

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

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

**SECOND REPORT AND ORDER AND SECOND FURTHER NOTICE OF PROPOSED RULE MAKING**

**Adopted: March 3, 2010**

**Released: March 11, 2010**

**Comment Date:** [30 days after publication in the Federal Register]

**Reply Comment Date:** [45 days after publication in the Federal Register]

By the Commission:

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## I. INTRODUCTION AND BACKGROUND

1. In this *Second Report and Order and Second Further Notice of Proposed Rule Making*, we consider in the *Second Report and Order* rule changes to Part 90 of the Commission's Rules<sup>1</sup> that were addressed in the *Notice of Proposed Rulemaking and Order (Notice)* in this proceeding.<sup>2</sup> In the *Second Further Notice of Proposed Rule Making (Second Further Notice)*, we solicit comment on other potential rule changes that were suggested in response to the *Notice* or arose subsequently. 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 the public to understand.<sup>3</sup>

2. Part 90 contains rules for both the Private Land Mobile Radio (PLMR) Services and certain Commercial Mobile Radio Services (CMRS). PLMR licensees generally do not provide for-profit communications services. Some examples of PLMR licensees are public safety agencies, businesses that use radio only for their internal operations, utilities, transportation entities, and medical service providers.<sup>4</sup> CMRS licensees, by comparison, do provide for-profit communications services, such as paging and Specialized Mobile Radio (SMR) services that offer customers communications that are interconnected to the public switched network.

## II. SECOND REPORT AND ORDER

3. The *Notice* proposed various changes to the rules regarding PLMR licensing, including frequency coordination and eligibility issues. It also sought comment on matters relating to the Wireless Medical Telemetry Service, which shares spectrum with Part 90 services. We address these proposals below.

### A. Private Land Mobile Radio Service Issues

4. *Frequency Coordination and Related Matters*. Applications for new and modified Part 90 stations generally require frequency coordination<sup>5</sup> before the application is submitted to the Commission,<sup>6</sup>

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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) (*Notice*). Eighty-eight comments and fifteen reply comments were filed in response to the *Notice*. The commenters, and the abbreviations or acronyms used to refer to them herein, are listed in Appendix E.

<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> *Biennial Review R&O*, 15 FCC Rcd at 16674-75 ¶ 3. The *Notice* in this proceeding addressed issues relating to both public safety and non-public safety PLMR services. This *Second Report and Order* addresses the issues that pertain to non-public safety PLMR services, or to all PLMR services in general. Matters raised in the *Notice* pertaining exclusively to public safety operations were addressed in a separate *Report and Order*. See Amendment of Part 90 of the Commission's Rules, *Report and Order and Further Notice of Proposed Rulemaking*, WP Docket No. 07-100, 24 FCC Rcd 4298 (2009).

<sup>5</sup> Frequency coordination is the process by which a private organization recommends to the Commission the frequency(ies) for a private land mobile radio service applicant “that will most effectively meet the applicant's needs while minimizing interference to licensees already operating within a given frequency band.” 47 C.F.R. § 90.7; see also, e.g., The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communication Requirements Through the Year 2010, *Fourth Report and Order and Fifth Notice of Proposed Rule Making*, WT Docket No. 96-86, 16 FCC Rcd 2020, 2064 (2001).

but certain types of applications are exempt from the frequency coordination requirement because they do not “have an impact on near-term frequency selections.”<sup>7</sup> The *Notice* sought comment on whether to permit licensees to forgo frequency coordination for other types of applications.

5. In the *Notice*, the Commission noted that certain PLMR licensees are permitted to modify their licenses to authorize CMRS operations (and subsequently to modify such licenses to revert to PLMR operations), and proposed to exempt such modifications from the frequency coordination requirement because frequency coordinators do not make recommendations regarding changes between private and commercial status.<sup>8</sup> With respect to PLMR-to-CMRS conversions, we agree with LMCC and Motorola<sup>9</sup> that we should retain the requirement for prior coordination. Such conversions involve interconnection with the public switched telephone network, which typically results in much higher levels of airtime usage on a channel.<sup>10</sup> Such increased usage can affect other licensees, and for this reason we conclude that frequency coordinators should evaluate the implications of any proposed conversions to CMRS. We agree with the commenters, however, that frequency coordination should not be required when a licensee reverts from CMRS to PLMR operations,<sup>11</sup> and amend our rules accordingly.

6. The *Notice* also sought comment on whether to eliminate the frequency coordination requirement for applications where the only change is a reduction in authorized bandwidth on the licensed center frequencies.<sup>12</sup> Half of the commenters addressing this issue argue that frequency coordination should be required for any change in technical parameters, including a reduction in authorized bandwidth, to protect nearby co-channel and adjacent channel licensee operations from new and potentially harmful interference.<sup>13</sup> The other commenters contend that frequency coordination is not necessary for modifications that propose only a reduction in bandwidth on the licensee’s currently authorized center frequency, because such a reduction cannot have an adverse impact on co-channel or adjacent channel licensees.<sup>14</sup> They emphasize that such an exemption from the frequency coordination requirement should be limited to applications proposing only to reduce channel bandwidth while remaining on the original center frequency, and not seeking any other changes to the existing license, such as converting from analog to digital emission.

7. We agree that a simple reduction in authorized bandwidth cannot adversely impact co-

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<sup>6</sup> See 47 C.F.R. § 90.175.

<sup>7</sup> Frequency Coordination in the Private Land Mobile Radio Services, *Report and Order*, PR Docket No. 83-737, 103 F.C.C. 2d 1093, 1150 ¶ 116 (1986); see 47 C.F.R. § 90.175(j).

<sup>8</sup> See *Notice*, 22 FCC Rcd at 9596-97 ¶ 3 (citing 47 C.F.R. § 90.621(e)(2), (3)).

<sup>9</sup> See LMCC comments at 4-5; Motorola reply comments at 3.

<sup>10</sup> See 1998 Biennial Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services, *Memorandum Opinion and Order and Second Report and Order*, WT Docket No. 98-182, 17 FCC Rcd 9830, 9844-45 ¶ 29 (2002) (citing Amendment of Part 95 of the Commission’s Rules to Establish a Very Short Distance Two-Way Radio Service, *Report and Order*, WT Docket 95-102, 11 FCC Rcd 12977, 12984 ¶ 18 (1996)).

<sup>11</sup> See Sprint Nextel comments at 2; LMCC comments at 4-5; CARA comments at 4; Motorola reply comments at 3.

<sup>12</sup> See *Notice*, 22 FCC Rcd at 9596-97 ¶ 3.

<sup>13</sup> See APCO comments at 2; NPSTC comments at 6; PCIA comments at 3; NAM/MRFAC comments at 3; FIT comments at 2.

<sup>14</sup> See LMCC comments at 5-6; AASHTO comments at 4, reply comments at 2-3; Radiosoft comments at 3; EWA reply comments at 2; Icom reply comments at 1. AASHTO also filed a rulemaking petition to this effect. See Petition for Rulemaking of the American Association of State Highway and Transportation Officials (filed May 18, 2009). LMCC filed comments in support of the AASHTO petition for rulemaking. See Letter dated September 9, 2009 from Al Ittner, President, LMCC to Marlene H. Dortch, Federal Communications Commission.

channel or adjacent channel licensees. We therefore find no need for a coordinator to review the proposal in advance. Removing the frequency coordination requirement for applications that modify existing licenses by reducing authorized bandwidth will not undermine the purpose of the frequency coordination process, *i.e.*, to ensure the quality of frequency selections, expedite licensing, and improve spectrum efficiency to the benefit of private land mobile users. It therefore is in the public interest and is consistent with the Commission's goal of reducing unnecessary regulatory burdens on licensees. In addition, we note that most PLMR licensees below 512 MHz will be required to migrate from 25 kHz operation to 12.5 kHz or narrower operation on their existing frequencies,<sup>15</sup> and we find that removing the frequency coordination requirement for such applications will further the upcoming narrowbanding transition without disturbing the integrity of the frequency coordination process or the Commission's overall spectrum management objectives. As a result, we amend our rules to provide an exemption from the frequency coordination requirement for modification applications that only reduce authorized bandwidth while remaining on the original center frequencies, and do not seek any other changes in technical parameters.

8. In addition, the *Notice* invited commenters to suggest other types of applications for which frequency coordination should no longer be required.<sup>16</sup> We agree with Sprint Nextel that applications seeking to modify licenses by lowering antenna height and/or decreasing power should be exempted from frequency coordination.<sup>17</sup> Not only would this have no adverse impact on co-channel or adjacent channel licensees, but, as Sprint Nextel points out, frequency coordinators do not recommend changes to applications seeking such modifications, and the technical information is readily available in the Universal Licensing System (ULS) database.<sup>18</sup> Such modifications are similar in their effect on other licensees to applications to eliminate frequencies or transmitter site locations, for which frequency coordination is no longer required.<sup>19</sup> We amend our rules accordingly.

9. CARA suggests similar treatment for applications to increase mobile counts.<sup>20</sup> We disagree with this proposal. Increasing the number of mobile units potentially increases airtime usage, which, as noted above, can impact other licensees. Moreover, frequency loading is relevant to the availability of frequencies in the 470-512 MHz band for assignment.<sup>21</sup> Consequently, we reject CARA's suggestion.

10. *Mobile Repeaters*. The *Notice* proposed to delete Section 90.247(b) of the Commission's Rules,<sup>22</sup> which states that for Industrial/Business Pool frequencies below 450 MHz, only low power

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<sup>15</sup> See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Third Memorandum Opinion and Order, Third Further Notice of Proposed Rule Making and Order*, WT Docket No. 99-87, 19 FCC Rcd 25045, 25051-52 ¶¶ 12-13 (2004) (requiring most PLMR licensees in the 150-174 MHz and 421-512 MHz bands to migrate to 12.5 kHz technology by January 1, 2013) (*Narrowbanding Memorandum Opinion and Order*); see also 47 C.F.R. § 90.209(b)(5).

<sup>16</sup> See *Notice*, 22 FCC Rcd at 9596-97 ¶ 3.

<sup>17</sup> See Sprint Nextel comments at 2.

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

<sup>19</sup> See 47 C.F.R. § 90.175(j)(17); 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 03-264, 20 FCC Rcd 13900, 13906 ¶ 8 (2005).

<sup>20</sup> See CARA comments at 4.

<sup>21</sup> See 47 C.F.R. § 90.313.

<sup>22</sup> See 47 C.F.R. § 90.247(b).

frequencies (where power is limited to two watts) may be assigned for use by mobile repeaters<sup>23</sup> and associated hand-held units, when separate frequencies are assigned for that purpose.<sup>24</sup> The commenters generally support the proposal.<sup>25</sup> Only FIT is concerned that removal of the mobile repeater power limits will lead to a “power war” among licensees, resulting in harmful interference to other licensees on those channels.<sup>26</sup> While we understand FIT’s concern, we believe that the benefits of greater flexibility from allowing mobile repeaters on full-power channels outweighs the speculative possibility of harmful interference, particularly given that mobile repeaters typically are deployed for a limited period of time. We note that mobile repeaters require frequency coordination, and the Commission’s Rules require licensees to work together to solve any interference issues.<sup>27</sup> Operators may also be subject to enforcement action for causing interference to other users.<sup>28</sup> As a result, we find that modification of our rules to remove the channel restriction concerning mobile repeaters below 450 MHz is appropriate. Similarly, we agree with Motorola<sup>29</sup> that we should eliminate the related limitation in Section 90.247(c) of the Commission’s Rules, which limits to 2.5 watts the output power of hand-held transmitters that communicate by way of a mobile repeater.<sup>30</sup> Of course, such transmitters and mobile repeaters will be subject to other relevant Part 90<sup>31</sup> power limitations, and may not exceed the Commission’s radiofrequency exposure criteria.<sup>32</sup> Should mobile repeater operations under the rules as amended result in interference to other users, we may revisit this issue to examine whether we should address the situation by, for example, reinstating power limits or limiting the service area radius for mobile repeaters.

11. Motorola also notes<sup>33</sup> that Section 90.247(f) requires mobile repeaters to be controlled using a “continuous coded tone.”<sup>34</sup> This term is an analog reference, which Motorola recommends be replaced with “continuous access signal,” which will accommodate both digital and analog control techniques. We

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<sup>23</sup> A mobile repeater station is a mobile station authorized to retransmit automatically, on a mobile service frequency, communications to or from hand-carried transmitters. *See* 47 C.F.R. § 90.7.

<sup>24</sup> *See Notice*, 22 FCC Rcd at 9598 ¶ 8. The limitation originally applied only to the former Business and Special Industrial Radio (B/ILT) Services and was imposed because there were few high power frequencies in the 150 MHz band available in those services, but a greater number of high power 150 MHz channels became available for use by B/ILT licensees after the Part 90 PLMR radio services were consolidated. *Id.* (citing 47 C.F.R. § 90.247(b) (1996); 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 Second Report and Order*)).

<sup>25</sup> *See* Wisconsin DOT comments at 2; CCS comments at 2; EWA reply comments at 3-4; Motorola comments at 5-6.

<sup>26</sup> *See* FIT comments at 3-4; *see also* PCIA comments at 4 (urging Commission to ensure that existing service will not be disrupted by the proposed rule change).

<sup>27</sup> *See* 47 C.F.R. § 90.173(b).

<sup>28</sup> *See* 47 C.F.R. § 90.403(e) (licensees shall take reasonable precautions to avoid causing harmful interference; this includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference).

<sup>29</sup> *See* Motorola comments at 5.

<sup>30</sup> *See* 47 C.F.R. § 90.247(c).

<sup>31</sup> *See* 47 C.F.R. § 90.205.

<sup>32</sup> *See* 47 C.F.R. §§ 2.1901, 2.1093; *see also* 47 C.F.R. §§ 1.1307, 1.1310.

<sup>33</sup> *See* Motorola comments at 5.

<sup>34</sup> *See* 47 C.F.R. § 90.247(f).



agree, and will amend Section 90.247 accordingly.

