses. Second, establishing a set-aside for a particular use could also reduce flexibility for 4.9 GHz licensees. In crafting the 4.9 GHz rules, the Commission endeavored to provide 4.9 GHz band licensees with the maximum operational flexibility practicable.<sup>57</sup> Reducing certain operations to specific portions of the band reduces this flexibility. Finally, we find that California’s request is more appropriately handled through coordination among local public safety agencies under the auspices of Section 90.1209(b), which requires that “[a]ll licensees ... cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities.”<sup>58</sup> In this respect, Section 90.1209(b) requires users to cooperatively determine the most appropriate channels for a particular use in a particular location, effectively resulting in the establishment of local allocations that will mitigate any potential for interference. In addition, we are proposing a more formal licensee-to-licensor coordination requirement for primary permanent fixed stations *infra* in the *Further Notice of Proposed Rulemaking*. Accordingly, we decline to adopt California’s request to set aside restricted spectrum within the 4.9 GHz band for “mission critical public safety mobile operations.”

14. Second, the National Academy of Sciences’ Committee on Radio Frequencies (CORF) requests that “if the Commission chooses to revise its rules to allow permanent fixed operations in the 4.9 GHz band, the rules should be revised to require such operations within the geographic areas denoted in Footnote US311 to undertake prior frequency coordination *vis-à-vis* the affected RAS [Radio Astronomy Service] observatory.”<sup>59</sup> The National Radio Astronomy Observatory (NRAO) takes essentially the same view, stating that “[w]ithout [such] coordination the installation of such a permanent station within a radio astronomy coordination zone could cause permanent harm to radio astronomy operations.”<sup>60</sup>

15. M/A-COM states, however, that its proposals would not “pose any threat of additional interference to adjacent band operations, such as radioastronomy” because “[n]owhere has M/A-COM asked the Commission to (1) adopt increased power or antenna gain limits that would increase interference potential to radioastronomy, or (2) authorize permanent fixed links that do not comply with existing Commission power limits.”<sup>61</sup> Moreover, both the Telecommunications Industry Association (TIA) and M/A-COM observe that Section 90.1215 effectively limits the interference potential of fixed links by limiting antenna gain and equivalent isotropic radiated power (EIRP) below the limits allowed for, and typically deployed in, traditional Part 101 links at 6 GHz.<sup>62</sup> As M/A-COM explains, the already low limits in Section 90.1215 “essentially prohibit deployment of ‘traditional’ point-to-point fixed microwave operations,” thus “substantially reduc[ing] potential interference levels that a 4.9 GHz link could create.”<sup>63</sup>

16. We find these comments of M/A-COM and TIA to be persuasive. Under the circumstances, we find it unlikely that there would be any increased threat of interference to adjacent

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<sup>56</sup> California Comments at 5-6.

<sup>57</sup> See *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9153 ¶ 3.

<sup>58</sup> 47 C.F.R. § 90.1209(b).

<sup>59</sup> National Academy of Sciences’ Committee on Radio Frequencies (CORF) Comments at 5-6, addressing 47 C.F.R. § 2.106 n. US311.

<sup>60</sup> National Radio Astronomy Observatory (NRAO) Comments at 3.

<sup>61</sup> M/A-COMM Reply Comments at 6.

<sup>62</sup> See TIA Comments at 1; M/A-COM Comments at 2-3.

<sup>63</sup> M/A-COM Comments at 2.



bands and, therefore, with our decision today we decline to also require a revision to our frequency coordination requirements. We note that we are not changing any of the requirements of Section 90.1207(d) with respect to licensing permanent stand-alone fixed point-to-point stations, which are already authorized under current rules on a site-by-site basis. Like the secondary permanent fixed stations, the Commission will license primary permanent fixed stations individually on a site-by-site basis. Fixed stations afforded primary status by our decision today are similarly bound by the same power restrictions. We also note that footnote US311 permits radio astronomy operations at the sites listed in US311 on an unprotected basis.<sup>64</sup> Requiring frequency coordination with respect to radio astronomy under the circumstances would be tantamount to elevating radio astronomy to primary status in the 4950-4990 MHz band, which is beyond the scope of this proceeding. Our rules already require that “[l]icensees will make every practical effort to protect radio astronomy operations as specified in § 2.106, footnote US311 of this chapter.”<sup>65</sup> Accordingly, we decline to adopt CORF’s and NRAO’s requests to require frequency coordination within the radio astronomy zones cited in footnote US311.

17. *Measurement Procedures.* In the *NPRM*, the Commission also proposed, as suggested by M/A-COM,<sup>66</sup> to amend Section 90.1215<sup>67</sup> to reflect the same measurement procedures adopted by the Commission for devices that use digital modulation techniques and are regulated by Part 15 of the rules.<sup>68</sup> Specifically, in 2004, the Commission modified Part 15 to permit the determination of a device’s output power by using average power measurements in addition to the existing peak output power measurement method.<sup>69</sup> M/A-COM proposed replacing the term “peak transmit power” with “maximum conducted output power,”<sup>70</sup> and adding a peak excursion ratio limit.<sup>71</sup> These changes would make the measurement procedures in Sections 90.1215 and 15.407(a) virtually identical.<sup>72</sup> In the *NPRM*, the Commission requested comment on the proposal.<sup>73</sup>

18. Motorola supports the proposed changes to harmonize measurement procedures for similar devices operating in nearby frequency bands.<sup>74</sup> Cisco agrees that there is no reason to treat identical equipment differently for compliance test purposes, and supports the Commission’s proposal to reflect in its 4.9 GHz band rules the same power test measurement procedures for unlicensed devices that

<sup>64</sup> See 47 C.F.R. § 2.106 n.US311.

<sup>65</sup> 47 C.F.R. § 90.1209(c).

<sup>66</sup> See Petition at 11-12; see also Amended Petition at 11-12.

<sup>67</sup> See 47 C.F.R. § 90.1215.

<sup>68</sup> See *NPRM*, 22 FCC Rcd at 9604 ¶ 23. See Modification of Parts 2 and 15 of the Commission’s Rules for unlicensed devices and equipment approval, *Report and Order*, ET Docket No. 03-201, 19 FCC Rcd 13539 (2004) (*Unlicensed Devices Report and Order*); see 47 C.F.R. § 15.407(a).

<sup>69</sup> See *Unlicensed Devices Report and Order*, 19 FCC Rcd at 13547 ¶ 34.

<sup>70</sup> Maximum conducted output power is defined as “[t]he total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.” 47 C.F.R. § 15.403(n).

<sup>71</sup> See Amended Petition at 11-12.

<sup>72</sup> M/A-COM’s proposed rule text contains one difference. Specifically, 47 C.F.R. § 90.1215(c) would contain the sentence, “If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used.” See Amended Petition at 12.

<sup>73</sup> *NPRM*, 22 FCC Rcd at 9604 ¶ 23.

<sup>74</sup> See Motorola Comments at 13.

use digital modulation techniques.<sup>75</sup> M/A-COM supports the proposal to amend Section 90.1215 to reflect the revised measurement procedures subsequently adopted by the Commission for devices that use digital modulation techniques and are regulated by Part 15.<sup>76</sup> Tropos similarly recommends that the Commission adopt the proposed measurement procedures to harmonize them with the recently adopted Part 15 measurement rules.<sup>77</sup>

19. We agree with commenters and find that measurement procedures under Part 15 should be consistent with those governing the 4.9 GHz band. As noted by M/A-COM,<sup>78</sup> such parallel treatment will allow technologies similar to those covered by Part 15 to be used in the 4.9 GHz band, and create opportunities for public safety users to benefit from speedier deployment of new technologies in this band.

20. Exalt is the only commenter opposed to changing the 4.9 GHz measurement procedures.<sup>79</sup> Exalt believes the tests currently included in Section 90.1215 suitably and sufficiently represent output power.<sup>80</sup> First, Exalt states that there does not appear to be a technical rationale for adding the peak excursion ratio, other than for the sake of harmonizing Section 90.1215 with Section 15.407.<sup>81</sup> Exalt argues that because manufacturers develop products for different applications, the differences in the Commission's rules are justified.<sup>82</sup> We disagree. The record shows that both 4.9 GHz devices and unlicensed devices that use digital modulation techniques support similar applications, such as broadband service.<sup>83</sup> Second, Exalt notes that some manufacturers insist that the average power testing be conducted when a product is cold, which produces inaccurate peak excursion ratio results.<sup>84</sup> Exalt urges the Commission to develop a more comprehensive test based upon measuring the average power after the product has been in full transmit mode for a standard period of time, over a bandwidth relative to the signal bandwidth to ensure equalization of test results.<sup>85</sup> We find that the issue of cold versus warm device testing is beyond the scope of this proceeding, and we decline to address it here.<sup>86</sup> Third, Exalt notes that, since the measurement uncertainty for peak excursion ratio is up to three dB, application of this ratio test may negatively restrict a device's output power level to a greater extent than what would be required if only the peak power spectral density limit currently in the rules were applied.<sup>87</sup> We include a peak excursion ratio because the changes that we are making are parallel to the measurement methodology applied to Part 15 technologies, and such parallel measurement procedures may speed the deployment of these related emerging technologies. In general, Exalt did not provide sufficient data to

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<sup>75</sup> See Cisco Comments at 8.

<sup>76</sup> See M/A-COM Comments at 8; M/A-COM Reply Comments at 3.

<sup>77</sup> See Tropos Comments at 6.

<sup>78</sup> See M/A-COM Comments at 8-9.

<sup>79</sup> See Exalt Comments at 2.

<sup>80</sup> See *id.*

<sup>81</sup> See *id.*; 47 C.F.R. § 15.407(a)(6).

<sup>82</sup> See Exalt Comments at 2.

<sup>83</sup> See Cisco Comments at 8. See also *Unlicensed Devices Report and Order*, 19 FCC Rcd at 13539 ¶ 1, 13540 ¶ 2.

<sup>84</sup> See Exalt Comments at 2.

<sup>85</sup> See *id.*

<sup>86</sup> Questions regarding specific testing procedures should be referred to the Commission's Office of Engineering and Technology Laboratory Division, telephone number 301-362-3000. Inquiries may be submitted online at <http://www.fcc.gov/labhelp>.

<sup>87</sup> See Exalt Comments at 2-3.

justify the testing changes it proposes. Furthermore, we conclude that Part 15 testing is sufficient to support the purpose of the rule, which includes achieving compatibility of similar equipment across different manufacturers.<sup>88</sup>

21. We agree with the majority of commenters who believe that the proposed measurement procedures should be adopted to harmonize the measurement procedures for similar devices operating in nearby frequency bands under Part 15. Given that manufacturers are considering technologies similar to those covered by Part 15 for use in the 4.9 GHz band, and because parallel treatment will speed deployment of new technologies in this band for the benefit of public safety users, we conclude that measurement procedures under the Part 15 rules and the 4.9 GHz rules should be consistent.

