

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

In the Matter of	)	
	)	
Reallocation of the 216-220 MHz,	)	WT Docket No. 02 - 08
1390-1395 MHz, 1427-1429 MHz,	)	RM-9267
1429-1432 MHz, 1432-1435 MHz,	)	RM-9692
1670-1675 MHz, and 2385-2390 MHz	)	RM-9797
Government Transfer Bands	)	RM-9854
	)	RM-9882

**NOTICE OF PROPOSED RULE MAKING**

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By the Commission: Commissioner Abernathy issuing a statement.

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## I. INTRODUCTION AND EXECUTIVE SUMMARY

1. In this Notice of Proposed Rulemaking (*Notice*), we propose new service rules for licensing a total of 27 megahertz of spectrum from the 216-220 MHz, 1390-1395 MHz, 1427-1429.5 MHz, 1429.5-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands. This spectrum was transferred from Government to non-Government use pursuant to the provisions of the Omnibus Budget Reconciliation Act of 1993 (OBRA-93)<sup>1</sup> and the Balanced Budget Act of 1997 (BBA-97).<sup>2</sup>

2. The service rules proposed in this *Notice* include provisions for licensing, technical (and operating) rules, competitive bidding, and interference standards. We note that portions of this spectrum are currently available and utilized by existing non-government licensees.<sup>3</sup> We solicit public comment on the flexibility that should be afforded new or incumbent licensees, and the technical and other service rules that should govern the range of existing and proposed services. We also anticipate authorizing new primary services in the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz bands.

3. We generally seek comment on the following issues under consideration for all of these bands:

- whether to authorize new services under either Part 27 or Part 101 of our Rules;
- whether to license new services by geographic service areas;
- whether to license band managers in these bands;
- whether to provide for partitioning and disaggregation of licensed spectrum; and
- whether to adopt technical rules in order to prevent in-band and out-of-band interference.

4. We also address several issues relating to existing services currently operating in these bands. We seek comment on the following issues:

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<sup>1</sup> Pub. L.103-66, 107 Stat. 312 (1993). The National Telecommunications and Information Administration (NTIA) submitted a report to the President, the Congress, and the Federal Communications Commission (FCC) outlining a transition timetable for the reallocation of this spectrum. National Telecommunications and Information Administration, U.S. Department of Commerce, Special Publication 95-32, *Spectrum Reallocation Final Report* (Feb. 1995) (*1995 NTIA Spectrum Reallocation Report*). Under the transition timetable proposed in that report, the 1390-1400 MHz, 1427-1432 MHz, and 1670-1675 MHz bands were scheduled for reallocation in January 1999. *Id.* at v.

<sup>2</sup> Pub. L.105-33, 111 Stat. 251 (1997). The National Telecommunications and Information Administration (NTIA) submitted a report to the President, the Congress, and the Federal Communications Commission (FCC) outlining a transition timetable for the reallocation of this spectrum through the process of competitive bidding. National Telecommunications and Information Administration, U.S. Department of Commerce, Special Publication 98-36, *Spectrum Allocation Report* (Feb. 1998) (*1998 NTIA Spectrum Reallocation Report*). Under that transition timetable proposed under this report, the 1385-1390 MHz and 1432-1435 MHz bands were scheduled for reallocation in January 1999. *Id.* at iv. The 216-220 MHz band was scheduled for reallocation in January 2002. *Id.*

<sup>3</sup> Prior to transfer from the Government, non-Government operations were operating in the 216-220 MHz and the 1427-1435 MHz bands. See 47 C.F.R. §§ 80.475, 90.248, 90.259, 95.801, 95.1001 and 95.1101.

- whether secondary telemetry in the 217-220 MHz and 1427-1429.5 MHz bands should be licensed on a site-by-site basis;
- whether primary telemetry in the 1429.5-1432 MHz band should be licensed on a site-by-site basis;
- whether to add technical specifications to Part 90 of our Rules for telemetry operations;<sup>4</sup>
- whether to apply the frequency coordination procedures of Section 90.175 to authorization of future telemetry operations.

5. Additionally, we propose service rules to augment the framework established in the *Reallocation Report and Order* that requires non-Federal Government users to coordinate with co-primary Federal Government incumbents. In this regard, we seek comment on the following issues:

- blanket coordination for LPRS;
- coordination of site-by-site and geographic area licensees with Federal Government incumbents;
- coordination procedures for licensees operating in the 1670-1675 MHz band near the METSAT station located at Greenbelt, MD.

6. With respect to non-Government incumbents who will remain in these bands, we seek comment on the following issues:

- coordination procedures for licensees in the 2385-2390 MHz band operating near non-Government aeronautical flight test telemetry sites;
- interim coordination procedures for terrestrial licenses along the Canadian and Mexican borders.

7. In accordance with Section 309(j) of the Communication Act, if we adopt a licensing scheme under which mutually exclusive applications are accepted for filing, we must resolve such mutually exclusive applications by competitive bidding.<sup>5</sup> We propose to conduct the auction of such licenses in

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<sup>4</sup> Prior to the release of the *Reallocation Report and Order*, Section 90.259 of our Rules permitted telemetry operations throughout the entire 216-220 MHz band and in the 1427-1435 MHz band. *See* 47 C.F.R. § 90.259 (2000). We note that in the *Reallocation Report and Order*, telemetry is limited to the 216-220 MHz band (secondary), the 1427-1429.5 MHz band (secondary) and the 1429.5-1432 MHz band (primary). New telemetry operations in the 216-217 MHz portion of the 216-220 MHz band will no longer be authorized after January 1, 2002. *See* Reallocation of 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 and Memorandum Opinion and Order*, ET Docket No. 00-221, FCC 01-382 at ¶ 26 (rel. January 2, 2002) (*Reallocation Report and Order*)

<sup>5</sup> 47 U.S.C. § 309(j).

conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of the Commission's Rules.<sup>6</sup>

8. Additionally, we seek comment on a petition for rulemaking filed on March 6, 2000, by Data Flow Systems, Inc., (Data Flow), requesting that the Commission amend Sections 90.35 and 90.259 of the Commission's Rules to allow the use of fixed telemetry in the 216-220 MHz band.<sup>7</sup> We also seek comment on a proposal filed by Securicor Wireless Holdings, Inc. (Securicor) in response to the *Reallocation Notice*.<sup>8</sup> Securicor seeks to license "white-space" in the 216-220 MHz band similar to the paradigm established for land mobile use of the 220-222 MHz band. Lastly, we request comment on a proposal submitted by Warren Havens (Havens) in response to the *Reallocation Notice* that seeks the creation of a new "Advanced Technologies 220 MHz" Service in the 216-225 MHz band.<sup>9</sup>

9. In a companion proceeding in ET Docket 00-221, the Commission recently reallocated the spectrum that is the subject of this *Notice*.<sup>10</sup> In response to that rulemaking, various parties recommended proposals on how best to utilize these bands to provide valuable services to the public.<sup>11</sup> Because we now consider service rules regarding this spectrum, we hereby incorporate by reference the record previously developed in the proceeding leading to the *Reallocation Report and Order*.<sup>12</sup>

10. The following chart summarizes the band plan consistent with the *Reallocation Report and Order* and the proposals in this *Notice*:

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<sup>6</sup> 47 C.F.R. § Part 1, Subpart Q.