12. *Expired Licenses.* In general, frequencies associated with expired licenses become available for reassignment once the license is deleted from the Commission's ULS database of active licenses (*i.e.*, the license's status in ULS is changed from Active to Expired or Canceled). Ordinarily, there is a delay between the date a license expires and the date its status is changed from Active to Expired in our licensing records.<sup>35</sup> During that period, frequency coordinators may select a frequency associated with the expired license for recommendation to the Commission (coordinate the frequency), but the Commission does not accept applications for the frequency until the frequency becomes available for reassignment.<sup>36</sup>

13. LMCC<sup>37</sup> notified the Commission in 2004 that all Part 90 frequency coordinators agreed not to coordinate frequencies associated with an expired license until the frequencies become available for reassignment, and requested the Commission's cooperation in enforcing this policy.<sup>38</sup> As a result, the *Notice* sought comment on whether the rules should be amended to prohibit the coordination of frequencies associated with expired licenses until those frequencies are deleted from the ULS database.<sup>39</sup> In response, LMCC reports that the agreement has operated properly since 2004.<sup>40</sup> While some commenters favor codifying the agreement in the Commission's Rules,<sup>41</sup> we agree with LMCC that no rule changes are required, and the Commission need only enforce the policy in the event that a third party objects to a premature coordination.<sup>42</sup>

14. *Multiple Licensing.* As explained in the *Notice*, most PLMR communication systems employ mobile relays (repeaters) with wide-area coverage so that communication may be maintained between mobile units that otherwise would be out of range of one another. It is common practice for an entity that owns and operates a repeater to share a base station with a number of other users.<sup>43</sup> Under this practice, each user of the mobile relay station (commonly called a "community repeater") applies for and obtains

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<sup>35</sup> Some commenters expressed concern over the length of the delay. See FIT comments at 5-6; Sprint Nextel comments at 3-4; PCIA comments at 4-5; EWA reply comments at 4.

<sup>36</sup> See Amendment of Parts 1 and 90 of the Commission's Rules Concerning the Construction, Licensing, and Operation of Private Land Mobile Radio Stations, *Memorandum Opinion and Order*, PR Docket No. 90-481, 8 FCC Rcd 6690, 6691 ¶ 5 (1993); see also National Science and Technology Network, Inc., *Memorandum Opinion and Order*, 17 FCC Rcd 365, 365 ¶ 2 (2001).

<sup>37</sup> LMCC is a non-profit association of organizations representing substantially all land mobile radio licensees, providers of land mobile services and manufacturers of land mobile equipment. LMCC's membership includes all of the Commission's certified Part 90 frequency coordinators. See Amendment of Part 90 of the Commission's Rules and Policies for Applications and Licensing of Low Power Operations in the Private Land Mobile Radio 450-470 MHz Band, *Memorandum Opinion and Order*, WT Docket No. 01-146, 19 FCC Rcd 18501, 18502 n.11 (2004).

<sup>38</sup> See Letter dated June 30, 2004 from Jim Pakla, President LMCC, to D'wana Terry, Chief, Public Safety and Critical Infrastructure Division, Wireless Telecommunications Bureau, Federal Communications Commission.

<sup>39</sup> See *Notice*, 22 FCC Rcd at 9599 ¶ 9.

<sup>40</sup> See LMCC comments at 10.

<sup>41</sup> See IAFC/IMSA comments at 6; AASHTO comments at 7; PCIA comments at 4-5; FIT comments at 5-6.

<sup>42</sup> See LMCC comments at 10-11. The filing of an application for a frequency that is still listed as Active in ULS would conflict with the requirement that applications include evidence of frequency coordination that includes a frequency coordinator's recommendation of "the most appropriate frequency." See 47 C.F.R. § 90.175(a). Other frequency coordinators would be aware of such a frequency recommendation, because all coordinators that are certified to coordinate the frequency must be notified. See 47 C.F.R. § 90.176.

<sup>43</sup> See *Notice*, 22 FCC Rcd at 9599-9600 ¶¶ 10-11.

an individual license for the station. Thus, a single base station is licensed to multiple users.<sup>44</sup> The *Notice* sought comment on the continued usefulness of multiple licensing, given that changes in the Commission's Rules have created new means for multiple entities to share facilities or spectrum, or otherwise meet their communications needs.<sup>45</sup>

15. Most commenters argue that multiple licensing continues to serve an important purpose and should be retained.<sup>46</sup> We agree that multiple licensing provides for a cost effective licensing option to entities while also facilitating efficient use of spectrum. Therefore, we conclude that there are public interest benefits in allowing multiple licensing of the same facility, and we will take no action to phase it out at this time.<sup>47</sup>

16. *Industrial/Business Pool Eligibility.* Section 90.35 of the Commission's Rules permits entities engaged in, *inter alia*, "[t]he operation of a commercial activity"<sup>48</sup> to operate on Industrial/Business Pool frequencies, and by its language does not expressly exclude state or local government entities from eligibility. The *Notice* concluded that Section 90.35 is flexible, and that activities such as the operation of a utility, golf course, etc., whether conducted by a government entity or a private entity, are "commercial activities" within the meaning of the rule.<sup>49</sup> It sought comment on whether to amend Section 90.35 to expressly provide that governmental entities are eligible to use Industrial/Business Pool frequencies for commercial enterprises.

17. Every commenter addressing the issue supports amending Section 90.35 to clarify that state and local government entities are eligible for Industrial/Business Pool frequencies when they engage in commercial activities.<sup>50</sup> Some commenters, while supporting the rule change, indicate that the Commission should condition such authorizations to prevent the use of Industrial/Business Pool frequencies for mission-critical public safety services.<sup>51</sup> We agree that state and local government entities should be able to be licensed for Industrial/Business Pool spectrum for use in commercial activities but not for public safety operations.<sup>52</sup> We amend Section 90.35(a) accordingly.

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<sup>44</sup> Section 90.185 of the Commission's Rules permits multiple licensing, provided that each licensee complies with the rules regarding permissible communications and is eligible for the frequency(ies) on which the station operates. *See* 47 C.F.R. § 90.185.

<sup>45</sup> *See Notice*, 22 FCC Rcd at 9600 ¶ 11.

<sup>46</sup> *See* Motorola comments at 7-8, reply comments at 6; LMCC comments at 11-12; Wisconsin DOT comments at 3; FIT comments at 6; PCIA comments at 5; EWA reply comments at 4. Only Sprint Nextel believes that multiple licensing is no longer necessary because changes to the rules have made spectrum more readily accessible. *See* Sprint Nextel comments at 4-5.

<sup>47</sup> *See* Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket No. 99-87, 15 FCC Rcd 22709, 22767 ¶ 126 (2000) (declining to eliminate multiple licensing).

<sup>48</sup> *See* 47 C.F.R. § 90.35(a)(1).

<sup>49</sup> *See Notice*, 22 FCC Rcd at 9601 ¶ 14.

<sup>50</sup> *See* NPSTC comments at 9; Wisconsin DOT comments at 3; CARA comments at 2-4; APCO comments at 3; IAFC/IMSA comments at 8; AASHTO comments at 10; LMCC comments at 14-15; FIT comments at 7-8; EWA reply comments at 5-6; Motorola comments at 8.

<sup>51</sup> *See* FIT comments at 7-8; EWA reply comments at 5-6; LMCC comments at 14-15; AASHTO comments at 10.

<sup>52</sup> State and local government entities may, however, conduct public safety operations on Industrial/Business Pool spectrum that is shared pursuant to Section 90.179(h) of our Rules, 47 C.F.R. § 90.179(h). *See Biennial Review R&O*, 15 FCC Rcd at 16683 ¶ 21.

18. The *Notice* also sought comment on a request<sup>53</sup> that the Commission's Rules be amended to permit government surveying operations to utilize Industrial/Business Pool itinerant frequencies.<sup>54</sup> Commenters unanimously support this request, stating that it would enable government entities to utilize modern surveying equipment, which currently is manufactured to operate only on Industrial/Business Pool frequencies.<sup>55</sup> We agree with the commenters, and will amend the rules to permit government surveying operations to utilize the Industrial/Business Pool itinerant frequencies.

19. *Disturbance of AM Broadcast Station Antenna Patterns.* The *Notice* requested comment on whether to modify Part 90 to include provisions for the correction of any disturbance of AM broadcast stations' antenna patterns by new land mobile towers and antennas.<sup>56</sup> We agree with commenters' consensus<sup>57</sup> that this issue would be more appropriately considered in another pending Commission proceeding,<sup>58</sup> so we will not amend Part 90 at this time.

20. *FB8T Station Class.* In 2000, the Commission established a new station class code, FB8, to identify those trunked<sup>59</sup> radio systems' base and mobile relay channels that are not subject to a monitoring requirement<sup>60</sup> because the applicant/licensee has obtained the necessary consent from co-channel licensees or has exclusive use of the channel.<sup>61</sup> All channels associated with a centralized trunked system and any channels in a hybrid system for which the necessary consent has been obtained or that are licensed on an exclusive basis must have an FB8 code for the base/mobile relay station.<sup>62</sup> Approximately thirty-five authorizations were subsequently issued with a station class of FB8T, allowing temporary use of base and mobile relay channels in systems that are not subject to a monitoring requirement. Authorizing temporary base stations anywhere within a licensee's authorized operating area could,

<sup>53</sup> See Petition for Rulemaking of the National Public Safety Telecommunications Council (filed August 23, 2006).

<sup>54</sup> See *Notice*, 22 FCC Rcd 9601 at ¶ 14.

<sup>55</sup> See California comments at 5; APCO comments at 3; IAFC/IMSA comments at 8; NPSTC comments at 9; AASHTO comments at 10; Wisconsin DOT comments at 3; TEMA comments at 2.

<sup>56</sup> See *Notice*, 22 FCC Rcd 9602 at ¶ 15. The Commission's Rules for some other services contain such a provision. See 47 C.F.R. §§ 22.371, 27.63, 73.1692.

<sup>57</sup> See Sprint Nextel comments at 5; AM Coalition comments at 1-3; Hatfield and Dawson comments at 3; LMCC comments at 15; APCO comments at 4; NPSTC comments at 12; AASHTO comments at 13; Wisconsin DOT comments at 3; CSS comments at 3; EWA reply comments at 7.

<sup>58</sup> See An Inquiry Into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification, *Second Report and Order and Second Further Notice of Proposed Rule Making*, MM Docket No. 93-177, 23 FCC Rcd 14367 (2008); An Inquiry Into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification, *Further Notice of Proposed Rule Making*, MM Docket No. 93-177, 16 FCC Rcd 5635 (2001).

<sup>59</sup> A trunked radio system employs technology that provides the ability to search two or more available channels and automatically assign a user an open channel. 47 C.F.R. § 90.7.

<sup>60</sup> Under the Part 90 rules, trunked systems must meet certain monitoring requirements. The monitoring requirements, however, do not apply if certain conditions are met. See 47 C.F.R. § 90.187(b), (c).

<sup>61</sup> See *Biennial Review R&O*, 15 FCC Rcd at 16886 ¶ 26.

<sup>62</sup> In a "centralized trunked system," the base station controller provides dynamic channel assignments by automatically searching all channels in the system for and assigning to a user an open channel within that system. In a "decentralized trunked system," which is also a system of dynamic channel assignment, the system continually monitors the assigned channels for activity both within the trunked system and outside the trunked system, and transmits only when an open channel is found. A "hybrid trunked system" is one where at least one of the frequencies being trunked but not all the frequencies being trunked meet the criteria specified in 47 C.F.R. § 90.187(b). *Notice*, 22 FCC Rcd at 9602 n.49.



however, allow the licensee to expand the contour of its unmonitored operations into areas where it does not have exclusivity, which could result in interference to other licensees.<sup>63</sup> Consequently, we no longer issue authorizations for systems with a station class of FB8T.

21. In the *Notice*, the Commission proposed to renew existing FB8T authorizations with a station class code of FBT (temporary base) in order to make it clear that these operations are subject to the monitoring requirement, and sought comment on whether any corresponding amendment to Part 90 was necessary.<sup>64</sup> Commenters support the proposal,<sup>65</sup> but an applicant whose FB8T application subsequently was granted as FBT suggested that station class code FB6T (the station class code used for decentralized trunked temporary stations) is more appropriate.<sup>66</sup> We agree that current FB8T stations should use a more specific station class code than FBT. As a result, we hereby clarify that FB8T stations will be renewed as FB2T (private, internal systems) or FB6T (for-profit private carriers), as appropriate.<sup>67</sup> No rule changes or other action are necessary to implement this proposal at this time.<sup>68</sup>

22. *Reorganization of Part 90.* The *Notice* sought comment on whether it would be appropriate to reorganize the Part 90 rules.<sup>69</sup> It noted that many of the services regulated under Part 90 differ significantly from the “traditional” PLMR services on which the original Part 90 rules were premised in 1978,<sup>70</sup> and that the current rules cover PLMR and CMRS services, site-based and geographically licensed services, and public safety and non-public safety services, on frequencies ranging from 530 kHz to 4990 MHz.<sup>71</sup> Nearly all of the commenters addressing this issue believe that changing the organizational structure of the Part 90 rules is unnecessary and would likely result in a more complex regulatory burden being placed on Commission licensees without any likely benefit to the licensees or the Commission.<sup>72</sup> Accordingly, we decline to adopt any structural changes to the Part 90 rules.

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<sup>63</sup> Temporary stations may be located at unspecified locations within a general area. 47 C.F.R. § 90.137(a). If an FB8T base station is located near the edge of the area in which an FB8 licensee has exclusivity or consent, the FB8T station can extend the licensee’s operations beyond the area in which FB8 licensee has exclusivity or consent, resulting in the licensee operating without monitoring in an area where monitoring is required.

<sup>64</sup> See *Notice*, 22 FCC Rcd at 9602 ¶ 16.

<sup>65</sup> See LMCC comments at 16; FIT comments at 9-10; Wisconsin DOT at 3.

<sup>66</sup> See FCC File No. 0002919005, Request for Partial Reconsideration of Decision of Grant, dated August 12, 2007, and Request for Stay filed on August 31, 2007 by National Science and Technology Network, Inc., at 1-2.

<sup>67</sup> FB7T is the station class code for non-profit private carrier temporary base stations, but no FB8T stations fall into this category.

<sup>68</sup> Some commenters argue that we should immediately modify existing FB8T authorizations instead of waiting for a renewal application. See LMCC comments at 16; FIT comments at 9-10. We do not believe that blanket license modification is necessary. FB8T stations can continue to be authorized as long as the contour of the temporary station does not extend outside the contour of its associated FB8 station on the same frequency. If particular FB8T stations are found to be causing interference, the Wireless Telecommunications Bureau can take action to modify the station class codes for those licenses pursuant to Section 316 of the Communications Act of 1934, as amended, 47 U.S.C. § 316.