22. *Miscellaneous 4940-4990 MHz Band Technical Matters.* We next address two miscellaneous technical matters. First, Motorola believes that the *NPRM* contains a typographical error in the proposed revision to the text of Section 90.1215(a).<sup>89</sup> Specifically, Motorola observes that the text of the proposed change to Section 90.1215(a) referred to a peak power spectral density limit of 20 dBm per megahertz, rather than 21 dBm per megahertz, which had been the existing requirement.<sup>90</sup> Motorola urges the Commission to retain the existing 21 dBm per megahertz limit in order to maximize coverage and robustness of public safety transmissions.<sup>91</sup> The Commission did not intend to propose a change to the 21 dBm per megahertz limit, as evidenced by a lack of related discussion in the *NPRM* text. Accordingly, we clarify that we are retaining the existing 21 dBm per megahertz limit.

23. Second, we address a matter raised by Cisco's comments regarding 4.9 GHz band emission masks. Cisco states that "[t]he Commission needs to use the opportunity presented by this Part 90 proceeding to correct an error associated with the 4.9 Emission Mask Order that it adopted in 2004."<sup>92</sup> Cisco further states that "[i]n that order, at paragraphs 12 and 13, the Commission specifically adopts the 'DSRC-A' emission mask."<sup>93</sup> Cisco argues that "the rules that the FCC published in its decision (and the rules subsequently appearing in the US Code of Federal Regulations) do not correctly reflect the Commission's decision, in that they would require a different mask, i.e., DSRC-C."<sup>94</sup> Cisco reasons, "the FCC's intent from the text of the decision is very clear – the FCC wanted to employ commercial off the shelf technology to the maximum extent in this band, and wanted the emission mask to do so as well."<sup>95</sup> Cisco continues, "[t]hat is why the Commission selected the DSRC-A mask for low power equipment in the band."<sup>96</sup> Cisco notes that "the error in the rules has produced significant confusion as the remainder of the western hemisphere nations examine 4.9 GHz rules for their own use."<sup>97</sup> Cisco provides an appendix with a visual depiction of the DSRC-A and DSRC-C masks.<sup>98</sup>

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<sup>88</sup> See *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9174 ¶ 54.

<sup>89</sup> See Motorola Comments at 13.

<sup>90</sup> See *id.* See also *NPRM*, 22 FCC Rcd at 9646; 47 C.F.R. § 90.1215(a).

<sup>91</sup> See Motorola Comments at 13.

<sup>92</sup> Cisco Comments at 6. See *The 4.9 GHz Band Transferred from Federal Government Use*, WT Docket No. 00-32, *Memorandum Opinion and Order*, 19 FCC Rcd 22325 (2004) (*4.9 GHz Emission Mask MO&O*).

<sup>93</sup> Cisco Comments at 6.

<sup>94</sup> *Id.* at 7.

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> See *id.*, Appendix A.

24. We disagree with Cisco's contention. The Commission decided that "the DSRC-A mask should be permitted for power levels of 20 dBm and less, and that the DSRC-C mask should apply to all power levels in excess of 20 dBm."<sup>99</sup> Contrary to Cisco's argument, the Commission adopted not only the DSRC-A mask for low power equipment, but also the DSRC-C mask for high power equipment. Consequently, the Commission amended its rules to designate Emission Mask L for power levels of 20 dBm or less, and the more stringent mask Emission Mask M for power levels above 20 dBm.<sup>100</sup> Commission engineering staff compared and verified the Emission Mask L attenuation values with Cisco's DSRC-A plot, as well as the Emission Mask M with Cisco's DSRC-C plot. After this review and based on the record, we conclude that the existing emission masks in the rules are correct and consistent with the Commission's intent. Additionally, we find Cisco's request to be beyond the scope of the *NPRM*, as the Commission did not seek comment on 4.9 GHz band emission masks. Therefore, we dismiss without prejudice Cisco's request for correction.

## B. Miscellaneous Proposals

25. *Part 90 Paging on Public Safety VHF Frequencies.* VHF public safety frequencies (150-174 MHz) are used primarily for two-way voice communications (*e.g.*, mobile dispatch).<sup>101</sup> The Commission's rules, however, also allow for paging operations on these frequencies.<sup>102</sup> As the Commission observed in the *NPRM*, experience has shown that paging and two-way voice operations can generally co-exist on the same channel in the same area without interference, provided the paging transmissions are infrequent (low traffic volume) and the paging licensee monitors the channels before transmitting.<sup>103</sup> Experience also has shown that the potential for paging to interfere with voice operations tends to increase as the amount of paging traffic increases.

26. The Commission previously expressed concern about the potential incompatibility between high-volume paging operations and public safety two-way voice communications operating on VHF frequencies.<sup>104</sup> To address the possibility of interference in these situations,<sup>105</sup> the Commission sought comment on whether paging operations conducted pursuant to Section 90.22 on VHF public safety frequencies should be restricted, especially on those frequencies reserved under the rules for mutual aid/interoperability communications.<sup>106</sup>

27. The majority of commenters expressed support for continuing to permit paging operations on all VHF public safety frequencies.<sup>107</sup> IAFC/IMSA state that "[f]ire and EMS [emergency

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<sup>99</sup> *4.9 GHz Emission Mask MO&O*, 19 FCC Rcd at 22330 ¶ 13.

<sup>100</sup> See 47 C.F.R. § 90.210(l)-(m).

<sup>101</sup> See 47 C.F.R. § 90.20(c)(3) (Public Safety Frequency Table).

<sup>102</sup> See 47 C.F.R. § 90.22.

<sup>103</sup> See *NPRM*, 22 FCC Rcd at 9597 ¶ 4; 47 C.F.R. § 90.20(d)(10). In general, VHF public safety frequencies are assigned on a shared basis. Consequently, the same channel can be licensed to different entities in the same general area.

<sup>104</sup> See Amendment of Part 90 of the Commission's Rules to Create the Emergency Medical Radio Service, *Report and Order*, PR Docket No. 91-72, 8 FCC Rcd 1454, 1457 ¶ 17 (1993).

<sup>105</sup> The frequency 155.340 MHz may be designated by common consent as an intersystem mutual assistance frequency under an area-wide medical communications plan. See 47 C.F.R. § 90.20(d)(40).

<sup>106</sup> *NPRM*, 22 FCC Rcd at 9598 ¶ 6.

<sup>107</sup> See, *e.g.*, Association of Public-Safety Officials-International, Inc. (APCO) Comments at 2; DuPage Public Safety Communications (DuPage) Comments at 2-4; Enterprise Wireless Alliance (EWA) Reply Comments at 3; Grundy County Emergency Telephone System Board (Grundy County) Comments at 1-2; IAFC/IMSA Comments

medical services] departments in major metropolitan areas, and mid-sized and small cities, heavily rely on VHF paging systems to alert personnel to emergency calls, particularly volunteer and off-duty personnel.”<sup>108</sup> VHF paging has evolved as “the predominant means by which such notifications are communicated.”<sup>109</sup> IAFC/IMSA also state that “restrictions on paging operations on VHF public safety frequencies will result in a significant, negative impact on the ability of public safety agencies, including Fire and EMS, to provide mission-critical communications.”<sup>110</sup> NPSTC takes a similar position, noting that eliminating VHF paging operations would cause “serious disruption” to public safety communications.<sup>111</sup> Several commenters express particular concern that the “elimination or restriction of paging on mutual aid frequencies would severely impact” their respective operations of notification of fire alarm activations and responses across their respective states, given that such operations use paging on mutual aid frequencies.<sup>112</sup>

28. Two commenters take a somewhat different view. National Telecommunications and Information Administration (NTIA) acknowledges that paging and voice operations can generally operate on the same channel in the same area, provided the paging transmissions are infrequent and the paging licensee monitors the channel prior to transmitting.<sup>113</sup> However, NTIA urges the Commission to limit paging operations specifically with respect to frequency 155.340 MHz and frequency 155.160 MHz to “one-way transmissions to alert ambulance and rescue squad personnel.”<sup>114</sup> As support, NTIA states that over the years, the Commission has received informal complaints about very high frequency paging systems interfering with two-way communications systems.<sup>115</sup> Moreover, it states that the Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) reported some communications problems on the 155.340 MHz Mutual Aid frequency in the New Orleans area during Hurricane Katrina.<sup>116</sup> According to NTIA, spectrum managers at DHS and FEMA speculated that hospital paging operations during Hurricane Katrina caused interference to state EMS operations.<sup>117</sup> NTIA also notes that search and rescue operations have experienced similar “intolerable interference from hospital paging operations on frequency 155.160 MHz.”<sup>118</sup> Another commenter acknowledges that the elimination of paging on VHF channels would cause a major hardship for certain smaller communities,

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at 3-4; Itasca County Sheriff’s Department Comments at 1; LMCC Comments at 8; Motorola Comments at 3-4; and Motorola Reply Comments at 5-6.

<sup>108</sup> IAFC/IMSA Comments at 3.

<sup>109</sup> *Id.* at 3. For similar views, *see* DeKalb County Association of Fire Departments Comments at 1; and AASHTO Comments at 5-6.

<sup>110</sup> IAFC/IMSA Comments at 3.

<sup>111</sup> NPSTC Comments at 4.

<sup>112</sup> DuPage Comments at 3; Illinois Mutual Aid Box System Division 11 Comments at 3; Illinois Fire Chiefs Association Comments at 2; and Grundy County Comments at 2.

<sup>113</sup> National Telecommunications and Information Agency (NTIA) Comments at 3.

<sup>114</sup> *Id.* at 4.

<sup>115</sup> *Id.* at iii.

<sup>116</sup> *Id.* at 2-3.

<sup>117</sup> *Id.* at 2.

<sup>118</sup> *Id.* at 3-4. Although not designated for search and rescue under the Commission’s rules, frequency 155.160 MHz is a channel common to many search and rescue groups nationwide. *Id.*



but supports an elimination of paging on certain shared or mutual aid frequencies that are monitored by public safety and medical personnel.<sup>119</sup>

29. We take seriously the potential for interference that may result from paging operations to two-way public safety voice communications. However, the record demonstrates substantial reliance by fire and EMS departments on the use of paging on VHF frequencies.<sup>120</sup> NTIA also appears to support these types of paging operations used to alert “ambulance and rescue squad personnel.” Further, while NTIA raises specific concerns regarding hospital paging systems disrupting two-way voice communications in the aftermath of Hurricane Katrina, the Commission did not receive any specific reports in the comments that this is a continuing problem. Accordingly, based on the record before us, we cannot conclude that paging operations conducted on VHF frequencies pursuant to Section 90.22, including on specific mutual aid channels, represent an interference risk to VHF public safety frequencies at this time.