<sup>7</sup> Petition for Rulemaking filed by Data Flow Systems, Inc. on March 6, 2000, RM-9882 (*Data Flow Petition for Rulemaking*). The Commission's Rules currently do not permit this use. See 47 C.F.R. §§ 90.35 and 90.259.

<sup>8</sup> See Securicor Comments filed on March 8, 2001 (*Securicor Comments*).

<sup>9</sup> See Warren Havens Comments filed on March 8, 2001 (*Havens Comments*).

<sup>10</sup> *Reallocation Report and Order*, *supra* note 4; Reallocation of 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 Rulemaking*, ET Docket 00-221, 15 FCC Rcd 22657 (2000) (*Reallocation Notice*).

<sup>11</sup> *Id.*

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

Review of Band Plan

**216-220 MHz Band**

216 MHz	217 MHz	218 MHz	219 MHz	220 MHz
Low Power Radio Service (Primary) (licensed by rule)	AMTS (Base) (Primary) (geographic area licensing proposed in PR Docket No. 92-257)	"218-219 MHz" Service (Primary) (geographic area licensing)	AMTS (Mobile) (Primary) (geographic area licensing proposed in PR Docket No. 92-257)  Amateur (Secondary)	
Telemetry Incumbents Grandfathered (Secondary) (site-by-site licensing)	Telemetry (Secondary) (site-by-site licensing)			

### 1.4 GHz Bands

1390 MHz	1392 MHz	1395 MHz	1427 MHz	1429.5 MHz	1432 MHz	1435 MHz
FS & MS† Commercial or Private (geographic area licensing)  MSS Feeder Uplinks*			WMTS (Primary) (blanket licensing)  Non-Medical Telemetry (Secondary) (site-by-site licensing)			Telemetry (Primary) (site-by-site licensing)  Grandfathered Telemetry (Secondary) (site-by-site licensing)  MSS Feeder Downlinks*
FS & MS† Commercial or Private (geographic area licensing)  (paired with 1432-1435 MHz)			FS & MS† Commercial or Private (geographic area licensing)  (paired with 1392-1395 MHz)			
			1430 MHz			1432 MHz

\*MSS Feeder Uplinks and Downlinks are contingent on international allocation and other constraints.<sup>13</sup>

† Indicates Mobile Service except Aeronautical Mobile.

### 1670-1675 MHz Band and 2385-2390 MHz Band

1670 MHz	1675 MHz	2385 MHz	2390 MHz
FS & MS† Commercial or Private (geographic area licensing)		FS & MS Commercial or Private (geographic area licensing)	

† Indicates Mobile Service except Aeronautical Mobile.

## II. BACKGROUND

11. In OBRA-93, Congress directed the Secretary of Commerce to identify at least 200 megahertz of spectrum used by the Federal Government for transfer to non-Government services. Accordingly, NTIA identified 235 megahertz of Government spectrum for transfer to non-Government use, including the 1390-1395 MHz, 1427-1432 MHz, and 1670-1675 MHz bands.<sup>14</sup> OBRA-93 also gave the Commission the authority to resolve mutually exclusive license applications by auctioning spectrum licenses in certain radio services.<sup>15</sup>

<sup>13</sup> 47 C.F.R. § 2.106, footnote US368. See *Reallocation Report and Order* at ¶ 52.

<sup>14</sup> See *1995 NTIA Spectrum Reallocation Report*.

<sup>15</sup> See § 6002(a) (codified at 47 U.S.C. § 309(j)).

12. In BBA-97, Congress directed the Secretary of Commerce to identify an additional twenty (20) megahertz of spectrum for transfer to non-Government use to be assigned in compliance with Section 309(j) of the Communications Act of 1934, as amended (Communications Act or the Act).<sup>16</sup> The National Telecommunications and Information Administration (NTIA) identified 20 megahertz<sup>17</sup> of spectrum for transfer, including the 216-220 MHz, 1432-1435 MHz, and 2385-2390 MHz bands.<sup>18</sup> BBA-97 expanded the Commission's auction authority by amending Section 309(j) of the Communications Act.<sup>19</sup> Specifically, BBA-97, as amended, requires the Commission to use competitive bidding to resolve mutually exclusive initial license or permit applications without regard to whether the spectrum is principally used for subscription-based services.<sup>20</sup> BBA-97 "gives the Commission discretion to evaluate which licensing mechanism is most appropriate for the services being offered."<sup>21</sup> Thus, the Commission is not foreclosed from implementing licensing schemes that are likely to result in mutual exclusivity if, in the exercise of its public interest analysis, the Commission determines that the potential benefits outweigh the potential costs of such a policy.<sup>22</sup>

13. On October 17, 1998, the President signed into law the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (NDAA-99).<sup>23</sup> NDAA-99 amended BBA-97 and the NTIA Organization Act<sup>24</sup> to require, *inter alia*, new non-Government licensees to reimburse incumbent Federal

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<sup>16</sup> See § 3002(e) (codified at 47 U.S.C. § 923(b)(3)). See also 47 U.S.C. § 309(j).

<sup>17</sup> Congress later amended the total amount of spectrum that NTIA was required to identify from not less than 20 to 12 megahertz. See National Defense Authorization Act for Fiscal Year 2000, Pub. L. 106-65, 113 Stat. 512 (1999), § 1062(c)(2) (codified as amended at 47 U.S.C. § 923(b)(3)(A)).

<sup>18</sup> In response to the requirements of BBA-97, NTIA also identified the 139-140.5 MHz, 141.5-143 MHz, and 1385-1390 MHz bands. See *1998 NTIA Spectrum Reallocation Report*. The Federal Government pursuant to the National Defense Authorization Act of Fiscal Year 2000 subsequently reclaimed these bands. See Pub. L. No. 106-65, 113 Stat. 512 (1999). We also note that NTIA's Report on Identification of Alternate Bands identifies portions of the 1.4 GHz band and the 1670-1675 MHz band as candidates for substitution under the Balanced Budget Act of 1997. See *Identification of Alternate Bands In Response to Title III of the Balanced Budget Act of 1997*, NTIA Special Publication 98-39 (rel. November 1998).

<sup>19</sup> See § 3002(a) (codified at 47 U.S.C. §§ 309(j)).

<sup>20</sup> Implementation of Section 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket 99-87, 15 FCC Rcd 22709, 22721 (2000) (*BBA Report and Order*), citing Amendment of the Commission's Rules Regarding Multiple Address Systems, WT Docket 97-81, *Report and Order*, 15 FCC Rcd 11956, 11962-63 ¶¶ 12, 13-15 (2000).

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at ¶ 27. See also *DIRECTV, Inc. v. FCC*, 110 F.3d 816, 828 (D.C. Cir. 1997) (recognizing that the Commission is not required to forego a policy scheme that furthers the public interest merely to avoid mutual exclusivity).

<sup>23</sup> See NDAA-99, Pub. L. 105-261, 112 Stat. 1920, § 1064(c)(3) (codified at 47 U.S.C. § 923(c)(3)(B)).