<sup>69</sup> See *Notice*, 22 FCC Rcd at 9603 ¶ 18.

<sup>70</sup> See Amendment of the Commission’s Rules governing the Private Land Mobile Radio Service to provide a new Part 90 that reregulates and consolidates Parts 89, 91, and 93, *Report and Order*, Docket No. 21348, 69 F.C.C. 2d 1612 (1978).

<sup>71</sup> See *Notice*, 22 FCC Rcd at 9602-03 ¶ 17.

<sup>72</sup> See Motorola comments at 9; APCO comments at 4; IAFC and IMSA comments at 8; LMCC comments at 17-18; NPSTC comments at 13; AASHTO comments at 14; FIT comments at 10; Wisconsin DOT comments at 3.

23. *Editorial Amendments.* Finally, we take this opportunity to make minor editorial amendments to Part 90. Specifically, we amend Section 90.35(b)(3) to associate the correct limitations with frequency 27.86 MHz and frequency band 5850-5925 MHz.<sup>73</sup> We also take this opportunity to remove references in Sections 90.35 and 90.267 to the freeze on high power applications for 12.5 kHz offset channels in the 460-470 MHz band,<sup>74</sup> which has expired.<sup>75</sup> Additionally, we amend the table in Section 90.103<sup>76</sup> to correct references to certain limitations that were renumbered in another proceeding,<sup>77</sup> and to delete a reference to the International Fixed Public Radiocommunications Service, which was eliminated in another proceeding.<sup>78</sup> Further, we amend Section 175(j)(5)<sup>79</sup> to remove references to frequencies that have been redesignated from Part 90 to Part 95.<sup>80</sup> We also amend Section 90.621(a)<sup>81</sup> to restore language that was inadvertently deleted when the rule was amended in another proceeding.<sup>82</sup> Further, we utilize this opportunity to amend Sections 90.353(f) and 90.357(a) to correct typographical errors.

## B. Wireless Medical Telemetry Service Issues

24. *Background.* The Wireless Medical Telemetry Service (WMTS) was established in 2000 to enhance the reliability of medical telemetry equipment that is vital to the effective care of patients with acute and chronic health problems,<sup>83</sup> and to ensure that wireless medical telemetry devices can operate free of harmful interference.<sup>84</sup> Fourteen megahertz of spectrum, in three bands, was allocated for WMTS operations. The band 1427-1432 MHz is shared between medical and non-medical telemetry operations.<sup>85</sup> Generally, WMTS has primary status in the lower half of the band (1427-1429.5 MHz), and

<sup>73</sup> See 47 C.F.R. § 90.35(b)(3).

<sup>74</sup> See 47 C.F.R. §§ 90.35(c)(61)(v), (c)(67), (c)(68)(iv), 90.267(e)(3).

<sup>75</sup> See The Wireless Telecommunications Bureau Extends the Freeze on High Power Use of the 460-470 MHz Band Offset Channels until December 31, 2005, *Public Notice*, 19 FCC Rcd 12414 (WTB 2004).

<sup>76</sup> See 47 C.F.R. § 90.103(b).

<sup>77</sup> See Amendment of Parts 2, 73, 74, 80, 90, and 97 of the Commission's Rules to Implement Decision from World Radiocommunication Conferences Concerning Frequency Bands Below 28000 kHz, *Report and Order*, ET Docket No. 02-16, 18 FCC Rcd 3423, 3477 (2003).

<sup>78</sup> See Elimination of Part 23 of the Commission's Rules, *Report and Order*, IB Docket No. 05-216, 25 FCC Rcd 541 (2010).

<sup>79</sup> See 47 C.F.R. § 90.175(j)(5).

<sup>80</sup> See *Biennial Review R&O*, 15 FCC Rcd at 16687-88 ¶¶ 30-31; see also 47 C.F.R. § 95.632(a).

<sup>81</sup> See 47 C.F.R. § 90.621(a).

<sup>82</sup> See Improving Public Safety Communications in the 800 MHz Band, *Report and Order*, WT Docket No. 02-55, 19 FCC Rcd 14969, 15190 (2004).

<sup>83</sup> See Amendment of Parts 2 and 95 of the Commission's Rules to Create a Wireless Medical Telemetry Service, *Report and Order*, ET Docket 99-255, 15 FCC Rcd 11206 (2000) (*WMTS Report and Order*). Medical telemetry equipment is used in health care facilities to transmit patient measurement data, such as pulse and respiration rates, to a nearby receiver. By permitting such remote monitoring of patients' vital signs, medical telemetry equipment provides significant benefits to patients in terms of mobility and comfort.

<sup>84</sup> Prior to the establishment of the WMTS, medical telemetry devices were permitted to operate on vacant VHF and UHF television channels under Part 15 on an unlicensed basis, or in the 450-470 MHz band under Part 90 on a secondary basis to PLMR operations. See 47 C.F.R. §§ 15.242, 90.238, 90.267.

<sup>85</sup> See Amendments to Parts 1, 2, 27, and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Report and Order*, WT Docket No. 02-8, 17 FCC Rcd 9980, 9993-94 ¶ 27 (2003) (27

non-medical telemetry in the upper half of the band (1429.5-1432 MHz).<sup>86</sup> Non-medical telemetry licensees may not exceed a measured or predicted field strength of 150  $\mu$ V/m into the WMTS portion of the band at the site of any WMTS operation.<sup>87</sup> WMTS operations are licensed by rule, without separate Commission authorization,<sup>88</sup> but must be registered with the American Society of Health Care Engineering of the American Hospital Association (ASHE), the WMTS frequency coordinator, prior to operation.<sup>89</sup>

25. In addition, in order to avoid interference between medical and non-medical telemetry operations in the 1427-1432 MHz shared band, ASHE and the Part 90 frequency coordinators are required to share with each other information about newly deployed WMTS equipment and Part 90 frequency recommendations.<sup>90</sup> At the Commission's request,<sup>91</sup> ASHE and LMCC formulated a mutually agreeable coordination plan, which was filed with the Commission on August 18, 2004.<sup>92</sup> The *Notice* tentatively concluded that implementation of the joint ASHE-LMCC coordination agreement would be in the public interest because it will further the Commission's continuing efforts to ensure protection of WMTS operations from harmful interference, and sought comment on whether the ASHE-LMCC coordination agreement should be reflected in the rules.<sup>93</sup>

26. The agreement sets forth different coordination procedures, depending on whether medical telemetry and non-medical telemetry are co-channel or adjacent channel, and whether each is primary or secondary.<sup>94</sup> The WMTS service rules in Part 95 do not explicitly authorize WMTS systems to operate

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*MHz Report and Order*). See 47 C.F.R. § 95.630; see also *WMTS Report and Order*, 15 FCC Rcd at 11210 ¶ 11. The other two WMTS bands are 608-614 MHz and 1395-1400 MHz.

<sup>86</sup> In seven defined geographic areas, however, WMTS is primary in the 1429-1431.5 MHz portion of the band, and non-medical telemetry is primary in the 1427-1429 MHz and 1431.5-1432 MHz portions of the band. See *27 MHz Report and Order*, 17 FCC Rcd at 9993-94 ¶¶ 26-28; see also Amendments to Parts 1, 2, 27, and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Notice of Proposed Rule Making*, WT Docket No. 02-8, 17 FCC Rcd 2500, 2522 ¶ 51 (2002). The seven carve-out areas are Pittsburgh, Pennsylvania; Washington, D.C.; Richmond/Norfolk, Virginia; Austin/Georgetown, Texas; Battle Creek, Michigan; Detroit, Michigan; and Spokane, Washington. *27 MHz Report and Order* at 9993 n.78; see 47 C.F.R. § 90.259(b)(4).

<sup>87</sup> See *27 MHz Report and Order*, 17 FCC Rcd at 10054-55 ¶ 204.

<sup>88</sup> See 47 C.F.R. § 95.1107.

<sup>89</sup> See 47 C.F.R. §§ 95.1105, 95.1111.

<sup>90</sup> Each Part 90 frequency coordinator is required, within one business day of making a frequency recommendation for non-medical telemetry operations in the band, to notify and provide technical information regarding the proposed operations to ASHE. See *27 MHz Report and Order*, 17 FCC Rcd at 10018 ¶ 95. ASHE must also notify all non-medical telemetry licensees potentially affected by the initial deployment of WMTS equipment in the band, *i.e.*, those non-medical telemetry licensees that may have to modify their operations to avoid causing harmful interference to WMTS facilities. See *id.* at 10018-19 ¶ 96.

<sup>91</sup> See Amendments to Parts 1, 2, 27, and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, Memorandum Opinion and Order, WT Docket No. 02-8, 18 FCC Rcd 16920, 16925 ¶ 11 (2003) (*27 MHz MO&O*).

<sup>92</sup> See letter dated August 18, 2004 from Lawrence J. Movshin, Wilkinson, Barker, Knauer, LLP, counsel to ASHE, to Marlene H. Dortch, Secretary, Federal Communications Commission (ASHE Letter).

<sup>93</sup> See *Notice*, 22 FCC Rcd at 9607 ¶ 27.

<sup>94</sup> The procedures are described in the *Notice*. See *id.* at 9606-07 ¶ 26.

on a secondary basis on those portions of the 1427-1432 MHz shared band where non-medical telemetry is primary. In response to conflicting requests,<sup>95</sup> the *Notice* sought comment on amending the rules to clarify whether such operations are permitted.<sup>96</sup>

27. *Discussion. ASHE-LMCC agreement.* Commenters support the joint ASHE-LMCC coordination agreement and agree that it should be cross-referenced or codified in the rules.<sup>97</sup> We conclude, however, that no rule change is necessary or appropriate. The ASHE-LMCC agreement is self-executing. As the *Notice* concluded, the agreement does not conflict with the existing rules.<sup>98</sup> Codification or incorporation by reference of the agreement would prevent ASHE and LMCC from making amendments to the agreement by mutual consent.<sup>99</sup> Moreover, our decision not to amend the rules to reflect the agreement is consistent with our current treatment of other agreements between or among other frequency coordinators, which are not codified or incorporated by reference in the rules.<sup>100</sup>

28. *Secondary operations.* Commenters are split on the issue of whether WMTS operations should be permitted to operate on a secondary basis in the portions of the 1427-1432 MHz band where non-medical telemetry has primary status. Some WMTS operations in the portions of the 1427-1432 MHz band where non-medical telemetry has primary status already are registered with ASHE. ASHE and one equipment manufacturer argue that the Part 95 rules should be amended to expressly permit such WMTS operations.<sup>101</sup> Philips states that many secondary WMTS devices operate free from unwanted interference because they use smart radio technology with cognitive functions, which can sense and avoid other transmissions, and change channels if necessary.<sup>102</sup> ASHE supports permitting secondary WMTS operations, but suggests that WMTS users be notified and cautioned that such operations should not be relied upon for functions that are critical to patient safety, because secondary operations would be subject to receiving interference from Part 90 operations.<sup>103</sup> On the other hand, LMCC and two manufacturers request that WMTS not be permitted to operate on a secondary basis in the non-medical telemetry portion

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<sup>95</sup> The Wireless Telecommunications Bureau received both a request that it clarify that such operations are permitted, *see* Memorandum dated Feb. 22, 2005 from Henry Goldberg, Goldberg, Godles, Wiener & Wright, to John Muleta, Chief, Wireless Telecommunications Bureau, and a request that it clarify that such operations are not permitted, *see* Letter dated Jan. 24, 2006 from Jim Pakla and Jill Lyon, Co-Presidents, Land Mobile Communications Council, to Catherine Seidel, Acting Chief, Wireless Telecommunications Bureau.

<sup>96</sup> *See Notice*, 22 FCC Rcd at 9608 ¶ 29.

<sup>97</sup> *See* LMCC comments at 18-19; ASHE comments at 5; Phillips comments at 4; Itron comments at 2.

<sup>98</sup> *See Notice*, 22 FCC Rcd at 9607 ¶ 28.

<sup>99</sup> Contrary to the belief of some commenters, even if the agreement were incorporated by reference, rather than codified in the rules, amendments could be made effective only via a formal rulemaking proceeding, which would prevent ASHE and LMCC from being able to respond quickly to any changes in technology developments or future rule changes.

<sup>100</sup> *See, e.g.*, Filing Freeze to Be Lifted for Applications under Part 90 for 12.5 kHz Offset Channels in the 421-430 MHz band and 470-512 MHz Bands, *Public Notice*, 13 FCC Rcd 5942, 5942 (WTB 1997) (announcing PLMR coordinators consensus plan for coordination procedures for offset frequencies, which the Commission directed them to reach, *see Refarming Second Report and Order*, 12 FCC Rcd at 14330-31 ¶ 43).

<sup>101</sup> *See* ASHE comments at 6; Philips comments at 2-3, reply comments at 3-4.

<sup>102</sup> *See* Philips comments at 2-3, reply comments at 3-4.

<sup>103</sup> *See* ASHE comments at 6-7 (in order to assure that medical facilities operating WMTS devices on a secondary basis are fully informed about the potential interference that could occur in such circumstances, ASHE also proposes separate notification requirements for both the manufacturers of the devices and the frequency coordinators); *see also* GEHC reply comments at 6 (opposing secondary WMTS operations, but supporting ASHE's notification proposal in the event that the Commission authorizes such operations).



of the band because patient health and safety could be jeopardized.<sup>104</sup> LMCC states that nearly all WMTS systems implemented at health-care facilities are deployed and registered by the equipment manufacturer and not by facility telecommunications staff, so health-care facility personnel do not understand that they have only secondary status on certain frequencies.<sup>105</sup>

29. As noted above, the Commission created the WMTS in order to make available spectrum where medical telemetry services could operate on a primary basis, free from harmful interference.<sup>106</sup> The authorization of secondary WMTS operations would subject such operations to the same interference concerns that the WMTS allocation was intended to address. We conclude, based on the current record, that permitting WMTS devices to operate on a secondary basis is not in the public interest, because of the risk of unwanted interference that can jeopardize patient safety. In addition, we note that while the 1427-1432 MHz band is the most commonly utilized WMTS band, it is not the only WMTS band available. WMTS devices are authorized to operate on a primary basis on a total of fourteen megahertz of spectrum,<sup>107</sup> and the record does not establish that secondary spectrum is needed to meet WMTS communication needs.<sup>108</sup> Accordingly, we amend Section 95.1111 of the Commission's Rules to clarify that the registration of WMTS devices on those portions of the 1427-1432 MHz band where WMTS operations do not hold primary status is prohibited.<sup>109</sup> WMTS devices already registered to operate on secondary frequencies will be grandfathered, and may continue operating for the time being. Nonetheless, we encourage users of such equipment to investigate whether those operations can or should be migrated to primary WMTS frequencies in order to maximize patient safety.