30. In reaching this decision, we note that many of the concerns raised by commenters appear to concern paging operations permitted under Section 90.20(d)(10), which was not the subject of the Commission’s inquiry in the *NPRM*. In other words, the Commission did not intend to propose limiting operations conducted by public safety licensees for one-way paging to ambulance and rescue squad personnel. Regardless, we take no action to restrict paging operations in the VHF bands, whether conducted pursuant to Section 90.22 or Section 90.20(d)(10). The record shows paging transmissions to be a proven and cost-effective way to recall first responders when emergency incidents occur.<sup>121</sup> We also find persuasive comments from the public safety community that prohibiting or otherwise restricting paging operations on VHF public safety frequencies would have a disruptive impact on a number of local communities that currently rely heavily on existing VHF paging operations as integral to their public safety operations.<sup>122</sup> We are particularly concerned with the potential disruptive effects that paging restrictions would have on limiting the availability of emergency communications or hampering the ability of public safety entities to provide services in a timely manner to the public. In this connection, NPSTC states:

[p]aging remains a critical communications path used by the range of public safety services—law enforcement, fire, emergency medical, transportation, and others. It is of particular importance where public safety relies upon volunteers who must be summoned from work or residence, often across wide geographic areas. It is a means used across all services to alert special units to a particular incident. To eliminate paging in the VHF band will not simply impose the additional cost associated with full voice

<sup>119</sup> Paul Spielman Comments at 1. The commenter states that this restriction would include but not be limited to the following frequencies: “155.475 MHz, 155.340 MHz, and 155.325 MHz (those frequencies that should be monitored by public safety, medical).” *Id.*

<sup>120</sup> Section 90.20(d)(10) permits, with respect to certain VHF channels, “a licensee regularly conducting two-way communications ... may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.”

<sup>121</sup> See, e.g., Bainbridge Township Fire Department Comments at 1; NPSTC Comments at 4-5.

<sup>122</sup> Itasca County Sheriff’s Department indicates that VHF paging has become such an important means by which alerts are communicated to personnel involved in emergency response situations that any new restrictions against paging operations on VHF public safety frequencies could be “crippl[ing]” to the communities’ ability to “get emergency notification to fire department personnel, first responders, and ambulance services.” Itasca County Sheriff’s Department Comments at 1. Tallassee Alabama Fire Department indicates that in some rural regions, a restriction on paging operations on VHF public safety frequencies would be “tantamount to eliminating the 911 systems.” Comments of Tallassee Alabama Fire Department at 1; see also Bainbridge Township Fire Department Comments at 1; DeKalb County Hospital Association-DeKalb Ambulance Service Comments at 1; DeKalb County Association of Fire Departments Comments at 1; Mundelein Fire Department Comments at 1-2.

communications. It will eliminate communications entirely. The Commission must recognize that by eliminating paging there will be no alternative. There are no [local] resources for the more expensive voice equipment.<sup>123</sup>

31. Rather than impose restrictions on paging at this time, we find that applications for future paging operations should continue to be licensed on a case-by-case basis in tandem with the frequency coordination process.<sup>124</sup> In the absence of a more significant likelihood of harmful interference involving paging and two-way operations, we are not inclined to amend our rules where we believe the existing mechanisms provide adequate safeguards. We also encourage users of VHF public safety frequencies, including the mutual aid/interoperability channels, to develop and rely on frequency sharing and priority access protocols to facilitate local and regional emergency coordination efforts.

32. As a general matter, experience in recent years has demonstrated the reliability of paging services during catastrophes. In the aftermath of the September 11, 2001 terrorist attacks, for instance, the *9/11 Commission Report* stated that with respect to communications around the Pentagon, “[p]agers seemed to be the most reliable means of notification when available and used . . .”<sup>125</sup> A similar experience is reported in the *Katrina Report*, which states that during the hurricane disaster, paging services provided a critical resource to public safety providers.<sup>126</sup>

33. While we decline to place new restrictions on paging operations on VHF public safety frequencies, including mutual aid/interoperability channels, we remain mindful of the potential for paging transmissions to cause harmful interference to voice operations. Accordingly, should specific instances of paging interference to two-way voice operations arise on the VHF public safety frequencies, including the mutual aid/interoperability channels, we retain our discretion to revisit this issue in the future and to take appropriate action as warranted.

34. *Cross-Banding.* Section 90.243(b)(1) states that “in the Public Safety Pool, medical services systems in the 150-160 MHz band are permitted to be cross-banded for mobile and central stations operations with mobile relay stations authorized to operate in the 450-470 MHz band.”<sup>127</sup> Because one could interpret this rule to mean that only medical services systems are permitted to use

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<sup>123</sup> NPSTC Comments at 5.

<sup>124</sup> See APCO Comments at 2.

<sup>125</sup> The 9/11 Commission Report, submitted by Thomas H. Kean (9/11 Commission Chairman) and Lee H. Hamilton (9/11 Commission Vice Chairman), to the President of the United States, the United States Congress, and the American people (July 22, 2004) (*9/11 Commission Report*) at 397, citing Arlington County: After Action Report on the Response to the September 11 Terrorist Attack on the Pentagon (2002) at 12-13.

<sup>126</sup> Report and Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, submitted by Nancy J. Victory, to FCC Chairman Kevin J. Martin (June 12, 2006) (*Katrina Report*) at 10.

<sup>127</sup> 47 C.F.R. § 90.243(b)(1). The spectrum available for public safety use is in multiple bands (e.g., 150-174 MHz, 421-512 MHz, and 800 MHz). Often, some public safety entities are authorized to operate in one band while others in the same general area are authorized to operate in another band or bands. In order for entities to communicate with one another, “cross-band repeaters” – repeaters that receive on frequencies in one band and transmit on frequencies in another band -- are often used to allow for communication between incompatible communications systems. See The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communication Requirements Through the Year 2010, *Notice of Proposed Rule Making*, WT Docket No. 96-86, 11 FCC Rcd 12460, 12475 ¶ 37 (1996).

cross-band repeaters,<sup>128</sup> the *NPRM* sought comment on a proposal to modify the rule to state specifically that cross-band repeaters are permitted for all public safety systems.<sup>129</sup>

35. All commenters who addressed this issue agree that Section 90.243(b)(1) should be amended to clarify that cross-band repeaters are permitted for all public safety systems.<sup>130</sup> Because the purpose of the rule is not limited to medical services systems but rather applies to all eligible users of the Public Safety Pool,<sup>131</sup> we amend the rule accordingly. In this respect, we ensure that all users of public safety systems may confidently employ cross-band repeaters and thus enhance communications among public safety agencies operating in various frequency bands.<sup>132</sup>

36. *Transit Systems and Toll Roads.* Under the current rules, only state and local governmental entities are eligible to hold authorizations in the Public Safety Pool.<sup>133</sup> Thus, to the extent metropolitan transit systems and toll roads are publicly-operated services, they are eligible to hold authorizations in the Public Safety Pool. However, the Commission noted in the *NPRM* that not all metropolitan transit systems and toll roads are publicly-owned.<sup>134</sup> Some are privately-owned, and operate under contracts or similar arrangements with governmental entities. Because non-governmental entities are ineligible to hold authorizations for Public Safety Pool frequencies, the *NPRM* sought comment on whether Section 90.20 should be amended to authorize privately-run metropolitan transit systems and toll road systems to hold authorizations to use frequencies in the Public Safety Pool.<sup>135</sup>

37. The majority of commenters on this issue state that private operators of transit systems and toll roads should not be eligible to hold licenses to operate on public safety frequencies.<sup>136</sup> For example, according to AASHTO, while private operators of transit systems and toll roads should be able to use public safety frequencies licensed to governmental entities via contractual agreement, public safety frequencies must remain within the control of public entity licensees.<sup>137</sup> LMCC points out that the Commission's rules already allow a licensee to designate an agent or third-party contractor of the licensee

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<sup>128</sup> The reference to “medical services systems” appears to be left over from the prior rule that applied only to the Emergency Medical and Special Emergency Radio Services, *see* 47 C.F.R. § 90.243(b)(1) (1996), before those services were consolidated into the Public Safety Radio Pool. *See* Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, *Second Report and Order*, PR Docket No. 92-235, 12 FCC Rcd 14307 (1997) (*Refarming 2<sup>nd</sup> R&O*).

<sup>129</sup> *NPRM*, 22 FCC Rcd at 9597 ¶ 7.

<sup>130</sup> *See* AASHTO Comments at 7; EWA Reply Comments at 3; APCO Comments at 2; California Comments at 4; EWA Comments at 3; IAFC/IMSA Comments at 5; LMCC Comments at 8; Motorola Comments at 4; NPSTC Comments at 6; TEMA Comments at 1; State of Wisconsin Department of Transportation Comments at 2; and Zion Fire Rescue Department Comments at 1-2.

<sup>131</sup> *See* Amendment of Part 90 of the Commission's Rules to Create the Emergency Medical Radio Service, *Memorandum Opinion and Order*, PR Docket No. 91-72, 11 FCC Rcd 1708 (1996). The Commission stated that, “we intended to treat EMRS eligibles in the same manner as all other Subpart B [Public Safety Radio Pool] eligibles – including permitting them to operate mobile relay stations.” *Id.* at 1712 ¶ 24.

<sup>132</sup> We remind users to take reasonable precautions to avoid causing harmful interference. *See* 47 C.F.R. § 90.403(e).

<sup>133</sup> *See* 47 C.F.R. § 90.20(a).

<sup>134</sup> *NPRM*, 22 FCC Rcd at 9600-9601 ¶¶ 12, 13.

<sup>135</sup> *Id.*

<sup>136</sup> *See, e.g.*, AASHTO Comments at 8-9; AASHTO Reply Comments at 3; APCO Comments at 3; EWA Reply Comments at 5; IAFC/IMSA Comments at 6-7; LMCC Comments at 13-14; and NPSTC Comments at 7-8.

<sup>137</sup> AASHTO Comments at 3.

as the control operator of its station, provided that the licensee retains ultimate control over the use of the spectrum.<sup>138</sup> On the other hand, the U.S. Department of Transportation (USDOT) observes that, given the “role played and services offered by private sector operators of public transit systems are indistinguishable from their traditional public sector counterparts ... the public or private sector origin of the operator of the affected infrastructure is immaterial.”<sup>139</sup>

38. In view of the record before us, we are not persuaded to amend Section 90.20 to permit privately-run metropolitan transit systems to be authorized on frequencies in the Public Safety Pool. Such an amendment to our rules would undermine the rationale of the Commission in restricting eligibility to hold a license in the Public Safety Pool in the first place. A chief reason for establishing such eligibility in the first instance was to assure that those public safety entities specifically charged with the protection of the life and property of the general public have access to spectrum. The Commission stated:

Our reasons for establishing a separate public safety pool stem from the fact that a majority of the communications required by the public safety community are used to protect life and property and because public safety operations can affect the lives of hundreds, thousands or even tens of thousands of people. We recognize that competing demands for and use of spectrum from entities with a different mission and less critical set of needs than this community could place an unacceptable strain on the integrity of public safety spectrum use. We can limit such a strain by creating a separate pool limited to public safety communications. Moreover, this approach is consistent with our goal to foster a regulatory environment in which agencies involved in the protection of life and property have the communications resources they need to carry out their mission and an opportunity to select from a wide range of advanced wireless communications services.<sup>140</sup>

39. The Commission’s other reasons for establishing its eligibility requirements in the Public Safety Pool were to promote interoperability between all entities involved in ensuring the safety of life by allowing them to communicate with one another, and remain consistent with other Commission definitions of public safety radio services.<sup>141</sup> The Commission indicated that restricting Public Safety Pool eligibility in this manner was not only consistent with the Commission’s definition of public safety

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<sup>138</sup> See LMCC Comments at 13, *citing* 47 C.F.R. § 90.463(a) (requiring a control operator to be stationed at the operating position of a control transmitter point, but permitting the control operator to be a party such as an agent of the licensee or a third-party contractor). We note, however, that 47 C.F.R. § 90.421(a) permits mobile units licensed in the Public Safety Pool to be installed in any vehicle which in an emergency would require cooperation and coordination with the licensee, and in any vehicle used in the performance, under contract, of official activities of the licensee. This provision does not permit the installation of radio units in non-emergency vehicles that are not performing governmental functions under contract but with which the licensee might wish to communicate, nor does it cover base stations. See 47 C.F.R. § 90.421(a).