<sup>24</sup> 47 U.S.C. § 901 (1992). NDAA-99 specifically amended Section 113(g)(1) of the NTIA Organization Act. See NDAA-99, § 1064(c)(1)-(3) (codified as amended at 47 U.S.C. § 923(c)(1)-(3)).



entities in advance for the relocation costs incurred as a result of frequency spectrum reallocations.<sup>25</sup> Specifically, the statutory reimbursement provisions apply to any Federal entity only, “if before August 5, 1997, the Commission has not identified that spectrum for service or assigned licenses or otherwise authorized service for that spectrum.”<sup>26</sup> Thus, the bands of spectrum previously identified for reallocation pursuant to BBA-97; namely, the 216-220 MHz, 1432-1435 MHz, and 2385-2390 MHz bands, are also now eligible for statutory reimbursement pursuant to NDAA-99.<sup>27</sup>

14. In the *Reallocation Notice* leading up to the companion *Reallocation Report and Order*, the Commission proposed general rules and guidelines to implement NDAA-99.<sup>28</sup> Concurrently, as part of a separate but related proceeding, NTIA also sought and received comment on its proposed rules governing reimbursement to Federal Government stations that are currently operating on bands identified for reallocation pursuant to BBA-97, as amended by NDAA-99.<sup>29</sup> We note that the Commission's implementation of NDAA-99 is substantially dependent on the procedures to be promulgated by NTIA, which have not yet been released. To the extent that we find it necessary to adopt rules or procedures to implement NDAA-99, we will do so in a separate proceeding.

### III. DISCUSSION

#### A. Licensing Plan

15. The licensing plan we propose in the instant proceeding, in conjunction with the companion *Reallocation Report and Order*, is pursuant to our statutory obligation to reallocate and provide service rules for this spectrum for non-Government users.<sup>30</sup> This action continues the implementation of the framework articulated in the Commission's November 1999 *Spectrum Policy Statement*.<sup>31</sup> With increasing demand for radio services, our spectrum management activities must focus on promoting more efficient use

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<sup>25</sup> *Id.* BBA-97 authorized Federal Government entities to accept payment in cash or kind for vacating spectrum transferred from Government to non-Government use through the use of a relocation regime. See § 3002(d) (codified at 47 U.S.C. § 923(g)).

<sup>26</sup> NDAA-99, § 1064(d).

<sup>27</sup> Conversely, services that the Commission allocated prior to August 5, 1997 in bands subject to reimbursement would not be required to compensate Government entities for relocation. For example, services that would not be subject to reimbursement obligations would include those services allocated spectrum in the 216-220 MHz band prior to August 5, 1997 such as the low power radio service (LPRS), telemetry, automated maritime telecommunications (AMTS), and services in the 218-219 MHz band, formerly known as Interactive Video Data Service (“218-219 MHz” Service).

<sup>28</sup> *Reallocation Notice*, *supra* note 4.

<sup>29</sup> See Mandatory Reimbursement Rules for Frequency Band or Geographic Relocations of Federal Spectrum Dependent Systems, Department of Commerce, National Telecommunications and Information Administration, 66 Fed. Reg. 4771 (January 18, 2001) (to be codified at 47 C.F.R. § 301).

<sup>30</sup> See Omnibus Budget Reconciliation Act of 1993, Pub. L.103-66, 107 Stat. 312 (1993); Balanced Budget Act of 1997, Pub. L.105-33, 111 Stat. 251 (1997).

<sup>31</sup> *Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, Policy Statement*, 14 FCC Rcd 19868 (1999) (*Spectrum Policy Statement*).

of the spectrum as well as increasing the amount of spectrum available for new services while continuing to ensure access to adequate spectrum for essential incumbent services. As indicated in the *Spectrum Policy Statement*, we believe that a flexible allocation approach can allow licensees freedom to determine the services to be offered and the technologies to be used in providing those services.<sup>32</sup> This flexibility can allow licensees to make the most efficient use of their assigned frequencies in response to market forces. We also believe that this approach can facilitate a robust and competitive market in the provision of current and future wireless services.

16. We recognize that new technologies may be developed to utilize these frequency bands. Future technologies may blur both technical and regulatory distinctions resulting in technical and operational regulations that could inadvertently impinge on efficient spectrum use. Consequently, we seek to develop service rules that are not based on a Commission prediction of how these bands may ultimately be used, but instead reflect a record that enables us to establish maximum practicable flexibility. In light of these considerations, we seek comment on the following issues. Should new terrestrial services be governed by Part 27 of the Commission's Rules?<sup>33</sup> Would the application of the Part 27 Rules to these bands be in the public interest by contributing to technological and service innovation and improving the national telecommunications infrastructure?<sup>34</sup> Further, we seek comment on the benefits and costs, including potential interference, of such flexibility, and whether application of the Part 27 Rules is in the public interest.

17. New service rules in Part 27 should be able to accommodate a wide variety of potential fixed and mobile service uses, such as voice, video and data transmission.<sup>35</sup> For example, with regard to the unpaired 1670-1675 MHz band in particular, certain commenters in response to the *Reallocation Notice* suggested a variety of services such as satellite-enabled notification service, personal location and monitoring service, and broadband data services. We also recognize that we do not know precisely the type of services that licensees may seek to provide in the bands subject to this proceeding. Accordingly, we seek comment on whether potential licensees in the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz bands would benefit from the regulatory construct and additional flexibility of Part 27.<sup>36</sup>

18. Considering flexible use for fixed and mobile services in these bands is consistent with Section 303(y)(2) of the Communications Act,<sup>37</sup> as amended by the Balanced Budget Act of 1997.<sup>38</sup>

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<sup>32</sup> *Id.* at 9.

<sup>33</sup> 47 C.F.R. Part 27.

<sup>34</sup> The Commission has recognized that, where appropriate, "[f]lexible allocations may result in more efficient spectrum markets." *Spectrum Policy Statement*, 14 FCC Rcd at 19870-71 ¶ 9 (1999). As the Commission observed when it adopted service rules for the 39 GHz bands: "It is in the public interest to afford [ ] licensees flexibility in the design of their systems to respond readily to consumer demand for their services, thus allowing the marketplace to dictate the best uses for this band." Amendment of the Commission's Rules Regarding the 37.0- 38.6 GHz and 38.6-40 GHz Bands, *Report and Order and Second Notice of Proposed Rulemaking*, 12 FCC Rcd 18600, 18616 ¶ 26 (1997).

<sup>35</sup> See Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), *Report and Order*, GN Docket No. 96-228, 12 FCC Rcd 10785 (1997) (*Part 27 Report and Order*).

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

<sup>37</sup> See 47 U.S.C. § 303(y)(2).

Section 303(y)(2) grants the Commission authority to permit flexible use of this spectrum if the Commission finds that such use: (1) is in the public interest; (2) would not deter investment in communications services and systems, or technology development; and (3) would not result in harmful interference among users.<sup>39</sup>

19. To determine, pursuant to Section 303(y)(2) of the Act, whether flexible use is appropriate for the spectrum under consideration herein, we seek comment on whether permitting flexible use of this spectrum would (1) be in the public interest; (2) would deter investment in communications services and systems, or technology development; or (3) would result in harmful interference among users.<sup>40</sup> To the extent commenters believe such flexibility will deter investment, they should also suggest specific restrictions on how spectrum should be used by a licensee, and detailed analysis of the economic tradeoffs between flexibility and investment that justify any particular recommended use restriction. We seek to develop a record to help quantify any trade-offs between flexibility and investment in technology and new services. Such a record will assist us in structuring these rules so as to avoid deterring investment in new technology and communications services. We also seek comment regarding the extent to which significant flexibility in service rules may encourage such investments. We also specifically seek public comment on types of uses that pose the greatest risk of interference to uses planned by parties interested in using this spectrum.