30. We note, however, that the record suggests that WMTS devices can operate safely on a secondary basis under certain conditions. Therefore, we seek comment in the *Second Further Notice* on whether secondary WMTS operations should be sanctioned upon the adoption of adequate safeguards.<sup>110</sup>

31. Other matters. We adopt ASHE's suggested editorial revisions to Sections 90.259(b)(4) (to clarify one of the carve-out areas); 95.1101, 95.1103(c), 95.1111(a) (to clarify the registration and

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<sup>104</sup> See LMCC comments at 20; Itron comments at 2; GEHC reply comments at 4-6. We note, however, that GEHC argued in a subsequent proceeding that medical devices should be permitted to operate on a secondary basis under certain conditions. See GEHC reply comments in ET Docket No. 08-59 at 14 ("the admonition that medical devices not be allowed to operate on a secondary basis seems unnecessarily restrictive in view of prevailing interference mitigation techniques and standards and developments in the relevant technology").

<sup>105</sup> See LMCC comments at 20.

<sup>106</sup> Compare 47 C.F.R. § 90.259(b) (expressly authorizing secondary non-medical telemetry in the 1427-1432 MHz band) with 47 C.F.R. § 95.630 (authorizing only primary WMTS operations).

<sup>107</sup> See *WMTS Report and Order*, 15 FCC Rcd at 11210 ¶ 11.

<sup>108</sup> See GEHC reply comments at 5 (stating that primary WMTS spectrum is sufficient to meet the needs of health care providers).

<sup>109</sup> See 47 C.F.R. § 95.1111. We also will revise footnote US350 of the Table of Frequency Allocations in Section 2.106 of the Commission's Rules to reflect this clarification. Footnote US350 was amended in 2005 to clarify that Federal agencies have full use of the medical telemetry and medical telecommand allocation in the entire 1427-1432 MHz band. See Amendments of Parts 2, 25 and 73 of the Commission's Rules to Implement Decisions from World Radiocommunications Conference (Geneva 2003) (WRC-03) Concerning Frequency Bands Between 5900 kHz and 27.5 GHz and to Otherwise Update the Rules in this Frequency Range, *Report and Order*, ET Docket 04-139, 20 FCC Rcd 6570, 6624-6625 ¶ 155 (2005). No substantive change was intended, and there was no discussion of whether to authorize secondary WMTS operations. See *id.* at 6620 ¶ 141, 6624 ¶ 155. We therefore remove language added at that time that conflicts with our clarification of Section 90.1111.

<sup>110</sup> See para. 32, *infra*.



notification process), 95.1115(a) and (d) and 95.1121 (to clarify that WMTS operates beyond the 1427-1429.5 MHz segment in the carve-out areas).<sup>111</sup> ASHE further requests that the Commission amend both Sections 95.1105 and 95.1115 of the Commission's Rules to make it "even more expressly understood" that authorized health care providers are licensed by rule to operate WMTS equipment only when the registration requirements in Section 95.1111(a) have been met.<sup>112</sup> We do not find such clarification necessary. Sections 95.1105 and 95.1111 clearly state that frequency coordination is required prior to commencement of WMTS operations.<sup>113</sup> The Commission to date has not received any complaints from operators of WMTS devices about the clarity and meaning of these rules, and no incidents have been reported where WMTS operations were commenced prior to registration with ASHE.<sup>114</sup> Therefore, we believe that the relevant language in the Part 95 rules is sufficient. Similarly, we also reject Itron's proposal that the rules should specify that WMTS users must coordinate operations prior to construction,<sup>115</sup> because we are not persuaded that the current pre-activation registration requirement is inadequate. Moreover, we reject LMCC's proposal that the rules be amended to require ASHE to notify Part 90 coordinators using the same electronic batch filing format that the Part 90 coordinators use to notify each other of Part 90 coordinations.<sup>116</sup> We agree with ASHE that such details should be negotiated between the parties.<sup>117</sup>

### III. SECOND FURTHER NOTICE OF PROPOSED RULE MAKING

32. *WMTS Secondary Operations.* As noted above, the WMTS service rules do not currently authorize WMTS systems to operate on a secondary basis on those portions of the 1427-1432 MHz shared band where non-medical telemetry is primary, and commenters disagree regarding whether the rules should be amended to permit such operations. Some comments suggest that WMTS devices can operate safely on a secondary basis under certain conditions. The current record, however, does not provide an adequate basis for us to adopt appropriate technical requirements. We therefore seek further comment on whether secondary WMTS operations should be permitted. Specifically, we seek comment on what particular technical rules would be needed to prevent unwanted interference and ensure patient safety. For example, should WMTS devices be permitted to operate on secondary frequencies only if no primary frequencies are currently available? Should WMTS devices operating on a secondary basis be required to monitor all channels that could be used for communication and use only clear channels for communication? Should WMTS devices operating on a secondary basis be required to utilize some form of redundancy to ensure that the transmitted data is received properly? We also seek comment on whether WMTS equipment manufacturers or vendors should be required to notify users that installed equipment will operate on a secondary basis to non-medical telemetry. Commenters also are asked to address whether certain functions (*e.g.*, monitoring of specific types of patients or specific medical information) are so critical to patient safety that they should be conducted only on frequencies where

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<sup>111</sup> See ASHE Letter at 2 n.4, Atts. B, C; ASHE comments at 7.

<sup>112</sup> See ASHE comments at 7-8; see also 47 C.F.R. § 95.1111(a).

<sup>113</sup> See 47 C.F.R. §§ 95.1105 ("Authorized health care providers are authorized by rule to operate transmitters in the Wireless Medical Telemetry Service without an individual license issued by the Commission provided the coordination requirements in § 95.1111 have been met."), 95.1111(a) ("Prior to operation, authorized health care providers who desire to use wireless medical telemetry devices must register all devices with a designated frequency coordinator.").

<sup>114</sup> See GEHC reply comments at 2-3 (objecting to ASHE's proposal to amend Section 95.1115 to require equipment manufacturers or their representatives to assist health care providers in registering their equipment).

<sup>115</sup> See Itron comments at 1-2.

<sup>116</sup> See LMCC comments at 19.

<sup>117</sup> See ASHE reply comments at 3.

WMTS has primary status. In addition, we seek comment on whether there is sufficient primary spectrum in the three WMTS frequency bands to meet users' communications needs without resorting to secondary operations.<sup>118</sup>

33. *End-of-Train Devices.* After the *Notice* was released, AAR filed a petition for rulemaking requesting an increase in the maximum permissible power for certain railroad telemetry operations.<sup>119</sup> AAR indicates that end-of-train (EOT) devices, which operate on frequency pair 452/457.9375 MHz, are an important radio communications system that is vital to safe and efficient operation of rail freight transportation.<sup>120</sup> EOT devices must, as a practical matter, be mounted on the coupling knuckle behind the last car in the train, but this is not the optimal location for transmitting radiofrequency signals because the direct path from the end of the train to the front of the train is always blocked by intervening train cars, and also can be adversely affected by variable terrain factors.<sup>121</sup>

34. Section 90.238(e) of the Commission's Rules limits telemetry operations in the 450-470 MHz band to two watts transmitter output power.<sup>122</sup> AAR is concerned that the two-watt limit offers little margin for degradation of the communications link, especially on longer trains (some of which are 7,000 to 8,000 feet long).<sup>123</sup> In order to minimize the possibility of communications link failure for EOT devices, AAR requests that the Commission's Rules be amended to allow EOT devices to operate with up to eight watts transmitter output power. AAR, which is the Commission's certified frequency coordinator for frequency pair 452/457.9375 MHz and the adjacent frequencies,<sup>124</sup> argues that the potential for causing interference to railroad operations is minimal.<sup>125</sup> We tentatively conclude that the Commission's Rules should be modified to accommodate the operational needs of EOT devices, and we seek comment on this proposal. We also seek comment on whether a 6 dB increase in power is necessary, or whether EOT devices can operate properly with a smaller increase.

35. *Trunking Rules.* Section 90.187 of the Commission's Rules<sup>126</sup> specifies the manner in which

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<sup>118</sup> We note that the allocation of additional spectrum for diagnostic and therapeutic purposes is under consideration in other proceedings. *See* Amendment of the Commission's Rules to Provide Spectrum for the Operation of Medical Body Area Networks in the 2360-2400 MHz band, *Notice of Proposed Rulemaking*, ET Docket No. 09-36, 24 FCC Rcd 9589 (2009); Amendment of Parts 2 and 95 of the Commission's Rules to Provide Additional Spectrum for the Medical Device Radiocommunication Service in the 413-457 MHz band, *Notice of Proposed Rulemaking*, ET Docket No. 09-36, 24 FCC Rcd 3445 (2009).

<sup>119</sup> *See* Petition for Rulemaking of the Association of American Railroads (filed October 2, 2007) (AAR Petition).

<sup>120</sup> EOT devices can be configured as one-way or two-way communications devices. The one-way EOT device is used to form a telemetry link from the rear of the train to the lead locomotive, and is required by Federal Railroad Administration (FRA) regulations to be capable of determining the brake pipe pressure on the rear car transmitting the information to the front unit for display to the locomotive engineer. FRA regulations require two-way EOT devices to be capable of transmitting an emergency brake application command to the rear unit and that the rear unit be capable of receiving that command and activating the train's braking system from the rear of the train. *See id.* at 2-4 (citing 49 C.F.R. §§ 232.401-232.409).

<sup>121</sup> *Id.* at 4-5.

<sup>122</sup> *See* 47 C.F.R. § 90.238(e).

<sup>123</sup> *See* AAR Petition at 5.

<sup>124</sup> *Id.* at 6; *see also* 47 C.F.R. § 90.35(b)(3). AAR's proposal pertains solely to this frequency pair, which AAR has designated for EOT devices, but we understand that at least one railroad operates EOT devices on a frequency outside the 450-470 MHz band.

<sup>125</sup> *See* AAR Petition at 6.

<sup>126</sup> 47 C.F.R. § 90.187.

trunking may be accomplished in the PLMR frequency bands below 800 MHz.<sup>127</sup> In order to permit centralized trunking while protecting the interests of existing users sharing the same spectrum, the rule sets forth the criteria and procedures to be followed by a licensee seeking to operate a centralized trunked system. Unless the applicant satisfies the requirements of the rule, the trunked system must monitor the frequencies prior to transmitting, *i.e.*, it must employ equipment that prevents transmission on a trunked frequency if a signal from another system is present on that frequency.<sup>128</sup> Currently, a centralized trunked system is subject to the monitoring requirement unless the applicant either obtains the written consent of all “affected licensees,” as defined by the rule; or has obtained exclusive use of its 470-512 MHz band frequencies by loading, pursuant to Section 90.313.<sup>129</sup>

36. Since its adoption in 1997,<sup>130</sup> Section 90.187 has been the subject of several decisions clarifying or interpreting it.<sup>131</sup> We tentatively agree with LMCC<sup>132</sup> that we should revise the rule, and related definitions in Section 90.7 of the Commission’s Rules,<sup>133</sup> to make the rule clearer. For example, we propose to clarify that Section 90.187 neither requires applicants for decentralized trunked systems to obtain consent from affected licensees, nor permits decentralized trunked systems to operate without monitoring.<sup>134</sup> We also tentatively agree with LMCC that the rule currently contains unnecessary provisions that should be removed. For example, Section 90.187(b)(2)(v) provides that a potential applicant that disagrees with a frequency coordinator’s determination that the proposed operations would cause objectionable interference may ask the Commission to overturn the coordinator’s determination,<sup>135</sup> but Section 90.175(a) already offers the same opportunity.<sup>136</sup> These and other proposed editorial changes are set forth in Appendix D, *infra*.

37. The current rule allows the applicant to choose between alternate methods of determining

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<sup>127</sup> 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services, *Notice of Proposed Rulemaking*, WT Docket No. 98-182, 13 FCC Rcd 21133, 21141 ¶ 23 (1998) (*Biennial Review NPRM*).

<sup>128</sup> 47 C.F.R. § 90.187(b).

<sup>129</sup> See 47 C.F.R. § 90.187(b) (citing 47 C.F.R. § 90.313).

<sup>130</sup> See *Refarming Second Report and Order*, 12 FCC Rcd at 14531-32.

<sup>131</sup> See, e.g., *Biennial Review R&O*, 15 FCC Rcd at 16685-87 ¶¶ 25-27; Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, *Third Memorandum Opinion and Order*, PR Docket No. 92-235, 14 FCC Rcd 10922, 10931 ¶¶ 19-20 (1999) (*Refarming Third Memorandum Opinion and Order*); Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, *Second Memorandum Opinion and Order*, PR Docket No. 92-235, 14 FCC Rcd 8642, 8661 ¶ 38 (1999) (*Refarming Second Memorandum Opinion and Order*); *Biennial Review NPRM*, 13 FCC Rcd at 21141-42 ¶ 23; Ralph A. Haller, *Letter*, 23 FCC Rcd 4714, 4715-18 (WTB/PSHSB 2008) (*Haller Letter*); National Science and Technology Network, Inc., *Order on Reconsideration*, 22 FCC Rcd 18644, 18646-47 ¶¶ 7-8 (WTB MD 2007) (*NSTN*), *aff’d*, *Order on Further Reconsideration*, 24 FCC Rcd 3577 (WTB MD 2009), *review pending*.

<sup>132</sup> See LMCC comments at 22-25, supplemental comments at 1-2.

<sup>133</sup> 47 C.F.R. § 90.7.