<sup>139</sup> USDOT Comments at 2-3.

<sup>140</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 Assignments Policies of the Private Land Mobile Services, *Second Report and Order*, PR Docket No. 92-235, 12 FCC Rcd 14307, 14316 ¶ 16 (1997) (*Second Report and Order*).

<sup>141</sup> *Id.* at 14319-20. See also 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 Assignments Policies of the Private Land Mobile Services, *Second Memorandum Opinion and Order*, PR Docket No. 92-235, 14 FCC Rcd 8642, 8645 ¶ 4 (1999).

services in other contexts,<sup>142</sup> but also with the Public Safety Wireless Advisory Committee's (PSWAC's) definition of public safety, reflected in its Final Report.<sup>143</sup>

40. Because state and local public agencies share similar responsibilities when it comes to safety of life and protection of property, it is critical that, especially during times of emergencies, the deployment and use of Public Safety Pool frequencies remain within the control of these public safety agencies.<sup>144</sup> Control is best assured when such licenses are held by public safety eligibles only. The current rule ensures that the continuity and expertise underlying the coordination and expansion of public safety communications systems appropriately remain with a region's state and local agencies.<sup>145</sup> Consistent with the view of the majority of commenters on this issue,<sup>146</sup> we find that the current rule ensures that a local or state governmental entity exercises responsibility and accountability for the use of the Public Safety Pool spectrum, even if the contract with the private entity either expires or terminates,<sup>147</sup> or if the private entity itself ceases to exist by way of bankruptcy, merger, or other organizational change. We therefore decline to amend our rules with respect to Public Safety Pool eligibility. Because we decline to amend Section 90.20, we need not address the outstanding issues raised in the *NPRM* on this issue regarding the administrative criteria to be used in the event we decided to amend the rule.<sup>148</sup>

### III. FURTHER NOTICE OF PROPOSED RULEMAKING

#### A. 4.9 GHz General Exemption from Certified Frequency Coordination

41. We take this opportunity to address an apparent inadvertent omission of a Commission rule that provided an exemption to 4.9 GHz band applicants from certified frequency coordination. By this *Further Notice of Proposed Rulemaking*, we seek comment on reinstating the omitted language into the Commission's Part 90 rules. When the Commission originally crafted the 4.9 GHz rules, it did not require frequency coordinators to certify applications because "all frequencies will be shared among licensees, and adjacent and co-located licensees are required to cooperate and coordinate in use of the spectrum."<sup>149</sup> Accordingly, the Commission codified a frequency coordination exemption for applications for frequencies in the 4940-4990 MHz band (4.9 GHz exemption).<sup>150</sup> The 4.9 GHz exemption appeared in the Federal Register entry for the *4.9 GHz Third Report and Order*,<sup>151</sup> as well as

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<sup>142</sup> *Second Report and Order*, 12 FCC Rcd at 14320 *citing* Development and Implementation of a Public Safety National Plan and Amendment of Part 90 to Establish Service Rules and Technical Standards for Use of the 821-824/866-869 MHz Bands by the Public Safety Services, GEN Docket No. 87-112, *Report and Order*, 3 FCC Rcd 905 (1987).

<sup>143</sup> Final Report of the Public Safety Wireless Advisory Committee, September 1996, Vol. 1, Sec. 1.18.

<sup>144</sup> See AASHTO Comments at 9.

<sup>145</sup> See *id.*

<sup>146</sup> See, e.g., AASHTO Comments at 8-9; AASHTO Reply Comments at 3; APCO Comments at 3; EWA Reply Comments at 5; IAFC/IMSA Comments at 6-7; LMCC Comments at 13-14; and NPSTC Comments at 7-8.

<sup>147</sup> In this regard, LMCC observes that a rule change that would license an independent private entity to operate on public safety spectrum could potentially involve the Commission in disputes about dispositions of Public Safety Pool licenses issued to a private entities in the event that a contract between such an entity and a governmental authority is terminated. See LMCC Comments at 13.

<sup>148</sup> See *NPRM*, 22 FCC Rcd at 9601 ¶¶ 12-13.

<sup>149</sup> *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9164 ¶ 28.

<sup>150</sup> *Id.*; 18 FCC Rcd at 9177 ¶ 9.

<sup>151</sup> See 68 Fed. Reg. 38,639 (June 30, 2003).



the 2003 and 2004 editions of the Commission's rules on Section 90.175(j).<sup>152</sup> However, in 2005 and subsequent editions of the Code of Federal Regulations, the exemption for 4.9 GHz applications was omitted.<sup>153</sup>

42. The omission of the 4.9 GHz exemption appears to have occurred inadvertently as a result of a rulemaking in 2004. On February 10, 2004, the Commission released a Report and Order to revise, *inter alia*, Section 90.175(j) "by adding a new subparagraph (17)" to exempt from frequency coordination "applications for DSRCS [Dedicated Short-Range Communications Service] licensees (as well as registrations for Roadside Units) in the 5850-5925 GHz band" (DSRCS exemption).<sup>154</sup> However, the 2003 Code of Federal Regulations, which was in effect at the time the *5.9 GHz Report & Order* was released, already contained seventeen exemptions in Section 90.175(j).<sup>155</sup> Because the *5.9 GHz Report & Order* stated that it was adding a new subparagraph, we tentatively conclude that the Commission did not intend to delete the 4.9 GHz exemption, then listed as Section 90.175(j)(17).<sup>156</sup> We base this tentative conclusion on the lack of any corresponding discussion in the *5.9 GHz Report & Order* relating to such a deletion, or any evidence of such an intention in subsequent proceedings. On July 1, 2004, as the result of an unrelated rulemaking, Section 90.175 was further revised by removing subparagraph (j)(13) and redesignating subparagraphs (j)(14) through (17) as (j)(13) through (16).<sup>157</sup> On August 3, 2004, the Federal Register entry for the *5.9 GHz Report & Order* was published, which overwrote the existing 4.9 GHz exemption in Section 90.175(j)(16) with the DSRCS exemption<sup>158</sup> rather than adding a new subparagraph as intended in the *5.9 GHz Report & Order*. Subsequently, the omission of the 4.9 GHz exemption was perpetuated through other rulemakings, such as the Commission's Biennial Regulatory Review in 2005.<sup>159</sup> Because there is no evidence that the Commission intended to impose a requirement for certified frequency coordination on applicants in the 4.9 GHz band, we believe that the subparagraph numbering in the *5.9 GHz Report & Order* and the subsequent overwriting of the 4.9 GHz exemption were ministerial errors that contributed to the omission.

43. We find that reinstating the 4.9 GHz exemption would relieve applicants from burdens and fees associated with obtaining certified frequency coordination and would satisfy the Commission's original intent to encourage licensees to cooperate and coordinate with each other in use of the spectrum. In this regard, we tentatively conclude that correcting the error would serve the public interest. However, the omission has been in effect for a substantial period of time, and some entities may be operating under the assumption that formal coordination from a certified frequency coordinator is required for 4.9 GHz

<sup>152</sup> See 47 C.F.R. § 90.175(j)(17) (2003), 47 C.F.R. § 90.175(j)(16) (2004). In 2004, the Commission redesignated Section 90.175(j)(17) as Section 90.175(j)(16). See 69 Fed. Reg. 39,867 (July 1, 2004).

<sup>153</sup> See 47 C.F.R. § 90.175(j) (2005, 2006, 2007).

<sup>154</sup> Amendment of the Commission's Rules Regarding Dedicated Short-Range Communication Services in the 5.850-5.925 GHz Band (5.9 GHz Band), Amendment of Parts 2 and 90 of the Commission's Rules to Allocate the 5.850-5.925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Services, *Report and Order*, WT Docket No. 01-90, ET Docket No. 98-95, 19 FCC Rcd 2458, Appendix A, 2503 ¶ 8 (2003) (*5.9 GHz Report & Order*).

<sup>155</sup> See 47 C.F.R. § 90.175(j) (2003). The 2003 publication of the Code of Federal Regulations is dated October 1, 2003.

<sup>156</sup> See 47 C.F.R. § 90.175(j)(17) (2003).

<sup>157</sup> See 69 Fed. Reg. 39,867 (July 1, 2004). The 4.9 GHz exemption appeared under 47 C.F.R. § 90.175(j)(16) as a result.

<sup>158</sup> See 69 Fed. Reg. 46,438 (Aug. 3, 2004).

<sup>159</sup> See Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 03-264, 20 FCC Rcd 13900, Appendix A, 13943 ¶ 24 (2005).

applications. We tentatively conclude that correcting the error by restoring the 4.9 GHz exemption would eliminate such uncertainty. Therefore, we seek comment on our tentative conclusion to amend Section 90.175(j) to restore the exemption for applications for frequencies in the 4940-4990 MHz band from certified frequency coordination requirements. Notwithstanding this tentative conclusion, we propose a separate, more formal licensee-to-licensee coordination requirement for applications seeking authorization for primary permanent fixed stations, as discussed below.

## B. Coordination for 4.9 GHz Primary Permanent Fixed Stations

44. As discussed above in the *Report and Order*, we accord primary status to certain permanent fixed point-to-point and point-to-multipoint stations.<sup>160</sup> We are also licensing all permanent fixed point-to-point and point-to-multipoint stations on an individual, site-by-site basis.<sup>161</sup> As we seek to make clear in Section A above, 4.9 GHz licensees are not subject to a formal frequency coordination requirement via certified frequency coordinators. Section 90.1209(b) addresses coordination matters by requiring that “[a]ll licensees shall cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities.”<sup>162</sup> We are concerned that the current rule language in Section 90.1209(b) may not ensure that applicants for primary permanent fixed stations offer sufficient protection to other primary permanent fixed stations and other co-primary users. Without a specific coordination procedure in place, interference issues may arise between co-primary permanent fixed stations or other co-primary users of the band. We thus believe that additional measures are required to minimize the potential for interference.