20. As discussed below, consistent with our approach, we note that licensees may be required to comply with rules contained in other Parts of the Commission's Rules. For example, to the extent a licensee provides a Commercial Mobile Radio Service (CMRS), such service would also be subject to the provisions of Part 20 of the Commission's Rules.<sup>41</sup> Part 20 applies to all CMRS providers, even though the stations may be licensed under other Parts of the Rules. We seek comment generally on any provisions in existing, service-specific rules that may require specific recognition or adjustment to comport with the supervening application of Part 27, as well as any provisions that may be necessary in Part 27 to fully describe the scope of covered services and technologies. For instance, if a licensee provides a fixed service, we seek comment on whether there are any specific provisions in Part 101 of the Commission's Rules<sup>42</sup> to which a licensee should be subject, even though the licensee's stations would be licensed under Part 27. Further, we seek comment on whether it is most appropriate to apply Part 90 licensing and service rules to telemetry operations in the 1429.5-1432 MHz frequency band. We also seek comment on whether Part 90 has applicability to other telemetry and land mobile operations in these bands.

(Continued from previous page) \_\_\_\_\_

<sup>38</sup> See BBA-97.

<sup>39</sup> See 47 U.S.C. § 303(y)(2).

<sup>40</sup> See 47 U.S.C. § 303(y)(2)(B).

<sup>41</sup> 47 C.F.R. Part 20; see also 47 C.F.R. § 27.3(g), as amended by Service Rules for the 746-764 and 776-794 MHz Bands and Revision to Part 27 of the Commission's Rules, *First Report and Order*, 15 FCC Rcd 476 (2000) (*746-764 and 776-794 MHz First Report and Order*).

<sup>42</sup> 47 C.F.R. Part 101.

21. We also note that applications in these services will be filed using the Universal Licensing System (ULS).<sup>43</sup> ULS is the Commission's automated licensing system and integrated database for wireless services. ULS includes consolidated applications forms, which will enable licensees and applicants to file applications electronically, thus increasing the speed and efficiency of the application process. All licensees filing applications and other filings using FCC Forms 601 through 605 or associated schedules must make these filings in accordance with ULS.<sup>44</sup> Use of ULS will permit Commission staff to process filings more efficiently and will enhance the availability of pertinent licensing information to the public.

### 1. Table of Allocations

22. In the recently adopted *Reallocation Report and Order*, we established new frequency allocations for the spectrum bands that are the subject of this proceeding. A brief overview of the bands involved and the conclusions of that proceeding follow.

23. *216-220 MHz Band.* Non-Government incumbents operating in this band include (1) the Automated Maritime Telecommunications System (AMTS);<sup>45</sup> (2) the "218-219 MHz" Service (formerly the Interactive Video Data System Service);<sup>46</sup> (3) the Low Power Radio Service (LPRS);<sup>47</sup> (4) Telemetry<sup>48</sup> and wildlife/ocean buoy tracking;<sup>49</sup> and (5) the Amateur Radio Service.<sup>50</sup> We also note that TV Channel 13 at 210-216 MHz also affects certain operations in this band.<sup>51</sup> Government incumbent operations which

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<sup>43</sup> Biennial Regulatory Review -- Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97, and 101 of the Commission's Rules to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, WT Docket No. 98-20, Amendment of the Amateur Service Rules to Authorize Visiting Foreign Amateur Operators to Operate Stations in the United States, WT Docket No. 96-188, RM-8677, *Report and Order*, 13 FCC Rcd 21027 (1998) (*ULS Report and Order*).

<sup>44</sup> 47 C.F.R. § 1.913(b).

<sup>45</sup> See 47 C.F.R. § 80.475. AMTS is an integrated and interconnected maritime communications system operating in the 217-218 MHz and 219-220 MHz portions of the band.

<sup>46</sup> See 47 C.F.R. § 95.801. The "218-219 MHz" Service is a two-way radio service that allows licensees to provide communications services to subscribers in specific areas.

<sup>47</sup> 47 C.F.R. § 95.1001. LPRS is a private, short-distance communication service operating in the 216-217 MHz portion of the band. LPRS provides auditory assistance to persons with disabilities, health care assistance for the ill, law enforcement tracking services in cooperation with law enforcement and point-to-point network control for AMTS coast stations.

<sup>48</sup> 47 C.F.R. § 90.259.

<sup>49</sup> 47 C.F.R. § 90.248.

<sup>50</sup> 47 C.F.R. § 97.303. The Amateur Radio Service is authorized to operate in the 219-220 MHz segment of the band secondary to AMTS. Amateur use of the 219-220 MHz segment is limited to stations participating as forwarding stations in point-to-point fixed digital message forwarding systems.

<sup>51</sup> 47 C.F.R. §§ 80.475(a)(1) and 95.861.

will remain in the 216-220 MHz band include the U.S. Navy's Space Surveillance (SPASUR) Radar system.<sup>52</sup> In addition, the U.S. Coast Guard will continue to operate approximately 30 airsearch radars on a secondary basis in the 216-225 MHz band.<sup>53</sup> Finally, the Government will continue to operate fixed, aeronautical mobile and land mobile services on a secondary basis, limited to telemetering and telecommand operations, in the 216-220 MHz band.<sup>54</sup>

24. In the *Reallocation Report and Order*, we modified the allocation of the 216-220 MHz band to fixed and mobile, except aeronautical mobile, and retained the secondary status of telemetry operations, amateur operations, as well as wildlife/ocean buoy tracking operations.<sup>55</sup> Because of the large number of non-Government incumbents in this band, we concluded that it would be inappropriate to authorize new co-primary services in this band.<sup>56</sup> But we also recognized the important public services that the Low Power Radio Service (LPRS) provides and the technical difficulties and costly impact to consumers if forced to relocate. Accordingly, we elevated LPRS to primary status in the 216-217 MHz portion of the band.<sup>57</sup> In order to protect LPRS operations, however, we prohibit new Government and non-Government secondary telemetry assignments in the 216-217 MHz portion of the band after January 1, 2002.<sup>58</sup>

25. *1.4 GHz Band.* A total of 13 megahertz of spectrum located at the 1390-1392 MHz, 1392-1395 MHz, 1427-1429.5 MHz, 1429.5-1432 MHz and 1432-1435 MHz bands comprise what we will refer to throughout this document as the "1.4 GHz band." Prior to the *Reallocation Report and Order*, non-government incumbents in these bands included secondary telemetry<sup>59</sup> in the 1427-1435 MHz bands and wireless medical telemetry (WMTS)<sup>60</sup> in the 1429-1432 MHz band. Several companies operate secondary telemetry in these bands including, for example, utility telemetry that conducts automated meter-reading functions. Health care facilities plan to use WMTS to monitor physiological parameters of patients. Government incumbents remaining in the 1.4 GHz band include military sites in the 1390-1395 MHz band,<sup>61</sup> military airborne operations in the 1427-1432 MHz<sup>62</sup> and 1432-1435 MHz bands<sup>63</sup> and

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<sup>52</sup> See 1995 NTIA *Spectrum Reallocation Report* at 3-14, Table 3-2. The SPASUR sites operate on frequency 216.98 MHz with a 1 kHz bandwidth.