<sup>134</sup> See, e.g., National Science and Technology Network, Inc., *Letter*, 21 FCC Rcd 14381, 14382 (WTB MD 2006) (citing *Biennial Review NPRM*, 13 FCC Rcd at 21141-42 ¶ 23), *recon. dismissed*, *Memorandum Opinion and Order*, 23 FCC Rcd 3214, 3220 ¶ 16 (2008); see also LMCC comments at 22. LMCC suggests, however, that conventional (*i.e.*, non-trunked) systems that obtain exclusive use of 470-512 MHz band frequencies by loading, pursuant to Section 90.313, be exempt from the monitoring requirement. See LMCC comments at 27-28, supplemental comments at 5.

<sup>135</sup> 47 C.F.R. § 90.187(b)(2)(v).

<sup>136</sup> 47 C.F.R. § 90.175(a).

which incumbents are “affected licensees”: stations with service contours that are overlapped by a circle with a seventy-mile radius from the proposed base station (distance analysis),<sup>137</sup> or stations with service contours that are overlapped by the proposed station’s interference contour (contour analysis).<sup>138</sup> LMCC seeks to eliminate the distance analysis, and to rely solely on the contour analysis.<sup>139</sup> The distance analysis was the original standard.<sup>140</sup> The contour analysis was added as an option in 1999 because the Commission was concerned that reliance on the distance analysis could preclude the implementation of trunking in spectrum-congested urban areas.<sup>141</sup> It is our understanding that almost all applications for new centralized trunked systems now rely on the contour analysis. Consequently, we tentatively conclude that the rule can be streamlined by eliminating the distance analysis option. We seek comment on this proposal.

38. Currently, the contour analysis must be performed only to demonstrate that the proposed system’s interference contour does not overlap any incumbent system’s service contour.<sup>142</sup> LMCC argues that the contour analysis for certain proposed stations<sup>143</sup> should also demonstrate that the proposed system’s service contour will not be overlapped by any affected licensee’s interference contour.<sup>144</sup> Such a requirement would appear to prevent the coordination of new trunked systems that would be of limited use, but the existence of which would preclude the expansion of existing systems. It also would be consistent with the requirements for operation on 12.5 kHz offset channels in the 470-512 MHz band.<sup>145</sup> We seek comment on this proposal, and on whether it should also apply to situations other than those specified by LMCC. We also seek comment on whether new trunked systems with a service contour that is overlapped by any affected licensee’s interference contour should be authorized only on a secondary basis.

39. LMCC requests that the rules be amended to provide that a non-centralized trunked station that is coordinated based upon a determination that its interference contour does not overlap the service contour of a centralized trunked station shall not be considered an affected licensee with respect to the centralized trunked station in the event of modification of the centralized trunked station, provided that the modification does not extend the centralized trunked station’s interference contour in the direction of the non-centralized trunked station.<sup>146</sup> LMCC does not explain why this rule change is being requested, and we are uncertain as to why it is needed. As a result, we are not proposing to modify the rules as requested but we do seek comment on this LMCC proposal.

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<sup>137</sup> See 47 C.F.R. § 90.187(b)(2)(ii).

<sup>138</sup> See 47 C.F.R. § 90.187(b)(2)(iii).

<sup>139</sup> See LMCC comments at 27, supplemental comments at 3.

<sup>140</sup> See *Refarming Second Report and Order*, 12 FCC Rcd at 14338 ¶ 58.

<sup>141</sup> See *Refarming Third Memorandum Opinion and Order*, 14 FCC Rcd at 10926 ¶ 7.

<sup>142</sup> See 47 C.F.R. § 90.187(b)(2)(v).

<sup>143</sup> Specifically, proposed 6.25 kHz stations with less than 12.5 kHz separation from an adjacent 12.5 kHz or 25 kHz system. See LMCC further supplemental comments at 4.

<sup>144</sup> *Id.*

<sup>145</sup> See, e.g., Samuel Moses, *Order on Further Reconsideration*, 21 FCC Rcd 11257, 11261-62 ¶ 14 (WTB 2006) (application shall not be certified if an incumbent or the applicant has unacceptable interference of more than five percent reduction of the calculated service area reliability), *aff’d*, *Second Order on Further Reconsideration*, 24 FCC Rcd 8857 (WTB 2009), *recon. pending*.

<sup>146</sup> See LMCC further supplemental comments at 4-5.

40. Whether an incumbent is an “affected licensee” also depends on spectral separation.<sup>147</sup> LMCC seeks to expand the definition of “affected licensee” in the context of proposed 12.5 kilohertz and 6.25 kilohertz bandwidth stations, depending on the authorized bandwidth of the incumbent station.<sup>148</sup> It argues<sup>149</sup> that these changes are necessary in order to avoid interference to licensees that migrate from 25 kilohertz bandwidth to 12.5 kilohertz or narrower bandwidth pursuant to the Commission’s narrowbanding mandate.<sup>150</sup> LMCC also suggests that these spectral separations be expressed in table form, rather than the current text descriptions.<sup>151</sup> We seek comment on these proposals.

41. Section 90.187 does not discuss how to account for systems that have no permanent base stations. In response to an LMCC request, the Commission’s Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau clarified that frequency coordinators must base their contour calculations for such systems on mobile units operating at the edge of the authorized service area in the direction of the proposed or incumbent station, utilizing any propagation curves and derating factors adopted by consensus of the coordinators.<sup>152</sup> The Bureaus noted LMCC’s argument that placing the mobile units at the edge of the service area could tend to overstate the mobile-only station’s potential to cause or receive interference, but concluded that the language of Section 90.187 calls for this method.<sup>153</sup> LMCC now suggests that the rule be revised to treat mobile-only stations as follows: for systems where the authorized operating area is defined as a radius around geographic coordinates, contour calculations should be based on a mobile unit operating at the geographic coordinates; while systems where the license does not specify geographic coordinates for the authorized operating area (*e.g.*, licenses authorizing operation within a particular county or state) would not be deemed “affected licensees.”<sup>154</sup>

42. We are not persuaded that LMCC’s recommendations represent the optimal solution. As the Bureaus noted in response to LMCC’s interpretation request, placing the mobile units at the center coordinates tends to understate the system’s potential to cause or receive interference.<sup>155</sup> In addition, we see no basis for affording differing levels of protection depending on whether the mobile-only operating area is defined by a point-radius or a geographic unit. Consequently, while we seek comment on

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<sup>147</sup> Section 90.187 currently provides that a geographically proximate incumbent (under the criteria discussed above) is an “affected licensee” if its assigned frequency is 15 kilohertz or less from the assigned frequency of a proposed 25 kilohertz bandwidth station, 7.5 kilohertz or less from the assigned frequency of a proposed 12.5 kilohertz bandwidth station, or 3.75 kilohertz or less from the assigned frequency of a proposed 6.25 kilohertz bandwidth station. *See* 47 C.F.R. § 90.187(b)(1)(i), (iii)(A)-(C); *see also NSTN*, 22 FCC Rcd at 18646-47 ¶¶ 7-8 (citing *Refarming Second Memorandum Opinion and Order*, 14 FCC Rcd at 8661 ¶ 38).

<sup>148</sup> Specifically, LMCC proposes that a 25 kilohertz bandwidth station be deemed an “affected licensee” if its assigned frequency is 15 kilohertz or less from the assigned frequency of a proposed 12.5 kilohertz bandwidth station, and that incumbents be deemed “affected licensees” with respect to a proposed 6.25 kilohertz bandwidth station if the assigned frequencies are within 15 kilohertz (for 25 kilohertz bandwidth incumbents), 7.5 kilohertz (for 12.5 kilohertz bandwidth incumbents) or 3.125 kilohertz (for 6.25 kilohertz bandwidth incumbents). *See* LMCC further supplemental comments at 4.

<sup>149</sup> *See* LMCC comments at 23-24.

<sup>150</sup> *See Narrowbanding Memorandum Opinion and Order*, 19 FCC Rcd at 25046 ¶ 2. LMCC also argues that stations that fail to meet the narrowbanding deadline should not be deemed “affected licensees.” *See* LMCC comments at 27, supplemental comments at 5.

<sup>151</sup> *See* LMCC further supplemental comments at 4.

<sup>152</sup> *See Haller Letter*, 23 FCC Rcd at 4716-17.

<sup>153</sup> *Id.* at 4716.

<sup>154</sup> *See* LMCC supplemental comments at 4.

<sup>155</sup> *See Haller Letter*, 23 FCC Rcd at 4716.



LMCC's proposals, we also ask commenters to address whether other feasible methods might more accurately approximate a mobile-only system's contours, such as using the boundary of the authorized operating area as the service contour and a specified distance therefrom as the interference contour.

43. Finally, LMCC appears to suggest removing current Section 90.187(d),<sup>156</sup> which permits potential applicants for centralized trunked operations to file written notice with a frequency coordinator, which will notify the other frequency coordinators, none of whom may accept a conflicting application for sixty days.<sup>157</sup> The Commission added this provision in 1999 in order to prevent "strike" applications against prospective applicants that have begun the process of seeking consent from existing stations.<sup>158</sup> We note that Section 1.935 of the Commission's Rules already prohibits the filing of mutually exclusive applications for the purpose of "greenmail."<sup>159</sup> We seek comment on this proposal.

44. *470-512 MHz band offset channels.* In 1997, the Commission directed the certified frequency coordinators for the private land mobile radio services to reach a consensus on the applicable coordination procedures for the 12.5 kHz offset channels in the 470-512 MHz band.<sup>160</sup> That consensus is embodied in the LMCC procedures for evaluating adjacent channel interference in the 470-512 MHz band using the interference criteria of TIA/EIA/TSB-88<sup>161</sup> (TSB-88).<sup>162</sup> The LMCC Consensus provides that an application shall not be certified if an incumbent or the applicant has unacceptable interference of more than five percent reduction of the calculated service area reliability.<sup>163</sup> LMCC appears to suggest codifying this requirement in our rules.<sup>164</sup> We believe that codifying the TSB-88 requirement could reduce confusion concerning the requirement,<sup>165</sup> so we seek comment on this proposal.<sup>166</sup> We also ask commenters to consider whether it is preferable to leave the requirement uncodified, so that the frequency coordinators can continue to modify the TSB-88 procedures without an amendment of the Commission's

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<sup>156</sup> Compare LMCC comments at 28 (retaining the provision) with LMCC supplemental comments at 5 (omitting the provision).

<sup>157</sup> See 47 C.F.R. § 90.187(d).

<sup>158</sup> See *Reforming Third Memorandum Opinion and Order*, 14 FCC Rcd at 10927-28 ¶¶ 10-11.

<sup>159</sup> See 47 C.F.R. § 1.935; see also, e.g., 2002 Biennial Regulatory Review, *Staff Report*, 18 FCC Rcd 4243, 4266 (2002).

<sup>160</sup> See *Reforming Second Report and Order*, 12 FCC Rcd at 14330-31 ¶ 43.

<sup>161</sup> See Telecommunications Industry Association/Electronics Industry Association Telecommunications Systems Bulletin 88 (TIA/EIA/TSB-88), *Wireline Communications System – Performance in Noise and Interference-Limited Situations – Recommended Methods for Technology-Independent Modeling, Simulation, and Verification* (January 1998).

<sup>162</sup> See *Filing Freeze to Be Lifted for Applications Under Part 90 for 12.5 kHz Offset Channels in the 421-430 and 470-512 MHz Bands*, *Public Notice*, 13 FCC Rcd 5942, 5942 (WTB 1997) (citing Letter from Larry A. Miller, President, LMCC, to Daniel B. Phythyon, Esq., Acting Chief, Wireless Telecommunications Bureau (Sept. 10, 1997) (LMCC Consensus)).

<sup>163</sup> See LMCC Consensus, Attachment at 2. LMCC later confirmed this position. See Letter dated Oct. 13, 2003 from Larry A. Miller, President, LMCC to D'Wana Terry, Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau.

<sup>164</sup> See LMCC further supplemental comments at 4.

<sup>165</sup> See, e.g., National Science and Technology Network, Inc., *Memorandum Opinion and Order*, 25 FCC Rcd 549 (2010), *aff'g Order on Reconsideration*, 23 FCC Rcd 5723 (WTB MD 2008).

<sup>166</sup> While LMCC proposed to add language to Section 90.187, we believe that such language is more appropriate for Section 90.303 of the Commission's Rules, 47 C.F.R. § 303, as reflected in the proposed rules in Appendix D, *infra*. Commenters are invited to suggest other appropriate language.

Rules.

45. *Station Identification.* Motorola urges the Commission to consider certain updates and changes to Section 90.425 of the rules governing the transmission of station identification information.<sup>167</sup> It first notes that the Commission's Rules permit 800 and 900 MHz stations that are licensed on an exclusive basis and normally employ digital emissions to transmit station identification in digital format,<sup>168</sup> and that similar rules are under consideration for the 700 MHz public safety band,<sup>169</sup> but that the rules do not provide the same flexibility for VHF or UHF PLMR licensees.<sup>170</sup> Motorola suggests modifying Section 90.425 of the Commission's Rules to allow the transmission of the required station identification using digital signals instead of Morse code.<sup>171</sup> Motorola also notes that Section 90.425(e)(2) allows CMRS licensees to use a single call sign for commonly owned facilities that are operated as part of a single system, and requests that we afford similarly situated PLMR licensees the same flexibility.<sup>172</sup> We seek comment on Motorola's proposals.

46. *Pro Forma License Assignments.* In its comments to the *Notice*, LMCC encourages the Commission to modify its rules to permit PLMR licensees to effectuate *pro forma* license assignments and transfers of control (*i.e.*, assignments and transfers that do not involve a substantial change in ownership or control<sup>173</sup>) without prior FCC approval but with a subsequent notification filing,<sup>174</sup> as licensees classified as CMRS telecommunications carriers are permitted to do pursuant to the Commission's forbearance authority.<sup>175</sup> The Commission has previously explained that the forbearance provisions of the Telecommunications Act of 1996 do not apply to licensees that do not meet the statutory definition of telecommunications carrier.<sup>176</sup> The Commission acknowledged that its forbearance authority only extends to telecommunications carriers and telecommunications services and does not apply to services which do not involve the provision of "telecommunications service," *i.e.*, the offering of telecommunications for a fee to the public, or to such classes of users as to be effectively available to the public.<sup>177</sup> Because PLMR licensees do not meet the statutory definition of telecommunications carrier, the forbearance provisions do not apply. As a result, we decline to propose the modification suggested by

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<sup>167</sup> See Motorola comments at 13-14.

<sup>168</sup> See 47 C.F.R. § 90.647(c).