45. Section 101.103(d)<sup>163</sup> presently establishes a prior coordination process that we believe would also serve the application process for primary fixed 4.9 GHz stations. Section 101.103(d) provides that proposed frequency usage of fixed microwave stations must be prior coordinated with existing licensees, permittees, and applicants in the area.<sup>164</sup> The coordination involves two separate elements: notification and response.<sup>165</sup> To be acceptable for filing, all applications and major technical amendments must certify that coordination, including response, has been completed.<sup>166</sup> The notification must specify the names of the licensees, permittees, and applicants with which coordination was accomplished.<sup>167</sup> The notification must include relevant technical details of the proposal.<sup>168</sup> Once notification is provided, affected parties have thirty days to respond.<sup>169</sup> Accordingly, we propose to modify Section 90.1209(b) to require applicants for primary fixed stations providing point-to-point and point-to-multipoint communications to successfully complete the prior coordination procedures of Section 101.103(d). We seek comment on this proposal. Additionally, we invite commenters to suggest any alternative measures that would serve the purpose of our proposal.

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<sup>160</sup> See *supra* para. 9.

<sup>161</sup> See *supra* para. 11.

<sup>162</sup> 47 C.F.R. § 90.1209(b).

<sup>163</sup> 47 C.F.R. § 101.103(d).

<sup>164</sup> See *id.*

<sup>165</sup> See 47 C.F.R. § 101.103(d)(2)(i).

<sup>166</sup> See *id.*

<sup>167</sup> *Id.*

<sup>168</sup> See 47 C.F.R. § 101.103(d)(2)(ii). For the 4.9 GHz band, we would not require the applicant to submit information about receive stations because only transmitters are licensed under the 4.9 GHz band rules. See 47 C.F.R. § 90.1207.

<sup>169</sup> See 47 C.F.R. § 101.103(d)(2)(iv).

### C. 4.9 GHz Band Plan Correction and Clarification

46. We seek comment on correcting an apparent error in the 4.9 GHz band plan and clarifying which center frequencies may be licensed when aggregating multiple channels into larger bandwidths. The band plan is governed by Section 90.1213 of the Commission's rules.<sup>170</sup> First, we identify an error in the bandwidth designated to channel number 14. In the *4.9 GHz Third Report and Order*, the Commission decided that "the frequency utilization plan will consist of ten one-megahertz channels and eight five-megahertz channels ..."<sup>171</sup> However, in the rule, "[c]hannel numbers 1 through 5 and 15 through 18 are 1 MHz channels and channels [sic] numbers 6 through 14 are 5 MHz channels," which results in nine one-megahertz channels and nine five-megahertz channels.<sup>172</sup> Accordingly, there is a discrepancy between the Commission's decision and the rule concerning the number of channels designated for each bandwidth.

47. Channel number 14 is designated as a five-megahertz bandwidth channel in the rules. However, the band edges of its upper neighbors, channel numbers 15 and 16 (each one megahertz wide) are only 0.5 and 1.5 megahertz away, respectively, and the band edge of its lower neighbor, channel number 13 (five megahertz wide) is only 0.5 megahertz away. Therefore, the five megahertz bandwidth of channel number 14 overlaps the bandwidth of channel numbers 13, 15 and 16. Since none of the other channels in the 4.9 GHz band have overlapping bandwidth, we tentatively conclude that the channel plan contains an error in the bandwidth of channel number 14. We propose to correct the channel number 14 bandwidth from five megahertz to one megahertz. We note that this correction would eliminate bandwidth overlap with adjacent channels, improve spectrum efficiency, restore symmetry to the band plan, and result in ten one-megahertz channels and eight five-megahertz channels, consistent with the Commission's intent in the *4.9 GHz Third Report and Order*. Also, we propose to grandfather existing licensees to minimize the effect of this rule change on existing operations. We seek comment on this proposed correction.

48. Finally, the Commission's Universal Licensing System accepts 4.9 GHz channel requests based on the center frequency. The Commission has been receiving applications for aggregated channels on improper center frequencies, which results in inefficient spectrum usage. For example, if a user seeks to aggregate two five-megahertz channels into a ten-megahertz bandwidth, the user might improperly request a frequency centered on one of the existing five-megahertz channels rather than centered in the middle of the desired ten-megahertz channel. The user takes up bandwidth over three or more channels rather than just the two channels that are needed. To resolve this problem, we propose to amend the table in Section 90.1213 to list the center frequencies that should be requested for every possible channel aggregation permitted in the rules. We believe that clarifying the band plan in this manner would improve spectrum efficiency and eliminate confusion over how to license aggregated channels. Also, we propose to grandfather existing licensees to minimize the effect of this clarification on existing operations. We seek comment on this proposal.

### D. Public Safety Pool Corrections

49. We seek comment on making three "clean-up" amendments to Section 90.20 relating to the Public Safety Pool Frequency Table and its associated limitations. The following proposed amendments would rectify three errors that Commission staff has discovered in this rule section since the release of the *NPRM*. Although these errors may appear ministerial in nature, they have been in effect for a substantial period of time, and thus, we seek comment on the corrections.

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<sup>170</sup> 47 C.F.R. § 90.1213.

<sup>171</sup> *4.9 GHz Third Report and Order*, 18 FCC Rcd at 9168 ¶ 39.

<sup>172</sup> 47 C.F.R. § 90.1213.

50. First, in the Section 90.20(d)(66)(i) table of frequency pairs, we note that Channel MED-4 has a mobile-only frequency of 463.075 MHz, unlike the other listed channels, which have mobile-only frequencies in the 468 MHz range. We tentatively conclude that 463.075 MHz was a typographical error, and we seek comment on a proposal to correct the mobile-only frequency for Channel MED-4 to 468.075 MHz. The lower half of the MED-4 pair, frequency 463.075 MHz in the base and mobile column, would remain unchanged.

51. Second, nine frequencies in the Public Safety Pool Frequency Table contain limitation 38;<sup>173</sup> however, Section 90.20(d)(38) only contains the text, “[Reserved].”<sup>174</sup> We propose to replace limitation 38 with limitation 10 on those frequencies. In 2005, the Commission issued an order that, *inter alia*, replaced limitation 38 with limitation 10 in the Public Safety Pool Frequency Table<sup>175</sup> because the two limitations were identical.<sup>176</sup> A portion of the final rule appendix reads: “Section 90.20 is further amended by replacing limitation 38 with 10 in the Public Safety Pool Frequency Table of Section 90.20(c)(3) (Frequencies.) for frequencies 155.325, 155.3325, 155.355, 155.3625, 155.385, 155.3925, 155.4, 155.4075, 462.9375, 462.95625, 462.9625, 462.96875, 462.975, 462.98125, 462.9875, 462.99375, 467.95, 467.95625, 467.9625, 467.96875, 467.975, 467.98125, 467.9875 and 467.99375 ...”<sup>177</sup> However, the list erroneously included frequency 462.9375 MHz, which does not have limitation 38, and excluded frequency 462.95 MHz, which has limitation 38. Also, the rule implementation was never completed for the listed frequencies in the 467 MHz range. Therefore, we seek comment on a proposal to complete the rule implementation of the *2005 Biennial Review R&O* and amend Section 90.20(c)(3) by replacing limitation 38 with limitation 10 on the nine frequencies listed in note 173.

52. Third, the frequency band 1427-1432 MHz in the Public Safety Pool Frequency Table contains an apparent error in the limitation column. The limitation reads, “O=’xl’>72.” We seek comment on a proposal to amend Section 90.20(c)(3) by replacing the text in the limitation column “O=’xl’>72” with the numeral “72.” This correction would clarify that limitation 72 applies to this band. Limitation 72 reads, “[t]his frequency band is available to stations in this service subject to the provisions of §90.259,”<sup>178</sup> and Section 90.259 contains provisions for the 1427-1432 MHz band.<sup>179</sup>

#### IV. PROCEDURAL MATTERS

53. *Ex Parte Presentations.* This is a permit-but-disclose notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission’s Rules. *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

<sup>173</sup> See 47 C.F.R. § 90.20(c)(3). The nine frequencies with limitation 38 are: 462.95, 467.95, 467.95625, 467.9625, 467.96875, 467.975, 467.98125, 467.9875 and 467.99375 MHz.

<sup>174</sup> 47 C.F.R. § 90.20(d)(38) (2008).

<sup>175</sup> See Biennial Regulatory Review - Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 03-264, 20 FCC Rcd 13900 (2005) (*2005 Biennial Review R&O*).

<sup>176</sup> See 47 C.F.R. §§ 90.20(d)(10), (38) (2005). In 2005, both limitations read: “A licensee regularly conducting two-way communication operations on this frequency may, on a secondary basis, also transmit one-way alert-paging signals to ambulance and rescue squad personnel.” *Id.*

<sup>177</sup> *2005 Biennial Review R&O*, 20 FCC Rcd at 13942 Appendix A ¶ 21.

<sup>178</sup> 47 C.F.R. § 90.20(d)(72).

<sup>179</sup> See 47 C.F.R. § 90.259.

54. *Comment and Reply Comment Filing Instructions.* Pursuant to sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the front page of this document. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
  - For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and include the following words in the body of the message "get form." A sample form and directions will be sent in response.
- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Federal Communications Commission.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE, Suite 110, Washington DC 20002. The filing hours at this location are 8:00 am to 7:00 pm. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.

People with Disabilities: To request materials in alternative formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer and Government Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (tty).

55. Interested parties may view documents filed in this proceeding on the Commission's Electronic Comment Filing System (ECFS) using the following steps: (1) Access ECFS at <http://www.fcc.gov/cgb/ecfs>. (2) In the introductory screen, click on "Search for Filed Comments." (3) In the "Proceeding" box, enter the numerals in the docket number. (4) Click on the box marked "Retrieve



Document List.” A link to each document is provided in the document list. Filings and comments are also available for public inspection and copying during regular business hours at the FCC Reference Information Center, 445 12<sup>th</sup> Street, SW, Room CY-A257, Washington, DC 20554. Filings and comments also may be purchased from the Commission’s duplicating contractor, Best Copy and Printing, Inc., Portals II, 445 12<sup>th</sup> Street, SW, Room CY-B402, Washington, DC 20554, telephone 1-800-378-3160, or via e-mail to [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com). This *Report and Order and Further Notice of Proposed Rulemaking* also may be downloaded from the Commission’s web site at <http://www.fcc.gov/>.

56. For further information, contact Mr. Gregory F. Intoccia, Policy Division, Public Safety and Homeland Security Bureau, (202) 418-1170 or TTY (202) 418-7233; or via e-mail at [Gregory.Intoccia@fcc.gov](mailto:Gregory.Intoccia@fcc.gov).