<sup>53</sup> See *Reallocation Report and Order* at ¶15.

<sup>54</sup> 47 C.F.R. § 2.106, footnote US210.

<sup>55</sup> See *Reallocation Report and Order* at ¶ 19.

<sup>56</sup> *Id.* at ¶ 27.

<sup>57</sup> *Id.* at ¶ 25.

<sup>58</sup> *Id.* at ¶ 26.

<sup>59</sup> See 47 C.F.R. § 90.259.

<sup>60</sup> See Subpart H of Part 95 of the Commission's Rules and Regulations.

<sup>61</sup> See 1995 NTIA *Spectrum Reallocation Report*, § 4, p. 3 and Table 4-1.

<sup>62</sup> See 1995 NTIA *Spectrum Reallocation Report*, § 4, p. 5 and Table 4-2.

<sup>63</sup> See 1998 NTIA *Spectrum Reallocation Report* at § 3, at 3-37 and Table 3-4.

unprotected radioastronomy (can include non-Government as well as Federal Government) throughout the 1350-1400 MHz bands.<sup>64</sup>

26. In the *Reallocation Report and Order*, we reallocated six megahertz of spectrum for fixed and mobile services, except aeronautical mobile, by pairing the 1432-1435 MHz band with the 1392-1395 MHz band.<sup>65</sup> In addition, we made two megahertz of unpaired spectrum, 1390-1392 MHz, available for fixed and mobile services, except aeronautical mobile.<sup>66</sup> We reallocated WMTS in the 1.4 GHz band from 1429-1432 MHz to 1427-1429.5 MHz.<sup>67</sup> We also retained a secondary allocation for telemetry in the 1427-1429.5 MHz band.<sup>68</sup> We upgraded the telemetry in the 1429.5-1432 MHz band to primary status<sup>69</sup> but retained the secondary status of all incumbent licensees pending the adoption of final rules in this proceeding.<sup>70</sup> Finally, we conditionally allocated low earth orbiting satellite (Little LEO) feeder uplinks in the 1390-1392 MHz band and feeder downlinks in the 1430-1432 MHz band.<sup>71</sup> The Little LEO operations<sup>72</sup> in the 1.4 GHz band are contingent on international allocation and other constraints applied to the bands for such operations.<sup>73</sup>

27. *1670-1675 MHz Band.* Up to this point, this band has been used strictly for Government operations. No non-Government operations are currently performed in this band. The Government Meteorological-Satellite Service (Space-to-Earth) will remain in this band.<sup>74</sup> In addition, radioastronomy operations are performed in the lower-adjacent band (1660-1670 MHz). In the *Reallocation Report and Order*, the Commission allocated the 1670-1675 MHz band for fixed and mobile services, except aeronautical mobile.<sup>75</sup>

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<sup>64</sup> 47 C.F.R. § 2.106, footnote US311.

<sup>65</sup> We restricted the mobile allocation to not permit airborne operations to protect sensitive adjacent channel operations. *Reallocation Report and Order* at Table 2 and ¶ 65.

<sup>66</sup> We restricted the 1390-1392 MHz band to no airborne operations because such operations in this band are incompatible with co-channel satellite uplinks and adjacent band radio astronomy operations. *Id.* at Table 2 and ¶ 50.

<sup>67</sup> *Id.* at Table 2 and ¶ 54.

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*

<sup>70</sup> *Id.* at n.181.

<sup>71</sup> *Id.* at Table 2 and ¶¶ 52, 55. Feeder links are typically the RF links between the satellite and large earth stations. They complete the path from the mobile earth station to a large fixed earth station that connects to the Public Switched Telephone Network. They are also used to control the satellite transponder.

<sup>72</sup> The Little LEO licensees are E-SAT, Inc., LEO One USA Corporation, Volunteers in Technical Assistance, Final Analysis Communications Services, Inc. and Orbital Communications Corporation.

<sup>73</sup> *Reallocation Report and Order* at Table 2 and ¶¶ 52, 55.

<sup>74</sup> See 1995 NTIA Spectrum Reallocation Report, § 4, p. 6.

<sup>75</sup> *Reallocation Report and Order* at ¶ 64.

28. *2385-2390 MHz Band.* The 2385-2390 MHz band is currently used for Government and non-Government operations. Government incumbents which will remain in this band include aeronautical flight test telemetry.<sup>76</sup> Non-Government incumbents include aeronautical flight test telemetry. In the *Reallocation Report and Order*, the Commission allocated the 2385-2390 MHz band for fixed and mobile services.<sup>77</sup>

## 2. Geographic Wide-Area Licensing

29. *Geographic Area Licensing.* We propose geographic area licensing in those bands where we anticipate establishing new services. These bands include the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands.

30. Our experience has been that wide-area licensing (as opposed to site-by-site licensing) affords licensees substantial flexibility to respond to market demand and may result in significant improvements in spectrum utilization.<sup>78</sup> In particular, geographic area licensing allows licensees to coordinate usage across an entire geographic area to maximize the use of spectrum in areas of highest demand. Geographic area licenses also provide licensees the flexibility to adjust spectrum usage depending upon market demands. Such adjustments may be significantly more difficult under a site-by-site licensing regime where prior Commission approval is needed before a licensee can address growth or changes in demand. Moreover, to the extent that geographic area licensing results in the conduct of auctions, it can also serve our public interest goals to promote “economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.”<sup>79</sup> We seek comment on our proposal to use geographic areas to license new services in these bands.

31. We seek comment on the appropriate geographic area to be used should we adopt a geographic area licensing approach for new services in these bands. When establishing geographic service areas, we must balance the competing need to provide large enough service areas and the need to choose geographic licensing areas that will permit the dissemination of licenses among a wide variety of applicants.<sup>80</sup> We also wish to ensure service to rural areas<sup>81</sup> and to promote investment in and rapid

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<sup>76</sup> See *1998 NTIA Spectrum Reallocation Report*, § 3, at 3-47 and Table 3-6.

<sup>77</sup> See *Reallocation Report and Order* at ¶ 71.

<sup>78</sup> See, e.g., Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, PR Docket No. 93-144, *First Report and Order*, *Eighth Report and Order*, and *Second Further Notice of Proposed Rule Making*, 11 FCC Rcd 1463 (1995) (restructuring licensing framework for 800 MHz Specialized Mobile Radio Service and adopting wide-area licensing). See also Gregory L. Rosston & Jeffrey S. Steinberg, *Using Market-Based Spectrum Policy to Promote the Public Interest*, 50 Fed. Comm. L.J. 87, 94 (1997).

<sup>79</sup> See 47 U.S.C. § 309(j)(3)(B).