<sup>169</sup> See The Development of Operational, Technical, and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Through the Year 2010, *Fifth Memorandum Opinion and Order, Sixth Report and Order, and Seventh Notice of Proposed Rulemaking*, WT Docket No. 96-86, 20 FCC Rcd 831, 849 ¶ 41 (2005); see also Motorola, Inc., *Order*, 20 FCC Rcd 16545 (WTB PSCID 2005) (granting a waiver pending the resolution of the rulemaking proceeding).

<sup>170</sup> See Motorola comments at 13-14. Part 90 also affords such flexibility to CMRS stations granted exclusive channels. See 47 C.F.R. § 90.425(e)(3).

<sup>171</sup> See Motorola comments at 13-14.

<sup>172</sup> *Id.*

<sup>173</sup> See Federal Communications Bar Association's Petition for Forbearance from Section 310(d) of the Communications Act Regarding Non-Substantial Assignments of Wireless Licenses and Transfers of Control Involving Telecommunications Carriers, *Memorandum Opinion and Order*, 13 FCC Rcd 6293, 6293 ¶ 2 (1998) (*Pro Forma Forbearance Order*).

<sup>174</sup> See LMCC comments at 5.

<sup>175</sup> See 47 U.S.C. § 160(c).

<sup>176</sup> See *Pro Forma Forbearance Order*, 13 FCC Rcd at 6299 ¶ 9 (1998) (holding that "licensees ... who do not meet the definition of 'telecommunications carrier' ... are beyond the scope of our section 10 forbearance authority").

<sup>177</sup> *Id.* at 6306-07 ¶ 24.

LMCC.

#### IV. PROCEDURAL MATTERS

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

48. *Regulatory Flexibility Analysis.* The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>178</sup> requires that a regulatory flexibility analysis be prepared for notice-and-comment rule making 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>179</sup> As required by the RFA,<sup>180</sup> the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) of the rules adopted in this *Second Report and Order*. The FRFA for the *Second Report and Order* is contained in Appendix A. The Commission will send a copy of the *Second Report and Order*, including the FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>181</sup>

49. As required by the RFA,<sup>182</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 proposed in this *Second Further Notice of Proposed Rule Making*. The IRFA for the *Second Further Notice of Proposed Rule Making* is contained in Appendix B. We request written public comment on the IRFA. Comments must be filed in accordance with the same filing deadlines for comments on the *Second Further Notice of Proposed Rule Making*, and must have a separate and distinct heading designating them as responses to the IRFA. The Commission will send a copy of the *Second Further Notice of Proposed Rule Making*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

50. *Paperwork Reduction Analysis.* This document does not contain new or modified information collection(s) subject to the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, therefore, it does not contain any 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).

51. *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).

52. *Alternative formats.* 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). This *Second Report and Order and Second Further Notice of Proposed Rule Making* also may be downloaded from the Commission’s web site at <<http://www.fcc.gov/>>.

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<sup>178</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>179</sup> 5 U.S.C. § 605(b).

<sup>180</sup> 5 U.S.C. § 603.

<sup>181</sup> 5 U.S.C. § 603(a).

<sup>182</sup> 5 U.S.C. § 603.

53. *Comment Dates.* 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 on or before [**30 days after publication in the Federal Register**] and reply comments on or before [**45 days after publication in the Federal Register**].

54. Commenters may file comments electronically using the Commission's Electronic Comment Filing System (ECFS), the Federal Government's eRulemaking Portal, or by filing paper copies.<sup>183</sup> Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. If multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Commenters may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and should include the following words in the body of the message, "get form." Commenters will receive a sample form and directions in reply. Commenters filing through the Federal eRulemaking Portal <<http://www.regulations.gov>>, should follow the instructions provided on the website for submitting comments.

55. Commenters who chose to file paper comments must file an original and four copies of each comment. 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. All filings must be sent to the Commission's Secretary, Office of the Secretary, Federal Communications Commission, 445 12<sup>th</sup> Street, S.W., Room TW-A325, Washington, DC 20554.

56. Commenters may send filings by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. Commenters must bind all hand deliveries together with rubber bands or fasteners and must dispose of any envelopes before entering the building. This facility is the only location where the Commission's Secretary will accept hand-delivered or messenger-delivered paper filings. Commenters must send commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) to 9300 East Hampton Drive, Capitol Heights, MD 20743. Commenters should address U.S. Postal Service first-class mail, Express Mail, and Priority Mail to 445 12<sup>th</sup> Street, S.W., Washington, DC 20554.

57. 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 [www.bcpweb.com](http://www.bcpweb.com).

58. For further information, contact Mr. Rodney Conway, Mobility Division, Wireless Telecommunications Bureau, (202) 418-2904 or TTY (202) 418-7233; or via e-mail at [Rodney.Conway@fcc.gov](mailto:Rodney.Conway@fcc.gov).

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<sup>183</sup> See Electronic Filing of Documents in Rulemaking Proceedings, *Report and Order*, 13 FCC Rcd 11322 (1998).

**IV. ORDERING CLAUSES**

59. 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 *Second Report and Order and Second Further Notice of Proposed Rule Making* is HEREBY ADOPTED.

60. IT IS FURTHER ORDERED that Parts 2, 90 and 95 of the Commission's Rules ARE AMENDED as specified in Appendix C, effective thirty days after publication of the *Second Report and Order and Second Further Notice of Proposed Rule Making* in the Federal Register.

61. IT IS FURTHER ORDERED that NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this *Second Further Notice of Proposed Rule Making* and that comment is sought on these proposals.

62. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Second Report and Order and Second Further Notice of Proposed Rule Making*, 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

**Final Regulatory Flexibility Analysis**

As required by the Regulatory Flexibility Act (RFA),<sup>184</sup> an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in the *Notice of Proposed Rule Making (NPRM)* in this proceeding was incorporated in the *NPRM*. Written public comments were requested on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>185</sup>

**A. Need for, and Objectives of, the Second Report and Order**

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. 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. In the *NPRM*, we sought comment on miscellaneous rule amendments that were intended to clarify Part 90 of the Commission's Rules. In addition, the *NPRM* sought comment on eliminating certain regulatory requirements contained in Part 90 of the Commission's Rules. The *NPRM* also sought comment regarding changes to the rules governing the Part 95 Wireless Medical Telemetry Service, to clarify those rules and implement a joint coordination agreement among the relevant frequency coordinators. We also solicited comment on other potential Part 90 rules changes, including suggestions to revise or eliminate provisions that are duplicative, outmoded or otherwise unnecessary.

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

No comments were submitted specifically in response to the IRFA. However, some commenters to the *NPRM* contend that the Commission's suggestion that Part 90 be reorganized would result in a more complex regulatory burden on Commission licensees. As discussed in Section E of this FRFA, we have considered the potential economic impact on small entities of these rules, and we have considered alternatives that would reduce the potential economic impact of the rules enacted herein, regardless of whether the potential economic impact was discussed in any comments.

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

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 generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>186</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>187</sup> A small business concern is one which:

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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 Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAA). Title II of the CWAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>185</sup> See 5 U.S.C. § 604.

<sup>186</sup> See 5 U.S.C. § 601(6).

<sup>187</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 the RFA, 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, establishes one

(1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>188</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>189</sup> Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the rules changes proposed in this *NPRM*.

*Governmental Entities.* Nationwide, there are a total of approximately 22.4 million small businesses, according to SBA data.<sup>190</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>191</sup> Nationwide, as of 2002, there were approximately 1.6 million small organizations.<sup>192</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>193</sup> Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.<sup>194</sup> We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.”<sup>195</sup> Thus, we estimate that most governmental jurisdictions are small.

*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>196</sup> The SBA rules contain a definition for cellular and other wireless telecommunications companies which encompasses business entities engaged in radiotelephone communications employing

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or more definitions which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.

<sup>188</sup> See Small Business Act, 5 U.S.C. § 632 (1996).

<sup>189</sup> See 5 U.S.C. § 601(4).

<sup>190</sup> See SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

<sup>191</sup> See 5 U.S.C. § 601(4).

<sup>192</sup> Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

<sup>193</sup> See 5 U.S.C. § 601(5).

<sup>194</sup> U.S. Census Bureau, *Statistical Abstract of the United States: 2006*, Section 8, page 272, Table 415.

<sup>195</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, page 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>196</sup> See subparts A and B of Part 90 of the Commission’s Rules, 47 C.F.R. §§ 90.1-90.22. Police licensees include 26,608 licensees that serve state, county, and municipal enforcement through telephony (voice), telegraphy (code), and teletype and facsimile (printed material). Fire licensees include 22,677 licensees comprised of private volunteer or professional fire companies, as well as units under governmental control. Public Safety Radio Pool licensees also include 40,512 licensees that are state, county, or municipal entities that use radio for official purposes. There are also 7,325 forestry service licensees comprised of licensees from state departments of conservation and private forest organizations that set up communications networks among fire lookout towers and ground crews. The 9,480 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 (1,460) use these channels for emergency medical service communications related to the delivery of emergency medical treatment. Another 19,478 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.

no more than 1,500 persons.<sup>197</sup> There are a total of approximately 127,540 licensees within these services.<sup>198</sup> With respect to local governments, in particular, since many governmental entities as well as private businesses comprise the licensees for these services, we include under public safety services the number of government entities affected.

*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 do, however, contain a size standard for small radiotelephone (wireless) companies which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>199</sup> The SBA rules contain a definition for cellular and other wireless telecommunications companies which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>200</sup> The Commission's fiscal year 1994 annual report indicates that, at the end of fiscal year 1994, there were 1,101,711 licensees operating 12,882,623 transmitters in the PLMR bands below 512 MHz.<sup>201</sup>

*Frequency Coordinators.* Neither the Commission nor the SBA has developed a small business size standard specifically applicable to spectrum frequency coordinators. The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of "Paging"<sup>202</sup> and "Cellular and Other Wireless Telecommunications."<sup>203</sup> Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.<sup>204</sup> Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.<sup>205</sup> Thus, under this category and associated small business size standard, the majority of firms can be considered small. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>206</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>207</sup> Thus, under this second category and size standard, the majority of firms can, again, be considered small.

<sup>197</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>198</sup> There is no information currently available about the number within the 127,540 that have less than 1500 employees.

<sup>199</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>200</sup> *Id.*

<sup>201</sup> See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

<sup>202</sup> See 13 C.F.R. § 121.201, NAICS code 517211.

<sup>203</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>204</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517211 (issued Nov. 2005).

<sup>205</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

<sup>206</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>207</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

*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>208</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>209</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>210</sup> Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.<sup>211</sup> Thus, under this size standard, the majority of firms can be considered small.

*Hospitals, Nursing Care Facilities, and Other Residential Care Facilities.* The SBA has developed small business size standards for these three categories and other, related categories. For the commercial census category of General Medical and Surgical Hospitals,<sup>212</sup> the SBA deems an entity to be small if it has \$31.5 million or less in annual revenues.<sup>213</sup> Census Bureau data for 2002 show that there were 3,200 firms in this category that operated for the entire year.<sup>214</sup> Of this total, 1,313 firms had revenues of under \$25 million, and 471 had revenues of \$25 million to \$49,999,999.<sup>215</sup> Thus, in this category, over 41 percent of the firms can be considered small. For the category of Nursing Care Facilities,<sup>216</sup> the SBA deems an entity to be small if it has \$12.5 million or less in annual revenues.<sup>217</sup> Census Bureau data for 2002 show that there were 7,826 firms in this category that operated for the entire year.<sup>218</sup> Of this total, 6,594 firms had revenues of under \$10 million, and 871 had revenues of \$10 million

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<sup>208</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>209</sup> See 13 C.F.R. § 121.201, NAICS code 334220.

<sup>210</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>211</sup> *Id.* An additional 18 establishments had employment of 1,000 or more.

<sup>212</sup> U.S. Census Bureau, 2002 NAICS Definitions, “622110 General Medical and Surgical Hospitals”; <http://www.census.gov/epcd/naics02/def/ND622110.HTM#N622110>.

<sup>213</sup> See 13 C.F.R. § 121.201, NAICS code 622110.

<sup>214</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Health Care and Social Assistance, “Establishment and Firm Size (Including Legal Form of Organization,” Table 4, NAICS code 622110 (issued Nov. 2005).

<sup>215</sup> *Id.* An additional 1416 firms had revenues of over \$50 million.

<sup>216</sup> U.S. Census Bureau, 2002 NAICS Definitions, “623110 Nursing Care Facilities”; <http://www.census.gov/epcd/naics02/def/ND623110.HTM#N623110>.

<sup>217</sup> See 13 C.F.R. § 121.201, NAICS code 623110.

<sup>218</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Health Care and Social Assistance, “Establishment and Firm Size (Including Legal Form of Organization,” Table 4, NAICS code 623110 (issued Nov. 2005).

to \$24,999,999.<sup>219</sup> Thus, in this category, the majority of firms can be considered small. For the category of Other Residential Care Facilities,<sup>220</sup> the SBA deems an entity to be small if it has \$6.5 million or less in annual revenues.<sup>221</sup> Census Bureau data for 2002 show that there were 3,131 firms in this category that operated for the entire year.<sup>222</sup> Of this total, 2,774 firms had revenues of under \$5 million, and 202 had revenues of \$5 million to \$9,999,999.<sup>223</sup> Thus, in this category, the majority of firms can be considered small.

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

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**

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: (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>224</sup>

We believe the changes adopted in the *Second Report and Order (2ndR&O)* will promote flexibility and more efficient use of the spectrum, reduce administrative burdens on both the Commission and licensees, and allow licensees to better meet their communication needs. In this *2ndR&O*, we will not change rules concerning multiple licensing because it still appears to be a viable and is not obsolete. Additionally, the *2ndR&O* decides that determining the feasibility of protection to broadcast AM station antenna patterns in Part 90 of our rules would be best handled in another ongoing Commission proceeding. The *2ndR&O* also clarifies the Commission's stance on the discontinuance of station classes FB8T and MO8T. The *2ndR&O* declines to reorganize the Part 90 rules. The *2ndR&O* also clarifies that WMTS operations are not permitted on a secondary basis.

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

None.

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<sup>219</sup> *Id.* An additional 361 firms had revenues of over \$25 million.

<sup>220</sup> U.S. Census Bureau, 2002 NAICS Definitions, "623990 Other Residential Care Facilities"; <http://www.census.gov/epcd/naics02/def/ND623990.HTM#N623990>.