57. *Regulatory Flexibility Analyses.* The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>180</sup> requires that a regulatory flexibility analysis be prepared for notice-and-comment rulemaking proceedings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”<sup>181</sup> As required by the RFA,<sup>182</sup> the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the rules adopted in this *Report and Order*. The FRFA for the *Report and Order* is contained in Appendix D. Additionally, as required by the RFA,<sup>183</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document. The IRFA is also set forth in Appendix D. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to the *Further Notice of Proposed Rulemaking* and must have a separate and distinct heading designating them as responses to the IRFA.

58. *Congressional Review Act.* The Commission will send a copy of this *Report and Order and Further Notice of Proposed Rulemaking* to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(4).

59. *Paperwork Reduction Act Analysis.* This *Report and Order* does not contain new or modified information collection(s), and this *Further Notice of Proposed Rulemaking* does not contain proposed information collection(s), subject to the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, therefore, the *Report and Order* does not contain any new or modified “information collection burden for small business concerns with fewer than 25 employees,” and the *Further Notice of Proposed Rulemaking* does not contain any proposed new or modified “information collection burden for small business concerns with fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4).

## V. ORDERING CLAUSES

60. Accordingly, IT IS ORDERED, pursuant to sections 4(i), 303(r), and 403 of the Communications Act of 1934, 47 U.S.C. §§ 154(i), 303(r), and 403, that this *Report and Order and Further Notice of Proposed Rulemaking* is HEREBY ADOPTED.

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<sup>180</sup> The RFA, *see* 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>181</sup> 5 U.S.C. § 605(b).

<sup>182</sup> 5 U.S.C. § 603.

<sup>183</sup> 5 U.S.C. § 603.

61. IT IS FURTHER ORDERED that Part 90 of the Commission's Rules IS AMENDED as specified in Appendix B, effective thirty days after publication of the *Report and Order* in the Federal Register.

62. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Center, SHALL SEND a copy of this *Report and Order and Further Notice of Proposed Rulemaking*, including the Initial and Final Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX A****List of Commenters**

Comments in WP Docket No. 07-100

Airspan Networks, Inc. (Airspan)  
American Association of State Highway Transportation Officials (AASHTO)  
Association of Public-Safety Officials-International, Inc. (APCO)  
Bainbridge Township Fire Department  
Balsam Volunteer Fire Department  
Troy Beckner  
City of Brookfield, Wisconsin Fire Department  
The State of California (California)  
Richard M. Carami  
Chariton County Enhanced 911 Services  
Chilton County Fire and EMS Association  
Cisco Systems, Inc. (Cisco)  
Coleraine Police  
Communications Consulting Services (CCS)  
Cook County Fire Chiefs Mutual Aid Association  
Cook County Emergency Management  
Steven R. Cordes  
Countryside Fire Protection District  
Data Flow Systems, Inc.  
DeKalb County Hospital Association, DeKalb Ambulance Association  
DeKalb County Association of Fire Departments, Inc.  
DeKalb County Sheriff  
City of Delafield, Wisconsin Fire Department  
Deer Creek Fire Protection District  
Les Dotson  
DuPage Public Safety Communications  
Ellis County, Kansas  
Elmore County E911  
Enterprise Wireless Alliance (EWA)  
Exalt Communications, Inc. (Exalt)  
Oveta R. Ford  
Gallia County 911 Center  
Timothy J. George  
Grundy County Emergency Telephone Systems Board  
Matthew F. Harker (Harker)  
City of Hays Fire Department  
Itron, Inc. (Itron)  
Illinois Fire Chiefs Association  
Illinois Mutual Aid Box Alarm System Division  
International Association of Fire Chiefs, Inc. and  
International Municipal Signal Association (IAFC/IMSA)  
Itasca County Sheriff's Department  
Johnson County, Kansas  
Donnie Knight  
Andrew Knitt  
Lakehead Fire Departments Mutual Aid Association

Land Mobile Communications Council (LMCC)  
Robert Lane  
M/A-COM, Inc. (M/A-COM)  
John Marcel  
Johnson County, Kansas  
Meds-1 Emergency Medical Services  
Adam Melton  
Metropolitan Water District of Southern California (MWD)  
Millbrook Fire Department  
Motorola, Inc. (Motorola)  
The Mundelein Fire Department  
National Academy of Sciences' Committee On Radio Frequencies (CORF)  
National Association of Regional Planning Committees (NARPC)  
National Public Safety Telecommunications Council (NPSTC)  
National Radio Astronomy Observatory (NRAO)  
National Telecommunications and Information Administration (NTIA)  
Village of Oak Park, Illinois Fire Department  
City Of Ottawa, Illinois, Fire Chief  
PCIA – The Wireless Infrastructure Association  
Peoria County, Illinois Emergency Telephone System Board  
Town of Pine Hill, Alabama  
Pine Hill Volunteer Fire Department  
Quadcom 911 Police & Fire Communications System  
Radiosoft  
Lisa Reed  
Village of River Forest, Illinois Fire Department  
City of Roanoke, Alabama, Police Chief  
City of Roanoke, Alabama Fire Chief  
Shelby County E911  
Paul Spielman  
Tallassee Alabama Fire Department  
Telecommunications Industry Association (TIA)  
Tennessee Emergency Management Agency (TEMA)  
Tropos Networks (Tropos)  
University of Iowa Hospitals and Clinics  
U.S. Department of Transportation (USDOT)  
Roger D. Wilson  
The State of Wisconsin Department of Transportation  
Zion Fire Rescue Department

## APPENDIX B

## Final Rules

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 90 continues to read as follows:

**Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).**

2. Section 90.243 is amended by revising paragraph (b)(1) to read as follows:

**§ 90.243 Mobile relay stations.**

\* \* \* \* \*

(b) \* \* \* \* \*

(1) In the Public Safety Pool, systems operating on any of the public safety frequencies listed in Section 90.20(c) are permitted to be cross-banded for mobile stations operations with mobile relay stations where such stations are authorized.

\* \* \* \* \*

3. Section 90.1207 is amended by revising paragraph (d) to read as follows:

**§ 90.1207 Licensing.**

\* \* \* \* \*

(d) Permanent fixed point-to-point and point-to-multipoint stations in the 4940-4990 MHz band must be licensed individually on a site-by-site basis. Such fixed stations that connect 4940-4990 MHz band base and mobile stations that are used to deliver broadband service, as well as other public safety networks using spectrum designated for broadband use, are accorded primary status. Primary status is also accorded to stand-alone permanent fixed 4940-4990 MHz band links that are used to deliver broadband service. Primary permanent fixed point-to-point and point-to-multipoint stations must use directional antennas with gains greater than 9 dBi up to 26 dBi. Permanent fixed point-to-point stations that do not meet the criteria for primary status will be authorized only on a secondary, non-interference basis to base, mobile, temporary fixed, and primary permanent fixed operations.

4. Section 90.1215 is amended by revising paragraphs (a), (b) and (c) and adding paragraph (e) to read as follows:

**§ 90.1215 Power limits.**

\* \* \* \* \*



(a) The maximum conducted output power should not exceed:

Channel Bandwidth (MHz)	Low Power Maximum Conducted Output Power (dBm)	High Power Maximum Conducted Output Power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

High power devices are also limited to a peak power spectral density of 21 dBm per one MHz. High power devices using channel bandwidths other than those listed above are permitted; however, they are limited to peak power spectral density of 21 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi. However, high power point-to-point and point-to-multipoint operations (both fixed and temporary-fixed rapid deployment) may employ transmitting antennas with directional gain up to 26 dBi without any corresponding reduction in the maximum conducted output power or spectral density. Corresponding reduction in the maximum conducted power and peak power spectral density should be the amount in decibels that the directional gain of the antenna exceeds 26 dBi.

(b) Low power devices are also limited to a peak power spectral density of 8 dBm per one MHz. Low power devices using channel bandwidths other than those listed above are permitted; however, they are limited to a peak power spectral density of 8 dBm/MHz. If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density should be reduced by the amount in decibels that the directional gain of the antenna exceeds 9 dBi.

(c) The maximum conducted power is measured as a conducted emission over any interval of continuous transmission calibrated in terms of an RMS-equivalent voltage. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true maximum conducted power measurement conforming to the definitions in this paragraph for the emission in question.

\* \* \* \* \*

(e) The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

APPENDIX C

Proposed Rules

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 90 continues to read as follows:

**Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7).**

2. Section 90.20 is amended by revising the Public Safety Pool Frequency Table of Section 90.20(c)(3) (Frequencies.) to replace limitation 38 with limitation 10 for frequencies 467.95, 467.95625, 467.9625, 467.96875, 467.975, 467.98125, 467.9875 and 467.99375 Megahertz.

3. Section 90.20 is further amended by revising the Public Safety Pool Frequency Table of Section 90.20(c)(3) (Frequencies.) to replace limitation O='xl'>72 with limitation 72 for the frequency band 1,427 to 1,432 Megahertz.

4. Section 90.20(d)(66)(i) is amended to read as follows:

**§ 90.20 Public Safety Pool.**

\* \* \* \* \*

(d) \* \* \* \* \*

(1) \* \* \* \* \*

\* \* \* \* \*

(66) \* \* \* \* \*

(i) \* \* \* \* \*

Frequencies base and mobile (megahertz)	Mobile only (MHz)	Channel name
* * *	* * *	* * *
463.075	468.075	MED-4
* * *	* * *	* * *

5. Section 90.175 is amended by adding a new paragraph (j)(19) to read as follows:

**§ 90.175 Frequency coordination requirements.**

\* \* \* \* \*

(j) \* \* \* \* \*

(19) Applications for frequencies in the 4940-4990 MHz band, except for primary, permanent fixed point-to-point and point-to-multipoint stations, which shall be subject to the requirements of §§ 90.1209(b) and 101.103(d) of this chapter.

\* \* \* \* \*

6. Section 90.1209 is amended by revising paragraph (b) to read as follows:

**§ 90.1209 Policies governing the use of the 4940-4990 MHz band.**

\* \* \* \* \*

(b) All licensees shall cooperate in the selection and use of channels in order to reduce interference and make the most effective use of the authorized facilities. Licensees of stations suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations concerned. Further, the Commission may prohibit the use of any 4.9 GHz channel under a system license at a given geographical location when, in the judgment of the Commission, its use in that location is not in the public interest. Applicants for primary, permanent fixed point-to-point and point-to-multipoint stations as defined in § 90.1207 shall be subject to the requirements of § 101.103(d) of this chapter.

\* \* \* \* \*

7. Section 90.1213 is revised to read as follows:

**§ 90.1213 Band plan.**

(a) The following channel center frequencies are permitted to be aggregated for channel bandwidths of 5, 10, 15 or 20 MHz as described in paragraph (b) of this section. Channel numbers 1 through 5 and 14 through 18 are 1 MHz bandwidth channels, and channel numbers 6 through 13 are 5 MHz bandwidth channels.