<sup>80</sup> See 47 U.S.C. §§ 309(j)(3)(B), (4)(C).

<sup>81</sup> See 47 U.S.C. § 309(j)(3)(A).

deployment of new technologies and services.<sup>82</sup> The Commission licenses spectrum using a wide variety of geographic areas. The Commission licenses the 800 MHz cellular radiotelephone services using Metropolitan and Rural Service Areas (MSAs and RSAs).<sup>83</sup> The Commission licenses the 24 GHz band by Economic Areas (EAs).<sup>84</sup> The Commission licenses the 2.3 GHz band using the twelve Regional Economic Area Groupings (REAs) and the 52 Major Economic Areas (MEAs) which are derived from EAs.<sup>85</sup> The Commission licenses the 746-764 MHz and 776-794 MHz bands by six Economic Area Groupings (EAGs), which it also derived from EAs.<sup>86</sup>

32. In addition, in response to the *Reallocation Notice*, three commenters propose very different services for the 1670-1675 MHz band<sup>87</sup> -- all three, however, support licensing this band on a nationwide basis.<sup>88</sup> AeroAstro states that a nationwide license is a requisite part of the national roll-out it believes is necessary to justify the cost of developing a satellite-based version of the technology it proposes to implement.<sup>89</sup> ArrayComm states that entrants who offer new specialized wireless services must establish a national footprint in order to overcome the advantages of incumbent wireless providers.<sup>90</sup> MicroTrax states that without a national license their proposed personal location and monitoring system will be restricted to the "artificial fences" of a regional licensing plan.<sup>91</sup>

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<sup>82</sup> See 47 U.S.C. § 309(j)(4)(C)(iii).

<sup>83</sup> See Public Notice Report No. CI-92-40 "Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties," dated January 24, 1992, DA 92-109, 7 FCC Rcd 742 (1992). See also 47 C.F.R. § 22.909. There are 734 MSAs and RSAs.

<sup>84</sup> See Amendments to Parts 1, 2, 87, and 101 of the Commission's Rules to License Fixed Services at 24 GHz, *Report and Order*, WT Docket No. 99-327, 15 FCC Rcd 16934, 16942-16944 (2000) (*24 GHz Report and Order*). There are 172 EAs, as defined by the U.S. Department of Commerce, and three additional Commission-defined EA-like areas. The three additional EA-like services areas are: (1) Guam and the Northern Mariana Islands (combined as one service area); (2) Puerto Rico and the United States Virgin Islands (combined as one service area); and (3) American Samoa.

<sup>85</sup> See 47 C.F.R. § 27.6. See also *Part 27 Report and Order*, 12 FCC Rcd at 10814-16 ¶¶ 54-60. At the time of the 2.3 GHz auction, REAs were defined as Regional Economic Area Groupings (REAGs).

<sup>86</sup> See *700 MHz First Report and Order*, 15 FCC Rcd at 500 ¶ 56.

<sup>87</sup> AeroAstro proposes a satellite-enabled notification system capable of transmitting short data messages, from any location on the globe, for receipt via the Internet in near-real-time. MicroTrax proposes a personal location and monitoring service. ArrayComm proposes to provide broadband data service to portable devices moving at pedestrian, or slower, speeds. See AeroAstro, Inc. comments filed March 8, 2001 (*AeroAstro Comments*); ArrayComm, Inc. comments filed March 8, 2001 (*ArrayComm Comments*) and MicroTrax comments filed March 8, 2001 (*MicroTrax Comments*).

<sup>88</sup> AeroAstro Comments at 7; ArrayComm Comments at 48; and MicroTrax Reply Comments at 11.

<sup>89</sup> AeroAstro Comments at 7.

<sup>90</sup> ArrayComm Comments at 50-51.

<sup>91</sup> MicroTrax Reply Comments at 12.



33. In light of these comments, we tentatively conclude to license the 1670-1675 MHz band on a nationwide basis. We seek comment on this tentative conclusion. We also inquire whether similar reasoning used to support licensing on a nationwide basis for the 1670-1675 MHz band may be appropriate for licensing the paired 1392-1395 MHz and 1432-1435 MHz bands or the unpaired 1390-1392 MHz and 2385-2390 MHz bands. We also seek comment from any party who believes that smaller geographic areas should be established for these bands. Commenters who support licensing based on service areas other than those discussed above should explain why other types of service areas are more appropriate.<sup>92</sup>

### 3. Spectrum Blocks

34. Having proposed to license new services on a geographic area basis, we now seek comment on the appropriate amount of spectrum to be provided for each licensee in each band. The paired 1392-1395 MHz and 1432-1435 MHz bands offer a total of six megahertz of spectrum. The unpaired 1390-1392 MHz band offers a total of two megahertz of spectrum while the unpaired 1670-1675 MHz and 2385-2390 MHz bands offer a total of five megahertz of spectrum each. We seek comment on whether the spectrum in each of these bands should be licensed as one block, or broken down into two or more bandwidths, and whether there should be a mixture of spectrum blocks, depending on the service areas used for licensing.

35. In comments to the *Reallocation Notice*, ArrayComm states that dividing the 1670-1675 MHz band among the three commercial parties interested in the band would not be technically feasible.<sup>93</sup> ArrayComm states that their proposed mass market broadband wireless data service cannot be provided in less than 5 MHz of spectrum.<sup>94</sup> ArrayComm states that even if the Commission were to subdivide the band into two 2.5 MHz blocks, the probable necessity of internal guard bands would further reduce the usable spectrum below 2.5 MHz.<sup>95</sup> With respect to the 1670-1675 MHz band, we tentatively agree with ArrayComm's assessment. With respect to the balance of the spectrum available to new services in these bands, we also believe that licensing each band as a single block of spectrum per service area would maximize the value of the spectrum while reducing the number of technical and interference problems. For example the paired 1392-1395 MHz and 1432-1435 MHz bands could be licensed as one six megahertz block of paired spectrum per service area while the unpaired 1390-1392 MHz band could be licensed as one two megahertz block of unpaired spectrum per service area. We seek comment on our proposal.

### 4. Band Managers

36. In response to the *Reallocation Notice*, the Industrial Telecommunications Association,

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<sup>92</sup> One such approach might be the use of Component Economic Areas (CEAs) which are a subset of EAs. CEAs were developed by the Commerce Department and there are 348 CEAs. Commenters may wish to address whether the use of CEAs would be appropriate in these bands.

<sup>93</sup> See ArrayComm Comments at 51-54.

<sup>94</sup> *Id.* at 48.

<sup>95</sup> *Id.* at 49.