<sup>221</sup> *See* 13 C.F.R. § 121.201, NAICS code 623990.

<sup>222</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Health Care and Social Assistance, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 623990 (issued Nov. 2005).

<sup>223</sup> *Id.* An additional 155 firms had revenues of over \$10 million.

<sup>224</sup> *See* 5 U.S.C. § 603(c).



**APPENDIX B****Initial Regulatory Flexibility Analysis**

As required by the Regulatory Flexibility Act (RFA),<sup>225</sup> the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in the *Second Further Notice of Proposed Rule Making* in WP Docket No. 07-100 (*Second 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 *Second FNPRM* as provided in paragraph 53 of this *Second FNPRM*. The Commission will send a copy of the *Second FNPRM*, including the IRFA, to the Chief Counsel for Advocacy of the U.S. Small Business Administration.<sup>226</sup> In addition, the *Second FNPRM* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>227</sup>

**A. Need for, and Objectives of, the Proposed Rules**

This proceeding is part of our continuing effort to provide clear rules that are easy for licensees to comprehend. The *Second FNPRM* seeks comment regarding changes to certain regulatory requirements contained in Part 90 of the Commission's Rules pertaining to telemetry operations by railroad licensees, and trunking of private land mobile radio operations below 512 MHz.

**B. Legal Basis for Proposed Rules**

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**

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 generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>228</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>229</sup> A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>230</sup> A small organization is

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<sup>225</sup> See 5 U.S.C. § 603. The RFA, see 5 U.S.C. §§ 601-612, was amended by the Contract with America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAA). Title II of the CWAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>226</sup> *Id.* § 603(a).

<sup>227</sup> *See id.*

<sup>228</sup> See 5 U.S.C. § 601(6).

<sup>229</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 the RFA, 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, establishes one or more definitions which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.

<sup>230</sup> See Small Business Act, 5 U.S.C. § 632 (1996).

generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>231</sup> Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the rules changes proposed in this *Second FNPRM*.

*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 do, however, contain a size standard for small radiotelephone (wireless) companies which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>232</sup> The SBA rules contain a definition for cellular and other wireless telecommunications companies which encompasses business entities engaged in radiotelephone communications employing no more than 1,500 persons.<sup>233</sup> The Commission’s fiscal year 1994 annual report indicates that, at the end of fiscal year 1994, there were 1,101,711 licensees operating 12,882,623 transmitters in the PLMR bands below 512 MHz.<sup>234</sup>

*Frequency Coordinators.* Neither the Commission nor the SBA has developed a small business size standard specifically applicable to spectrum frequency coordinators. The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of “Paging”<sup>235</sup> and “Cellular and Other Wireless Telecommunications.”<sup>236</sup> Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.<sup>237</sup> Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.<sup>238</sup> Thus, under this category and associated small business size standard, the majority of firms can be considered small. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>239</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>240</sup> Thus, under this second category and size standard, the majority of firms can, again, be considered small.

*RF Equipment Manufacturers.* The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and

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<sup>231</sup> See 5 U.S.C. § 601(4).

<sup>232</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>233</sup> *Id.*

<sup>234</sup> See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

<sup>235</sup> See 13 C.F.R. § 121.201, NAICS code 517211.

<sup>236</sup> See 13 C.F.R. § 121.201, NAICS code 517212.

<sup>237</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517211 (issued Nov. 2005).

<sup>238</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

<sup>239</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization,” Table 5, NAICS code 517212 (issued Nov. 2005).

<sup>240</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

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>241</sup> The SBA small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing is all such firms having 750 or fewer employees.<sup>242</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>243</sup> Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.<sup>244</sup> Thus, under this size standard, the majority of firms can be considered small.

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

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**

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: (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>245</sup>

We believe the changes proposed in this *Second FNPRM* will promote flexibility and more efficient use of the spectrum, reduce administrative burdens, and allow licensees to better meet their communication needs. In this *Second FNPRM*, we seek comment on the proposals to modify the rules. Many of the proposed changes constitute clarification of existing requirements or elimination of existing limitations. Among other proposals, we seek comment on whether our trunking regulations should be refined for ease of understanding and to reduce the administrative and licensee regulatory burden. We also are considering the alternative of retaining the existing trunking regulations. The *Second FNPRM* also seeks comment on the feasibility of increasing the allowed power for end of train devices to provide a more robust communications link from the front to the back of long trains.

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

None.

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<sup>241</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>242</sup> See 13 C.F.R. § 121.201, NAICS code 334220.

<sup>243</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>244</sup> *Id.* An additional 18 establishments had employment of 1,000 or more.

<sup>245</sup> See 5 U.S.C. § 603(c).

## APPENDIX C

## Final Rules

Parts 2, 90 and 95 of Chapter 1 of Title 47 of the Code of Federal Regulations are amended as follows:

1. The authority citation for Part 2 continues to read as follows:

**Authority:** 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Section 2.106 is amended by revising note US350 to read as follows:

**§ 2.106 Table of Frequency Allocations**

\* \* \* \* \*

US350 In the band 1427-1432 MHz, Federal use of the land mobile service and non-Federal use of the fixed and land mobile services is limited to telemetry and telecommand operations as described further:

(a) *Medical operations.* The use of the band 1427-1432 MHz for medical telemetry and telecommand operations (medical operations) shall be authorized for both Federal and non-Federal stations.

(1) Medical operations shall be authorized in the band 1427-1429.5 MHz in the United States and its insular areas, except in the following locations: Austin/Georgetown, Texas; Detroit and Battle Creek, Michigan; Pittsburgh, Pennsylvania; Richmond/Norfolk, Virginia; Spokane, Washington; and Washington DC metropolitan area (collectively, the “carved-out” locations). See Section 47 C.F.R. 90.259(b)(4) for a detailed description of these areas.

(2) In the carved-out locations, medical operations shall be authorized in the band 1429-1431.5 MHz.

(3) Medical operations may operate on frequencies in the band 1427-1432 MHz other than those described in paragraphs (a)(1) and (2) only if the operations were registered with a designated frequency coordinator prior to **[insert date of Federal Register publication]**.

(b) *Non-medical operations.* The use of the band 1427-1432 MHz for non-medical telemetry and telecommand operations (non-medical operations) shall be limited to non-Federal stations.

(1) Non-medical operations shall be authorized on a secondary basis to the Wireless Medical Telemetry Service (WMTS) in the band 1427-1429.5 MHz and on a primary basis in the band 1429.5-1432 MHz in the United States and its insular areas, except in the carved-out locations.

(2) In the carved-out locations, non-medical operations shall be authorized on a secondary basis in the band 1429-1431.5 MHz and on a primary basis in the bands 1427-1429 MHz and 1431.5-1432 MHz.

\* \* \* \* \*

3. 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).**

4. Section 90.20 is amended by adding paragraph (e)(7) to read as follows:

\* \* \* \* \*

(e) \* \* \* \* \*

(7) Frequencies governed by section 90.35(c)(17) of this chapter.

\* \* \* \* \*

5. Section 90.35 is amended by removing paragraphs (c)(61)(v) and (c)(68)(iv), adding paragraphs (a)(5) and (c)(91), relocating the entry in the table in paragraph (b)(3) for “5850-5925” to the proper location in numerical order and revising it, and revising paragraph (c)(67) to read as follows:

**§ 90.35 Industrial/Business Pool.**

(a) \* \* \* \* \*

(5) Public Safety Pool eligibles are eligible for Industrial/Business Pool spectrum only to the extent that they are engaged in activities listed in paragraphs (a)(1)-(4) of this section. Industrial/Business Pool spectrum may not be utilized for the purposes set forth in Section 90.20(a) of this chapter.

\* \* \* \* \*

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

(3) *Frequencies.* \* \* \*

INDUSTRIAL/BUSINESS POOL FREQUENCY TABLE

Frequency or band	Class of station(s)	Limitations	Coordinator
* * * * *	* * * * *	* * * * *	* * * * *
27.86	Base or mobile	89	
* * * * *	* * * * *	* * * * *	* * * * *
5850-5925	do	90, 91.	Not applicable
* * * * *	* * * * *	* * * * *	* * * * *

\* \* \* \* \*

(c) \* \* \* \* \*



(67) Medical telemetry operations are authorized on this frequency on a secondary basis. Medical telemetry operations are subject to the provisions of § 90.267(h)(2).

\* \* \* \* \*

(91) Subpart M of this part contains rules for assignment of frequencies in the 5850-5925 MHz band.

\* \* \* \* \*

6. Section 90.103 is amended by revising the entries in the table in paragraph (b) for “1900 to 1950,” “1950 to 2000,” and “13,750 to 14,000,” and amending paragraph (c)(1), to read as follows:

**§ 90.103 Radiolocation Service.**

\* \* \* \* \*

(b) \* \* \*

Frequency or band	Class of station(s)	Limitation(s)
<b>Kilohertz</b>		
* * * 1900 to 1950 ..... 1950 to 2000 ..... * * *	* * * ...do..... ...do..... * * *	* * * 6, 25, 26, 27 and 28 6, 25, 27 and 28 * * *
<b>Megahertz</b>		
* * * 13,750 to 14,000 ..... * * *	* * * ...do..... * * *	* * * 29 * * *

(c) \* \* \* \* \*

(1) This frequency band is shared with and stations operating in this frequency band in this service are on a secondary basis to stations licensed in the Maritime Mobile Service.

\* \* \* \* \*

7. Section 90.175 is amended by revising paragraph (j)(5) and adding paragraphs (j)(19), (j)(20), (j)(21) to read as follows:

**§ 90.175 Frequency coordinator requirements.**

\* \* \* \* \*

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

(5) Applications in the Industrial/Business Pool requesting a frequency designated for itinerant operations.

\* \* \* \* \*

(19) Applications filed exclusively to return channels that had been authorized for commercial operation pursuant to Section 90.621(e) or (f) of this chapter to non-commercial operation (including removal of the authorization to interconnect with the public switched telephone network).

(20) Applications for a reduction in the currently authorized emission bandwidth or a deletion of an existing emission designator.

(21) Applications for a reduction in antenna height or authorized power.

8. Section 90.247 is amended by removing and reserving paragraphs (b) and (c) and modifying paragraph (f) to read as follows:

**§ 90.247 Mobile repeater stations.**

\* \* \* \* \*

(b) [Reserved]

(c) [Reserved]

\* \* \* \* \*

(f) When automatically retransmitting messages originated by or destined for hand-carried units, each mobile station shall activate the mobile transmitter only with a continuous access signal, the absence of which will de-activate the mobile transmitter. The continuous access signal is not required when the mobile unit is equipped with a switch that activates the automatic mode of the mobile unit and an automatic time-delay device that de-activates the transmitter after any uninterrupted transmission period in excess of 3 minutes. For the purposes of this rule section the continuous access signal can be achieved by use of digital or analog methods.

\* \* \* \* \*

9. Section 90.259 is amended by revising paragraph (b)(4)(ii) to read as follows:

**§ 90.259 Assignment and use of frequencies in the bands 216-220 MHz and 1427-1432 MHz.**

\* \* \* \* \*

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

(4) \* \* \* \* \*

(ii) Washington, DC metropolitan area—Counties of Montgomery, Prince George’s and Charles in Maryland; Counties of Arlington, Prince William, Fauquier, Loudon, and Fairfax, and Cities of Alexandria, Falls Church, Fairfax, Manassas and Manassas Park in Virginia; and District of Columbia;

\* \* \* \* \*

10. Section 90.267 is amended by removing paragraph (e)(3) and redesignating paragraph (e)(4) as (e)(3).

11. Section 90.353 is amended by revising paragraph (f) to read as follows:

**§ 90.353 LMS operations in the 902-928 MHz band.**

\* \* \* \* \*

(f) Multilateration EA licensees may be authorized to operate on both the 919.75-921.75 MHz and 921.75-927.75 MHz bands within a given EA (see § 90.209(b)(5)).

\* \* \* \* \*

12. Section 90.357 is amended by revising paragraph (a) to read as follows:

**§ 90.357 Frequencies for LMS systems in the 902-928 MHz band.**

\* \* \* \* \*

(a) Multilateration LMS systems will be authorized on the following LMS sub-bands:

LMS Sub-band	Forward Link <sup>1</sup>
904.000-909.750 MHz	927.750-928.000 MHz
919.750-921.750 MHz <sup>2</sup>	927.500-927.750 MHz
921.750-927.250 MHz	927.250-927.500 MHz

<sup>1</sup> Forward links for LMS systems may also be contained within the LMS sub-band. However, the maximum allowable power in these sub-bands is 30 Watts ERP in accordance with § 90.205(l).

<sup>2</sup> The frequency band 919.750-921.750 MHz is shared co-equally between multilateration and non-multilateration LMS systems.

\* \* \* \* \*

13. Section 90.621 is amended to read as follows:

**§ 90.621 Selection and assignment of frequencies.**

(a) Applicants for frequencies in the Public Safety and Business/Industrial/Land Transportation Categories must specify on the application the frequencies on which the proposed system will operate

pursuant to a recommendation by the applicable frequency coordinator. Applicants for frequencies in the SMR Category must request specific frequencies by including in their applications the frequencies requested.

(1) For trunked systems, the assignment of frequencies will be made in accordance with applicable loading criteria and in accordance with the following:

(i) Channels will be chosen and assigned in accordance with §§ 90.615, 90.617, or 90.619.

(ii) A mobile station is authorized to transmit on any frequency assigned to its associated base station.

(iii) There are no limitations on the number of frequencies that may be trunked. Authorizations for non-SMR stations may be granted for up to 20 trunked frequency pairs at a time in accordance with the frequencies listed in §§ 90.615, 90.617, and 90.619.

(2) For conventional systems the assignment of frequencies will be made in accordance with applicable loading criteria. Accordingly, depending upon the number of mobile units to be served, an applicant may either be required to share a channel, or, if an applicant shows a sufficient number of mobile units to warrant the assignment of one or more channels for its exclusive use, it may be licensed to use such channel or channels on an unshared basis in the area of operation specified in its application.

(i) Channels will be chosen and assigned in accordance with §§ 90.615, 90.617, or 90.619.

(ii) A mobile station is authorized to transmit on any frequency assigned to its associated base station.