Center Frequency (MHz)	Bandwidth (MHz)	Channel Nos.
4940.5	1	1
4941.5	1	2
4942.5	1	3
4943.5	1	4
4944.5	1	5
4947.5	5	6

4952.5	5	7
4957.5	5	8
4962.5	5	9
4967.5	5	10
4972.5	5	11
4977.5	5	12
4982.5	5	13
4985.5	1	14
4986.5	1	15
4987.5	1	16
4988.5	1	17
4989.5	1	18

(b) The following tables list center frequencies to be licensed for aggregated channels only. A license may contain any combination of bandwidths from aggregated channels provided that the bandwidths do not overlap. The bandwidth edges (lower and upper frequencies) are provided to aid in planning.

(1) 5 MHz bandwidth aggregation:

Center Frequency (MHz)	Channel Nos. Employed	Lower Frequency (MHz)	Upper Frequency (MHz)
4942.5	1 to 5*	4940	4945
4947.5	6	4945	4950
4952.5	7	4950	4955
4957.5	8	4955	4960
4962.5	9	4960	4965
4967.5	10	4965	4970
4972.5	11	4970	4975
4977.5	12	4975	4980
4982.5	13	4980	4985
4987.5	14 to 18*	4985	4990

\*These channels should only be used if all other channels are blocked.

(2) 10 MHz bandwidth aggregation:

Center Frequency (MHz)	Channel Nos. Employed	Lower Frequency (MHz)	Upper Frequency (MHz)
4945	1 to 6*	4940	4950
4950	6 & 7	4945	4955
4955	7 & 8	4950	4960
4960	8 & 9	4955	4965
4965	9 & 10	4960	4970
4970	10 & 11	4965	4975
4975	11 & 12	4970	4980
4980	12 & 13	4975	4985
4985	13 to 18*	4980	4990

\*These channels should only be used if all other channels are blocked.

(3) 15 MHz bandwidth aggregation:

Center Frequency (MHz)	Channel Nos. Employed	Lower Frequency (MHz)	Upper Frequency (MHz)
4947.5	1 to 7*	4940	4955
4952.5	6 to 8	4945	4960
4957.5	7 to 9	4950	4965
4962.5	8 to 10	4955	4970
4967.5	9 to 11	4960	4975
4972.5	10 to 12	4965	4980
4977.5	11 to 13	4970	4985
4982.5	12 to 18*	4975	4990

\*These channels should only be used if all other channels are blocked.

(4) 20 MHz bandwidth aggregation:

Center Frequency (MHz)	Channel Nos. Employed	Lower Frequency (MHz)	Upper Frequency (MHz)
4950	1 to 8*	4940	4960



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4955	6 to 9	4945	4965
4960	7 to 10	4950	4970
4965	8 to 11	4955	4975
4970	9 to 12	4960	4980
4975	10 to 13	4965	4985
4980	11 to 18*	4970	4990

\*These channels should only be used if all other channels are blocked.

## APPENDIX D

## Regulatory Flexibility Analyses

## I. FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>184</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking (NPRM)*.<sup>185</sup> The Commission sought written public comment on the proposals in the *NPRM*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>186</sup>

## A. Need for, and Objectives of, the Report and Order

2. We believe it appropriate to review all of our regulations relating to administering Private Land Mobile Radio (PLMR) Services to determine which regulations can be clarified, streamlined or eliminated. The *Report and Order* in this proceeding is part of our continuing effort to provide clear and concise rules that (1) facilitate adoption of new wireless technologies, devices and services, and (2) are easy for licensees to comprehend and understand. Additionally, we believe the decisions adopted in the *Report and Order* will (3) promote flexibility and more efficient use of the spectrum, (4) prevent unnecessary administrative burdens from being imposed on licensees, (5) allow licensees to better meet their communication needs, and (6) maintain public accountability for use of public safety spectrum.

3. The *Report and Order* contains five decisions. First, the *Report and Order* modifies the Commission's rules governing the 4.9 GHz band to grant primary status to permanent fixed stations that connect 4.9 GHz base and mobile stations, as well as other public safety networks using spectrum designated for broadband use. We also accord primary status to stand-alone fixed 4.9 GHz links that are used to deliver broadband service. This change provides clear and concise rules that facilitate adoption of new wireless technologies, devices and services, and allows licensees to better meet their communications needs. Second, the *Report and Order* requires the same output power measurement procedures for 4.9 GHz band devices as those required for devices using digital modulation techniques regulated by Part 15 of our rules. This change harmonizes rules that apply to similar technologies, and the resulting similar treatment will help speed deployment and adoption of new wireless technologies, devices and services. Third, the *Report and Order* declines to restrict paging operations on VHF public safety frequencies. This decision avoids a potentially disruptive impact to licensees that conduct paging operations on VHF public safety frequencies, and thus prevents administrative burdens from being imposed on such licensees. In addition, this decision maintains licensees' flexibility and enables them to meet their communication needs. Fourth, the *Report and Order* amends the Commission's rules to clarify that cross-band repeaters are permitted for all public safety systems. This change provides clear and concise rules that are easy for licensees to comprehend and understand; promotes flexibility and more efficient use of spectrum; allows licensees to better meet their communications needs; and reduces administrative burdens by obviating the need for finding alternative work-around solutions when a user needs cross-banding capability. Fifth, the *Report and Order* declines to amend the Commission's rules to permit privately-run metropolitan transit systems and toll roads to be authorized as licensees to use frequencies

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<sup>184</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>185</sup> Amendment of Part 90 of the Commission's Rules, *Notice of Proposed Rulemaking and Order*, WP Docket No. 07-100, 22 FCC Rcd 9595, 9613 (2007) (*NPRM*).

<sup>186</sup> See 5 U.S.C. § 604.

in the Public Safety Pool. This decision recognizes the public interest role that public agencies have played in effectively utilizing the Public Safety Pool to maintain public accountability for the use of public safety spectrum.

**B. Summary of Significant Issues Raised by Public comments in Response to the IRFA**

4. No comments were submitted specifically in response to the IRFA.

**C. Description and Estimate of the Number of Small Entities To Which the Final Rules Will Apply**

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted. The RFA defines “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>187</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act, unless the Commission has developed one or more definitions that are appropriate to its activities.<sup>188</sup> Under the Small Business Act, a “small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA).”<sup>189</sup> A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>190</sup> Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the rules changes adopted in this *Report and Order*.

6. *Governmental Entities.* Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.<sup>191</sup> A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>192</sup> Nationwide, as of 2002, there were approximately 1.6 million small organizations.<sup>193</sup> The term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>194</sup> Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.<sup>195</sup> We estimate that, of this total,

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<sup>187</sup> See 5 U.S.C. § 601(6).

<sup>188</sup> See 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, established one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition in the Federal Register.”

<sup>189</sup> See Small Business Act, 5 U.S.C. § 632 (1996).

<sup>190</sup> See 5 U.S.C. § 601(4).

<sup>191</sup> See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at 40 (July 2002).

<sup>192</sup> See 5 U.S.C. § 601(4).

<sup>193</sup> Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

<sup>194</sup> See 5 U.S.C. § 601(5).

<sup>195</sup> U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, Section 8, at 272, Table 415.

84,377 entities were “small governmental jurisdictions.”<sup>196</sup> These entities are included here because many of these small government jurisdictions are also licensees.

7. *Public Safety Radio Licensees.* As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.<sup>197</sup> Because of the vast array of public safety licensees, the Commission has not developed a small business size standard specifically applicable to public safety licensees. The SBA rules contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>198</sup> With respect to local governments, in particular, since many governmental entities comprise the licensees for these services, we include under public safety services the number of government entities affected. According to Commission records, there are a total of approximately 133,870 licenses within these services.<sup>199</sup>

8. *Private Land Mobile Radio Licensees.* Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed a small business size standard specifically applicable to PLMR users. The SBA rules, however, contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>200</sup> According to the Commission’s records, there are a total of approximately 470,316 PLMR licenses.<sup>201</sup> Despite the lack of specific information, however, the Commission believes that a substantial number of PLMR licensees may be small entities.

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<sup>196</sup> We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, at 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

<sup>197</sup> See subparts A and B of Part 90 of the Commission’s Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees are comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include state, county, or municipal entities that use radio for official purposes. There are also forestry service licensees comprised of state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. State and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Additional licensees include medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

<sup>198</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>199</sup> This figure was derived from Commission licensing records as of June 27, 2008. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of public safety licensees that have less than 1,500 employees.

<sup>200</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>201</sup> This figure was derived from through Commission licensing records as of June 3, 2008. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of PLMR licensees that have less than 1,500 employees.

9. *Frequency Coordinators.* Neither the Commission nor the SBA has developed a small business size standard specifically applicable to spectrum frequency coordinators. There are nine frequency coordinators certified by the Commission to coordinate frequencies allocated for public safety use.<sup>202</sup> The Commission has not developed a small business size standard specifically applicable to frequency coordinators. The SBA rules, however, contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>203</sup> Under this category and size standard, we estimate that a majority of frequency coordinators can be considered small.

10. *RF Equipment Manufacturers.* The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.”<sup>204</sup> The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.<sup>205</sup> According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.<sup>206</sup> Of this total, 1,010 had employment of fewer than 500, and an additional 13 had employment of 500 to 999.<sup>207</sup> Thus, under this size standard, the majority of firms can be considered small.

**D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements**

11. There are no projected reporting, recordkeeping or other compliance requirements.

**E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

12. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather

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<sup>202</sup> See <http://www.fcc.gov/pshs/public-safety-spectrum/coord.html> (last visited June 26, 2008).

<sup>203</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>204</sup> U.S. Census Bureau, 2002 NAICS Definitions, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing”; <http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342>.

<sup>205</sup> See 13 C.F.R. § 121.201, NAICS code 334220.

<sup>206</sup> U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (released May 26, 2005); <http://factfinder.census.gov>. The number of “establishments” is a less helpful indicator of small business prevalence in this context than would be the number of “firms” or “companies,” because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks-out data for firms or companies only to give the total number of such entities for 2002, which was 929.

<sup>207</sup> *Id.* An additional eighteen establishments had employment of 1,000 or more.



than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>208</sup>

13. None of the decisions in this *Report and Order* impose any adverse burden of significant economic impact on small entities. Rather, these decisions either confer benefits on small entities or maintain the status quo, as described in Section A above. Accordingly, there is no need to consider significant alternatives.

#### **F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

14. None.

## **II. INITIAL REGULATORY FLEXIBILITY ANALYSIS**

15. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>209</sup> the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Further Notice of Proposed Rulemaking* in WP Docket No. 07-100 (*FNPRM*). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *FNPRM* provided in paragraph 54 of the item. The Commission will send a copy of the *FNPRM*, including the IRFA, to the Chief Counsel for Advocacy of the U.S. Small Business Administration.<sup>210</sup> In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>211</sup>

#### **A. Need for, and Objectives of, the Proposed Rule**

16. This proceeding is part of our continuing effort to provide clear and concise rules that facilitate new wireless technologies, devices and services, and are easy for licensees to comprehend and understand. The *FNPRM* contains four proposals. First, we seek comment on correcting an inadvertent omission from Section 90.175 of the Commission's rules. When the Commission crafted the rules for the 4940-4990 MHz band (4.9 GHz), applicants for 4.9 GHz frequencies were exempt from certified frequency coordination requirements.<sup>212</sup> This exemption was deleted inadvertently in the course of an unrelated rulemaking. We propose to reinstate the exemption to remove uncertainty and serve the Commission's original intent. Second, and notwithstanding the first proposal, we propose to modify Section 90.1209(b) to require applicants for primary fixed stations providing point-to-point and point-to-multipoint communications to successfully complete the prior coordination procedures of Section 101.103(d). We are concerned that the current rule language in Section 90.1209(b) may not ensure that applicants for primary permanent fixed stations offer sufficient protection to other primary permanent fixed stations and other co-primary users, and we believe that additional measures are required to minimize the potential for interference. Third, in the band plan of Section 90.1213, we propose to correct

<sup>208</sup> See 5 U.S.C. § 603(c).