Inc. (ITA) stated support for licensing the paired 1392-1395 MHz and 1432-1435 MHz bands to band managers exclusively.<sup>96</sup> In a separate proceeding, we defined band managers as "a class of licensees that are specifically authorized to lease their licensed spectrum usage rights for use by third parties through private, contractual agreements, without having to secure prior approval by the Commission."<sup>97</sup> ITA indicates that a licensing framework utilizing the concept of band managers would optimize the use of available spectrum by providing continued protection for incumbents as well as maximum flexibility for potential licensees and new services.<sup>98</sup>

37. In the *BBA Report and Order*, the Commission recognized band manager licensing as an option for future licensing of private radio services<sup>99</sup> and, consequently, in the *Reallocation Report and Order*, we briefly discussed the prospects of licensing the paired 1392-1395 MHz and 1432-1435 MHz bands to band managers.<sup>100</sup> As part of the instant proceeding, we now seek comment on approaches by which we may permit more flexible use of the spectrum reallocated for licensees subject to this proceeding.<sup>101</sup>

38. As an initial matter, we seek comment on the feasibility of allowing licensees to operate as band managers for the newly reallocated spectrum in this proceeding. More specifically, unlike a previous band manager construct, where we designated an entire frequency band as a "band manager" band, we propose that for the spectrum specified herein, licensees would have the option of electing to operate either as a band manager or as a regular, non-band manager-type licensee.<sup>102</sup> We seek comment on how we can license both band managers and other types of spectrum users in one band.

39. Under our proposal, band managers could be seen as "spectrum brokers" and would continue to have the ability to lease spectrum usage rights to third parties through private, contractual agreements, without having to secure prior approval by the Commission. We propose, however, that band managers would be restricted to any service rules we adopt for them. We seek comment on whether this type of mixed-use licensing (band managers and non-band managers) would be appropriate for the paired 1392-1395 MHz and 1432-1435 MHz bands. We also seek comment on whether we should allow this type of mixed-use licensing for any or all of the unpaired 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz bands. We also seek comment on any potential disadvantages of a band manager approach here, especially related to the interference risks of any particular features of the spectrum in question.

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<sup>96</sup> See ITA Comments filed on March 8, 2001.

<sup>97</sup> Promoting Efficient Use of Spectrum Through Eliminating Barriers to the Development of Secondary Markets, *Notice of Proposed Rulemaking*, WT Docket No. 00-230, 15 FCC Rcd 24203, 24209 at ¶ 17 (2000) (*Secondary Markets Notice*).

<sup>98</sup> *Id.* at 3.

<sup>99</sup> *BBA Report and Order*, 15 FCC Rcd at 22727-22735.

<sup>100</sup> See *Reallocation Report and Order* at ¶ 49.

<sup>101</sup> *BBA Report and Order*, 15 FCC Rcd at 22727.

<sup>102</sup> See Service Rules for the 746-764 and 776-794 MHz Bands and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, WT Docket No. 99-168, 15 FCC Rcd 5299 (2000) (*Guard Band Second Report and Order*).

40. We seek comment on whether our spectrum management policies would be enhanced by permitting band managers the expanded flexibility to use their spectrum internally or provide telecommunications services, in addition to leasing it. If we were to permit such flexibility, should we also implement safeguards to ensure that a band manager's core function remains focused on leasing; and if so, how?<sup>103</sup> Additionally, we note that for licensees in existing private radio services, we historically have adopted eligibility restrictions.<sup>104</sup> Would similar provisions be necessary or feasible where the anticipated or potential use of the bands is both commercial and private? Also, should band managers in the subject bands be permitted to use the spectrum directly and construct their own facilities?<sup>105</sup> In other words, should we limit the concept of a band manager operating in the subject band to non-facilities-based operations so they are engaged only in the business of leasing spectrum? We also seek comment on whether it is necessary to provide additional safeguards to prevent a band manager from discriminating among spectrum users.

41. We also request comment on the type of information to be included in agreements between band managers and spectrum users should we permit band managers in any of these bands. We seek comment on whether the requirements the Commission established for agreements between Guard Band Managers and spectrum users in Part 27 of our Rules would be appropriate. For example, under Part 27 of our Rules, agreements between the Guard Band Manager and spectrum user(s) in the 700 MHz band must specify in detail the operating parameters of the proposed systems including power, antenna height, frequency(s) of operation, base station locations and area of operations.<sup>106</sup>

42. We also seek comment on whether we should require band managers to file annual reports on their spectrum usage with the Commission.<sup>107</sup> We seek comment on whether such agreements should ensure that band managers are responsible for violations of rules by users of the spectrum assigned to them, and whether band managers must provide the Commission with information on users to allow the Commission to limit interference and enforce our rules.<sup>108</sup>

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<sup>103</sup> See, e.g., *Guard Band Second Report and Order*, supra, note 102, (limiting band managers and affiliated entity spectrum use).

<sup>104</sup> See, e.g., 47 C.F.R. § 90.35(a) (requiring eligibility for Part 90 licenses on Industrial/Business Pool frequencies).

<sup>105</sup> In the *BBA Report and Order*, we consider this issue in the context of whether to permit a band manager in a particular service to act as a spectrum broker that leases spectrum and as a user of its licensed spectrum, with respect to future allocations, such as the instant proceeding. *BBA Report and Order*, 15 FCC Rcd at 22734.

<sup>106</sup> See 47 C.F.R. Part 27, Subpart G.

<sup>107</sup> See 47 C.F.R. § 27.607.

<sup>108</sup> See, e.g., Implementation of Sections 309(J) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 6803 (2000) (reviewing some of the considerations that the Commission might take into account in defining a band manager's rights and responsibilities in the context of particular services).

## 5. Treatment of Incumbents

43. As discussed in Section III.A.1., *supra*, several non-Government entities will continue to operate throughout the spectrum bands subject to this proceeding. Although we reallocated the 216-220 MHz band for fixed or mobile services, AMTS<sup>109</sup> and “218-219 MHz” Services will continue to operate in the 217-220 MHz portion of the band. Further, in the 216-217 MHz portion of the 216-220 MHz band we upgraded LPRS to primary status. Although we retained the allocation for secondary telemetry throughout the 216-220 MHz band, we also stated that we would no longer accept new applications in the 216-217 MHz band, and that after January 1, 2002, we would no longer permit new assignments for Government and non-Government operations in the 216-217 MHz band.<sup>110</sup> Similarly, in the 1.4 GHz bands, we reallocated WMTS from the 1429-1432 MHz band to the 1427-1429.5 MHz band.<sup>111</sup> In addition, we upgraded telemetry in the 1429.5-1432 MHz band to primary status, but retained the secondary status of non-medical telemetry in the 1427-1429.5 MHz band.<sup>112</sup>

### a. AMTS / 218-219 MHz / LPRS Services

44. The decisions we made in the *Reallocation Report and Order* accommodate the continued existence and licensing of AMTS, the “218-219 MHz” Service and LPRS in the 216-220 MHz band. Thus, we propose no service rule changes in this proceeding with regard to AMTS,<sup>113</sup> LPRS<sup>114</sup> or the “218-219 MHz” service.<sup>115</sup> We note that in the 216-220 MHz band, we already assign licenses in the “218-

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<sup>109</sup> The Commission adopted rules allowing AMTS licensees to serve fixed and mobile (including hand-held) units operating on land in areas around their stations so long as they give priority to communications from stations operating on the water. See Amendment of the Commission's Rules Concerning Maritime Communications, *Second Report and Order and Second Further Notice of Proposed Rule Making*, PR Docket No. 92-257, 12 FCC Rcd 16949, 16969 (1997).

<sup>110</sup> See *Reallocation Report and Order* at ¶¶ 26, 33. Consistent with this decision, beginning January 1, 2002, we are no longer accepting new applications for telemetry licenses in the 216-217 MHz frequency band, including applications for major modifications of existing licenses. See 47 C.F.R. § 1.929. New and major applications received after January 1, 2002, in the 216-217 MHz frequency band, will be returned as not accepted for filing.