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

\* \* \* \* \*

14. The authority citation for Part 95 continues to read as follows:

**Authority: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.**

15. Section 95.1101 is amended to read as follows:

**§ 95.1101 Scope.**

This subpart sets out the regulations governing the operation of Wireless Medical Telemetry Devices in the 608-614 MHz, 1395-1400 MHz, and 1427-1432 MHz frequency bands. See section 95.630 of this chapter regarding permissible frequencies.

16. Section 95.1103 is amended by revising paragraph (c) to read as follows:

**§ 95.1103 Definitions.**

\* \* \* \* \*

(c) Wireless medical telemetry. The measurement and recording of physiological parameters and other patient-related information via radiated bi-or unidirectional electromagnetic signals in the 608-614, 1395-1400 MHz and 1427-1432 MHz frequency bands.

17. Section 95.1111 is amended by revising paragraph (a) and adding paragraph (c) to read as follows:

**§ 95.1111 Frequency coordination.**

(a) Prior to operation, authorized health care providers who desire to use wireless medical telemetry devices must register all devices with a designated frequency coordinator. Except as specified in § 95.1105, operation of WMTS equipment prior to registration is not authorized under this Part. The registration must include the following information:

\* \* \* \* \*

(c) As of [insert date of Federal Register publication], no registrations may be accepted for frequencies where WMTS does not have primary status. Previously registered secondary facilities may continue to operate as registered.

18. Section 95.1115 is amended by revising paragraphs (a)(2) and (d)(1) as follows:

**§ 95.1115 General technical requirements.**

(a) \* \* \* \* \*

(2) In the 1395-1400 MHz and 1427-1432 MHz bands, the maximum allowable field strength is 740 mV/m, as measured at a distance of 3 meters, using measuring equipment with an averaging detector and a 1MHz measurement bandwidth.

\* \* \* \* \*

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

(1) In the 1395-1400 MHz and 1427-1432 MHz bands, no specific channels are specified. Wireless medical telemetry devices may operate on any channel within the bands authorized for wireless medical telemetry use in this part.

\* \* \* \* \*

19. Section 95.1121 is amended to read as follows:

**§ 95.1121 Specific requirements for wireless medical telemetry devices operating in the 1395-1400 and 1427-1432 MHz bands.**

Due to the critical nature of communications transmitted under this part, the frequency coordinator in consultation with the National Telecommunications and Information Administration shall determine whether there are any Federal Government systems whose operations could affect, or could be affected by, proposed wireless medical telemetry operations in the 1395-1400 MHz and 1427-1432 MHz bands. The locations of government systems in these bands are specified in footnotes US351 and US352 of § 2.106 of this chapter.



**APPENDIX D****Proposed Rules**

Part 90 of Chapter 1 of Title 47 of the Code of Federal Regulations are 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 90.7 is amended by adding definitions for “centralized trunked system” and “decentralized trunked system” in alphabetical order and by revising the definition of “trunked radio system” to read as follows:

**§ 90.7 Definitions.**

\* \* \* \* \*

*Centralized trunked system.* A system in which there is dynamic assignment of communications paths by automatically searching all communications paths in the system for and assigning to a user an open communications path within that system. Individual communications paths within a trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

\* \* \* \* \*

*Decentralized trunked system.* A system which monitors the communications paths within its assigned channels for activity within and outside of the trunked system and transmits only when an available communications path is found. Individual communications paths within trunked system may be classified as centralized or decentralized in accordance with the requirements of Section 90.187 of this chapter.

\* \* \* \* \*

*Trunked radio system.* A radio system employing technology that provides the availability to search two or more available communications paths and automatically assign a user an open communications path.

\* \* \* \* \*

3. Section 90.187 is amended to read as follows:

**§ 90.187 Trunking in the bands between 150 and 512 MHz.**

(a) Applicants for centralized and decentralized trunked systems operating on frequencies between 150 and 512 MHz (except 220-222 MHz) must indicate on their applications (radio service and class of station code, instructions for FCC Form 601) that their system will be trunked. Licensees of stations that are not trunked may trunk their systems only after modifying their license (see Section 1.927 of this chapter).

(b) Trunked systems operating under this section must employ equipment that prevents transmission on a trunked frequency if a signal from another system is present on that frequency. The level of monitoring must be sufficient to avoid harmful interference to other systems.

(c) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems operating in the 470-512 MHz band that meet the loading requirements of section 90.313 of this part and have exclusive use of their frequencies in their service area.

(d) The monitoring requirement in paragraph (b) of this section does not apply to centralized trunked systems if the application is accompanied by written consent from all affected licensees.

(1) Affected licensees for the purposes of this section are licensees (and previously filed pending applicants) meeting both of these criteria:

(A) Spectral overlap. Licensees (and filers of previously filed pending applications) with an assigned (or proposed) frequency having a spectral separation from a frequency of the proposed centralized trunked station that does not exceed these values:

Proposed Station	Incumbent Authorized Bandwidth		
	<i>20 kHz</i>	<i>11.25 kHz</i>	<i>6 kHz</i>
<i>25 kHz</i>	15.0 kHz	15.0 kHz	15.0 kHz
<i>12.5 kHz</i>	15.0 kHz	7.5 kHz	7.5 kHz
<i>6.25 kHz</i>	15.0 kHz	7.5 kHz	3.125 kHz

*The left column is the authorized bandwidth requested for the proposed trunked station. The second row is the authorized bandwidth of the incumbent. The other cells in the table show the frequency range above and below the frequency of the proposed centralized trunked station that must be considered.*

(B) Contour overlap. (i) Licensees (and filers of previously filed pending applications) with a service contour (37 dBu for stations in the 150-174 MHz band, and 39 dBu for stations in the 421-512 MHz band) that is overlapped by the proposed centralized trunked station's interference contour (19 dBu for stations in the 150-174 MHz band, and 21 dBu for stations in the 421-512 MHz band), or with an interference contour that is overlapped by the proposed centralized trunked station's service contour.

(ii) The calculation of service and interference contours shall be performed using generally accepted engineering practices and standards, including appropriate derating factors, agreed to by a consensus of all certified frequency coordinators. Frequency coordinators shall make this information available to the Commission upon request.

(2) Licensees (and filers of previously filed pending applicants) with no permanent base station may be deemed to be affected licensees for the purposes of this section only if center geographic coordinates are specified for the authorized operating area. In such a case, the contours set forth in paragraph (c)(1)(B) of this section shall be calculated with respect to a station located at the center coordinates.

(3) After January 1, 2013, licensees with an authorized bandwidth exceeding 12.5 kHz will not be deemed affected licensees, unless the licensee meets the efficiency standard set forth in section 90.203(j)(3) of this chapter.

(4) The written consent from an affected licensee shall state all terms agreed to by the parties and shall be signed by the parties. The written consent shall be maintained by the operator of the centralized trunked station and be made available to the Commission upon request. An application for a centralized trunked station shall include either a certification from the applicant that written consent has been obtained from all affected licensees, or a certification from the frequency coordinator that there are no affected licensees.

(5) The exclusive service area of a station that has been authorized for centralized trunked operation will be protected from proposed centralized trunked, decentralized trunked or conventional operations in accordance with the standards of subsections (d)(1)(A)(i) and (ii) above.

(d) Trunking of systems licensed on paging-only channels or licensed in the Radiolocation Service (subpart F) is not permitted.

(e) No more than 10 channels for new centralized trunked operation in the Industrial/Business Pool may be applied for at a single transmitter location or at locations with overlapping service contours as specified in paragraph (c)(1)(b) of this section. Subsequent applications for centralized trunked operation are limited to no more than an additional 10 channels, and must be accompanied by a certification, submitted to the certified frequency coordinator coordinating the application, that all of the applicant's existing channels authorized for centralized trunked operation at that location or at locations with overlapping service contours have been constructed and placed in operation. Certified frequency coordinators are authorized to require documentation in support of the applicant's certification that existing channels have been constructed and placed in operation. Applicants for Public Safety Pool channels may request more than 10 centralized trunked channels at a single location or at locations with overlapping service contours if accompanied by a showing of sufficient need. The requirement for such a showing may be satisfied by submission of loading studies demonstrating that requested channels in excess of 10 will be loaded with 50 mobiles per channel within a five year period commencing with the grant of the application.

(f) If a licensee authorized for centralized trunked operation discontinues trunked operation for a period of 30 consecutive days, the licensee, within 7 days thereafter, shall file a conforming application for modification of license with the Commission.

4. Section 90.238 is amended by revising paragraph (e) to read as follows:

**§ 90.238 Telemetry operations.**

\* \* \* \* \*

(e) In the 450-470 MHz band, telemetry operations will be authorized on a secondary basis with a transmitter output power not to exceed 2 watts on frequencies subject to § 90.20(d)(27) or § 90.35(c)(30), except that telemetry operations used by Railroad licensees may be authorized on frequency pair 452/457.9375 MHz with a transmitter output power not to exceed 8 watts.

\* \* \* \* \*

5. Section 90.303 is amended by adding paragraph (d) to read as follows:

**§ 90.303 Availability of frequencies.**

\* \* \* \* \*

(d) Applications for stations in the 470-512 MHz band operating on assigned frequencies allotted for bandwidths of 12.5 kHz or less must demonstrate that the proposed operations will neither cause more than five percent degradation to adjacent-channel licensees (and filers of previously filed pending applications) nor incur more than five percent degradation from adjacent-channel licensees (and filers of previously filed pending applications), using the interference criteria of Telecommunications Industry Association/Electronics Industry Association Telecommunications Systems Bulletin 88 (TIA/EIA/TSB-88), *Wireline Communications System - Performance in Noise and Interference-Limited Situations - Recommended Methods for Technology-Independent Modeling, Simulation, and Verification* (January 1998). For purposes of this paragraph, adjacent-channel licensees (and filers of previously filed pending applications) are stations with an authorized bandwidth of 20 kHz and an assigned frequency separated by 12.5 kHz or less from the proposed station, and stations with an authorized bandwidth of 11.25 kHz and an assigned frequency separated by 6.25 kHz or less from the assigned frequency of the proposed station.

6. Section 90.425 is amended by removing paragraph (e)(2), renumbering paragraph (e)(3) as (e)(2), and adding paragraphs (f) and (g) to read as follows:

**§ 90.425 Station identification.**

\* \* \* \* \*

(f) Stations subject to a station identification requirement will be permitted to use a single call sign for commonly owned facilities that are operated as part of a single system. The call sign must be transmitted each hour within five minutes of the hour, or upon completion of the first transmission after the hour.

(g) Stations licensed in the 150-170 MHz and 450-470 MHz bands that are licensed on an exclusive basis, and normally employ digital signals for the transmission of data, text, control codes, or digitized voice, may also be identified by digital transmission of the call sign. A licensee that identifies its call sign in this manner must provide the Commission, upon request, information sufficient to decode the digital transmission and ascertain the call sign transmitted.

**APPENDIX E**List of Commenters

Airspan Networks, Inc.  
AM Directional Antenna Performance Verification Coalition  
American Association of State Highway Transportation Officials (AASHTO)  
American Society For Healthcare Engineering Of The American Hospital Association (ASHE)  
Association of Public-Safety Officials-International, Inc. (APCO)  
Association of American Railroads (AAR)  
Bainbridge Township Fire Department  
Balsam Fire Department  
City of Brookfield, WI Fire Department  
The State of California (California)  
CARA Enterprises, Inc. (CARA)  
Richard M. Carami  
Chariton County Enhanced 911 Services  
Chilton County Fire and EMS Association  
Cisco Systems, Inc.  
Coleraine, Minnesota Police Department  
Communications Consulting Services (CCS)  
Cook County Fire Chiefs Mutual Aid Association  
Countryside Fire Protection District  
Data Flow Systems  
DeKalb County Hospital Association  
DeKalb County Association of Fire Departments Inc.  
DeKalb County Sheriffs Department  
City of Delafield, WI Fire Department  
Deer Creek Fire Protection District  
DuPage Public Safety Communications  
Elmore County E911  
Enterprise Wireless Alliance (EWA)  
Exalt Communications, Inc.  
Oveta R. Ford  
Forest Industries Telecommunications (FIT)  
Gallia County 911 Center  
GE Healthcare (GEHC)  
Timothy George for Meds 1 Emergency Medical Services  
Goldberg, Godles, Wiener & Wright  
Grundy County Emergency Telephone Systems Board  
Matthew F. Harker  
Hatfield & Dawson Consulting Engineers, LLC  
City of Hays Fire Department  
Icom  
Illinois Fire Chiefs Association  
Illinois Mutual Aid Box Alarm System Division 11  
International Association Of Fire Chiefs, Inc. (IAFC)  
International Municipal Signal Association (IMSA)  
University of Iowa Hospitals and Clinics  
Itasca County Sheriff's Department  
Itron, Inc. (Itron)



Johnson County Kansas  
Donnie Knight  
Lakehead Mutual Aid Association  
Land Mobile Communications Council (LMCC)  
Robert Lane  
M/A-COM, Inc.  
John Marcel  
MRFAC, Inc. (MRFAC)  
Metropolitan Water District of Southern California  
Millbrook Fire Department  
Motorola, Inc. (Motorola)  
The Mundelein Fire Department  
National Academy of Sciences' Committee on Radio Frequencies  
National Association of Manufactures (NAM)  
National Association of Regional Planning Committees  
National Public Safety Telecommunications Council (NPSTC)  
National Radio Astronomy Observatory  
National Science and Technology Network Inc.  
National Telecommunications and Information Administration  
Village of Oak Park, Illinois Fire Department  
City Of Ottawa, Illinois  
PCIA  
Peoria County, IL Emergency Telephone System Board  
Phillips Medical Systems (Phillips)  
Town of Pine Hill, Alabama  
Pine Hill Volunteer Fire Department  
Quadcom 911 Police & Fire Communications System  
Radiosoft  
Randolph County E911  
Lisa Reed  
Village of River Forest Illinois Fire Department  
City of Roanoke, Alabama, Police Chief  
City of Roanoke, Alabama, Fire Chief  
Shelby County Alabama E911  
Paul Spielman  
Sprint Nextel  
Tallassee Alabama Fire Department  
Telecommunications Industry Association  
Tennessee Emergency Management Agency (TEMA)  
Tropos Networks  
U.S. Department of Transportation  
Roger D. Wilson, Walker County 911  
The State of Wisconsin Department of Transportation (Wisconsin DOT)  
Zion Fire Rescue Department