<sup>209</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>210</sup> See 5 U.S.C. § 603(a).

<sup>211</sup> *Id.*

<sup>212</sup> 47 C.F.R. § 90.175 generally requires that applications for new frequencies must include a showing of frequency coordination. In many frequency bands, a statement is required from the frequency coordinator recommending the most appropriate frequency. *Id.*

the channel number 14 bandwidth from five megahertz to one megahertz, and we propose amend the table in Section 90.1213 to list the center frequencies that should be requested for every possible channel aggregation permitted in the rules. Fourth, we seek comment on correcting three errors in Section 90.20 of the Commission's rules relating to the Public Safety Pool Frequency Table and associated limitations. We believe that these amendments to the band plan would improve spectrum efficiency and eliminate confusion with respect to channel licensing.

## **B. Legal Basis for Proposed Rules**

17. The proposed action is authorized under sections 4(i), 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), 303(r), and 403.

## **C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply**

18. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted. The RFA defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>213</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act, unless the Commission has developed one or more definitions that are appropriate to its activities.<sup>214</sup> Under the Small Business Act, a "small business concern is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) meets any additional criteria established by the Small Business Administration (SBA)."<sup>215</sup> A small organization is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."<sup>216</sup> Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the rules changes adopted in this *Report and Order*.

19. *Governmental Entities.* Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.<sup>217</sup> A "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."<sup>218</sup> Nationwide, as of 2002, there were approximately 1.6 million small organizations.<sup>219</sup> The term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."<sup>220</sup> Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.<sup>221</sup> We estimate that, of this total,

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<sup>213</sup> See 5 U.S.C. § 601(6).

<sup>214</sup> See 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, established one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition in the Federal Register."

<sup>215</sup> See Small Business Act, 5 U.S.C. § 632 (1996).

<sup>216</sup> See 5 U.S.C. § 601(4).

<sup>217</sup> See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at 40 (July 2002).

<sup>218</sup> See 5 U.S.C. § 601(4).

<sup>219</sup> Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

<sup>220</sup> See 5 U.S.C. § 601(5).

<sup>221</sup> U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, Section 8, at 272, Table 415.

84,377 entities were “small governmental jurisdictions.”<sup>222</sup> These entities are included here because many of these small government jurisdictions are also licensees.

20. *Public Safety Radio Licensees.* As a general matter, Public Safety Radio Pool licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services.<sup>223</sup> Because of the vast array of public safety licensees, the Commission has not developed a small business size standard specifically applicable to public safety licensees. The SBA rules contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>224</sup> With respect to local governments, in particular, since many governmental entities comprise the licensees for these services, we include under public safety services the number of government entities affected. According to Commission records, there are a total of approximately 133,870 licenses within these services.<sup>225</sup>

21. *Private Land Mobile Radio Licensees.* Private land mobile radio (PLMR) systems serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed a small business size standard specifically applicable to PLMR users. The SBA rules, however, contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>226</sup> According to the Commission’s records, there are a total of approximately 470,316 PLMR licenses.<sup>227</sup> Despite the lack of specific information, however, the Commission believes that a substantial number of PLMR licensees may be small entities.

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<sup>222</sup> We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, at 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

<sup>223</sup> See subparts A and B of Part 90 of the Commission’s Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees are comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include state, county, or municipal entities that use radio for official purposes. There are also forestry service licensees comprised of state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. State and local governments are highway maintenance licensees that provide emergency and routine communications to aid other public safety services to keep main roads safe for vehicular traffic. Emergency medical licensees use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Additional licensees include medical services, rescue organizations, veterinarians, persons with disabilities, disaster relief organizations, school buses, beach patrols, establishments in isolated areas, communications standby facilities, and emergency repair of public communications facilities.

<sup>224</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>225</sup> This figure was derived from Commission licensing records as of June 27, 2008. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of public safety licensees that have less than 1,500 employees.

<sup>226</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>227</sup> This figure was derived from through Commission licensing records as of June 3, 2008. Licensing numbers change on a daily basis. This does not indicate the number of licensees, as licensees may hold multiple licenses. There is no information currently available about the number of PLMR licensees that have less than 1,500 employees.

22. *Frequency Coordinators.* Neither the Commission nor the SBA has developed a small business size standard specifically applicable to spectrum frequency coordinators. There are nine frequency coordinators certified by the Commission to coordinate frequencies allocated for public safety use.<sup>228</sup> The Commission has not developed a small business size standard specifically applicable to frequency coordinators. The SBA rules, however, contain a definition for Wireless Telecommunications Carriers (except Satellite) which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>229</sup> Under this category and size standard, we estimate that a majority of frequency coordinators can be considered small.

**D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements**

23. There are no projected reporting, recordkeeping or other compliance requirements.

**E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

24. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>230</sup>

25. First, we seek comment on restoring the exemption for applications for frequencies in the 4940-4990 MHz band from certified frequency coordination requirements. We believe the change proposed in this *FNPRM* will minimize economic impact and reduce administrative burdens on small public safety applicants that may have been operating under the assumption that formal frequency coordination is required for 4.9 GHz applications. We note that it was not the Commission's original intent for certified frequency coordinators to provide services to applicants for 4.9 GHz band frequencies. The Commission's original intent was for licensees to work with each other in selecting frequencies to avoid causing interference with one another, and thus, the Commission did not require formal, certified frequency coordination. The only reason the exemption was deleted, or the apparent coordination requirement came into existence, was because of an inadvertent clerical error. One alternative is to maintain the status quo. However, we tentatively conclude that taking no action would perpetuate uncertainty and lead small entities that seek a 4.9 GHz band authorization to believe that they must undertake the burden of obtaining formal, certified frequency coordination. We tentatively conclude that taking no action may benefit small certified frequency coordinators through increased business obtained through applicants' potential misconceptions that certified frequency coordination may be required, but we note that this outcome is not consistent the Commission's original intent. Small frequency coordinators should not be benefiting from applicants' potential misconceptions about the rules. Taking no action could impose significant economic impact that never should have been imposed on small entities applying for 4.9 GHz authorizations.

26. Second, and notwithstanding the first proposal, we seek comment on modifying Section 90.1209(b) to require applicants for 4940-4990 MHz band primary fixed stations providing point-to-point

<sup>228</sup> See <http://www.fcc.gov/pshs/public-safety-spectrum/coord.html> (last visited June 26, 2008).

<sup>229</sup> See 13 C.F.R. § 121.201, NAICS code 517210.

<sup>230</sup> See 5 U.S.C. § 603(c).

and point-to-multipoint communications to successfully complete the prior coordination procedures of Section 101.103(d). While this proposed requirement would impose an administrative burden on applicants for primary permanent fixed stations, we note that no additional fees would be imposed. We considered more stringent requirements to submit applications through certified frequency coordinators similar to requirements imposed in other public safety bands.<sup>231</sup> However, we decided against this alternative because such requirements would have economic impact on small entities through frequency coordinators fees.

27. Third, we seek comment making a correction and clarifications to the 4940-4990 MHz band plan. We propose to correct the channel number 14 bandwidth from five to one megahertz. We note that this correction would eliminate bandwidth overlap adjacent channels, restore symmetry to the band plan, and improve spectrum efficiency. Next, we propose to amend the table in Section 90.1213 to list the center frequencies that should be requested for every possible channel aggregation permitted in the rules for the purpose of eliminating licensing confusion. We propose to grandfather existing licensees from these proposed rule changes. Therefore, we anticipate that these proposals will have no significant economic impact on small entities.

28. Fourth, we seek comment on proposals to make three “clean-up” amendments to Section 90.20. The three proposals would correct three minor errors related to the Public Safety Pool Frequency Table and associated limitations for the purpose of eliminating confusion. The first proposal would correct a mobile-only frequency in the frequency table in Section 90.20(d)(66)(i). We propose to correct the “MED-4” mobile-only frequency from 463.075 MHz to 468.075 MHz to be consistent with the table’s other mobile-only frequencies, which are in the 468 MHz range. The second proposal would complete implementation of an unfinished 2005 rule change intended to eliminate duplicate limitations in Section 90.20. Specifically, the 2005 Biennial Review rulemaking changed limitation 38 to “[Reserved]” to remove redundancy with limitation 10 and replaced limitation 38 with limitation 10 on each frequency containing limitation 38.<sup>232</sup> However, the rulemaking included one wrong frequency and omitted another, and implementation was incomplete with respect to eight frequencies. Thus, nine frequencies remain on the Frequency Table with limitation 38. We propose to replace limitation 38 with limitation 10 on the remaining nine frequencies. The third proposal would also amend Section 90.20(c)(3) by correcting the 1427-1432 MHz band limitation from “O=’xl’>72” to the numeral “72.” We anticipate that these proposals will have no significant economic impact on small entities.

#### **F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

29. None.

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<sup>231</sup> See, e.g., 47 C.F.R. § 90.175.

<sup>232</sup> See Biennial Regulatory Review - Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 03-264, 20 FCC Rcd 13900, 13942 Appendix A ¶ 21 (2005)



**STATEMENT OF  
ACTING CHAIRMAN MICHAEL J. COPPS**

*Amendment of Part 90 of the Commission's Rules, WP Docket No. 07-100*

I am pleased to support this Report and Order and Further Notice of Proposed Rulemaking. The 4.9 GHz band holds great promise for enabling the use of new broadband applications in support of public safety, such as high-speed digital technologies and wireless local area networks for incident scene management. Today's Report and Order provides more operational flexibility in the 4.9 GHz service rules in order to facilitate deployment of additional broadband network facilities in the service of public safety needs in communities throughout the country. By clarifying that 4.9 GHz fixed links that connect base and mobile stations used to deliver broadband services are afforded primary status under our rules, the Commission is promoting more intensive use of the spectrum for broadband applications in the band. This, in turn, will provide first responders with greater ability to use emerging broadband technologies to share crucial broadband data and thereby assist those in need, address emergency situations and disasters, and save lives.

The Report and Order also brings several other revisions intended to clarify the technical rules and speed deployment in this public safety band. In addition, the Further Notice seeks comment on additional revisions that could improve frequency coordination in the band. I thank the Bureau for their efforts on this item.