<sup>111</sup> *Reallocation Report and Order* at Table 2 and ¶ 54.

<sup>112</sup> *Id.*

<sup>113</sup> AMTS base stations are currently licensed on a site-by-site basis along U.S. coastlines and inland waterways. Service rules for AMTS are being updated in the *AMTS Fourth R&O and Third NPRM*. Amendment of the Commission's Rules Concerning Maritime Communications; Petition for Rule Making filed by RegioNet Wireless License, LLC, PR Docket 92-257, *Fourth Report and Order and Third Further Notice of Proposed Rule Making*, PR 92-257, 15 FCC Rcd 22,585 (2000) (proposing to transition the AMTS from site-by-site licensing to geographic service area licensing) (*AMTS Fourth R&O and Third NPRM*).

<sup>114</sup> 47 C.F.R. § 95.1009. The Low Power Radio Service operates on frequencies between 216-217 MHz. LPRS is a private, short-distance communication service providing auditory assistance to persons with disabilities, health care assistance for the ill, law enforcement tracking services in cooperation with law enforcement and point-to-point network control for AMTS coast stations. LPRS is licensed by rule under Part 95 of our Rules, therefore, no individual station license is needed for LPRS operations.

<sup>115</sup> The service rules for the “218-219 MHz” Service were updated in the “218-219 MHz” Order. Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, (continued....)

219 MHz" service by competitive bidding, and we have proposed a geographic area licensing scheme for AMTS in the 217-218 MHz and 219-220 MHz sub-bands.<sup>116</sup>

#### b. Other Proposals

45. *Data Flow*. Data Flow requests that the Commission amend Sections 90.35 and 90.259 of the Commission's Rules.<sup>117</sup> Specifically, Data Flow requests that the "Class of Stations" column for frequency band 216-220 of the Industrial/Business Pool Frequency Table in Section 90.35, be amended from "Base or mobile" to "Fixed, base, or mobile."<sup>118</sup> Data Flow Systems also requests that Section 90.259 be amended to substitute the word "shall" for "may" to read as follows: "Base stations authorized in these bands *may* be used to perform telecommand functions with associated mobile telemetering stations."<sup>119</sup>

46. Data Flow states that water utility companies utilize fixed telemetry to ensure safe drinking water for the public and to protect the environment from contaminated runoff.<sup>120</sup> Data Flow contends that because of the dearth of satisfactory channels available in the 150-174 MHz or the 450-470 MHz bands, water utility companies have needed to use the 216-220 MHz band for fixed telemetry purposes.<sup>121</sup> Data Flow cites to previous grant waivers allowing water utility companies to operate fixed telemetry in the 216-220 MHz band.<sup>122</sup> We seek comment on Data Flow System's petition as it relates to future secondary telemetry operations in the 217-220 MHz band.<sup>123</sup>

47. *Securicor*. In its comments to the *Reallocation Notice*, Securicor sought to license "white space" in the 216-220 MHz band under a paradigm similar to the 220-222 MHz band (220 MHz Service).<sup>124</sup> Securicor states that expansion of the spectrally-efficient technology of the 220 MHz service to the 216-220 MHz band would allow greater use of the limited amount of unencumbered spectrum.<sup>125</sup>

(Continued from previous page) \_\_\_\_\_  
*Report and Order and Memorandum Opinion and Order*, WT Docket No. 98-169, RM-8951, 15 FCC Rcd 1497, 1499 ¶ 2 (1999) (*218-219 MHz Order*) (Recons. pending)

<sup>116</sup> See *AMTS Fourth R&O and Third NPRM*, *supra* note 113.

<sup>117</sup> *Data Flow Petition* at 3. Data Flow is a Florida corporation that manufactures and sells Supervisory Control and Data Acquisition (SCADA) telemetry systems to public and private water utility companies throughout the United States. *Id.*

<sup>118</sup> *Id.* See 47 C.F.R. § 90.35.

<sup>119</sup> 47 C.F.R. § 90.259 (emphasis added).

<sup>120</sup> *Data Flow Petition* at 1, 3.

<sup>121</sup> *Id.* at 3.

<sup>122</sup> *Id.* at 3-4.

<sup>123</sup> As we are no longer permitting new secondary telemetry operations at 216-217 MHz, Data Flow's petition is now limited to the 217-220 MHz sub-band.

<sup>124</sup> See Securicor Comments at 5. Securicor is a service provider in the 220 MHz Service.

<sup>125</sup> *Id.* at 5.

Securicor suggests that we establish 5 kHz channels but allow aggregations, partitioning, disaggregation and spectrum leasing to provide flexibility.<sup>126</sup> Securicor states that incumbent operations could be protected under current rules and that incumbents should be allowed to acquire licenses during auctions to expand their operations.<sup>127</sup>

48. In the *Reallocation Report and Order*, we declined Securicor's request with respect to the 216-217 MHz portion of the band because of the need to protect LPRS operations.<sup>128</sup> Nonetheless, in the *Reallocation Report and Order*, we deferred action on Securicor's request as it relates to the remaining portion of the 216-220 MHz band.<sup>129</sup> In this regard, we note that the heavy incumbent use of the 217-220 MHz band would make it difficult to create a new band plan to accommodate Securicor's request. The balance of the band is either already subject to competitive bidding (218-219 MHz) or proposed to be assigned by competitive bidding (AMTS). Nonetheless, we ask whether there are efficiencies to be gained by implementing Securicor's proposal because of the adjacent 220-222 MHz Service.

49. *Warren Havens*. In comments filed in response to the *Reallocation Notice*, Warren Havens requests the Commission authorize "advanced technologies services" in the 216-225 MHz band which would be governed under a corollary set of service rules.<sup>130</sup> Havens suggests that new "advanced technologies services" could include a National Environmental Wireless Service (NEWS) for environmental and wildlife monitoring, or 4<sup>th</sup> generation wireless technologies.<sup>131</sup> In the *Reallocation Report and Order*, we declined to make changes to the 216-217 MHz portion of the band in order to protect LPRS operations.<sup>132</sup> Nonetheless, in the *Reallocation Report and Order*, we deferred action on Havens' request as it relates to the remaining portion of the 216-220 MHz band.<sup>133</sup> We believe that Havens' proposal would not be feasible due to the heavy incumbent use of the 217-220 MHz band. Nonetheless, we take this opportunity to solicit public comment on Havens' proposal with respect to the 217-220 MHz band.

### c. Itron-AHA Joint Agreement

50. In the *Reallocation Report and Order*, we noted that we would consider a band swap

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<sup>126</sup> *Id.* at 6.

<sup>127</sup> *Id.* at 7.

<sup>128</sup> See *Reallocation Report and Order* at ¶ 35.

<sup>129</sup> *Id.*

<sup>130</sup> See Havens Comments at 3. Havens holds AMTS authorizations to serve five inland navigable waterways and also holds licenses in the 220-222 MHz service.

<sup>131</sup> *Id.* at 4-8.

<sup>132</sup> See *Reallocation Report and Order* at ¶ 35.

<sup>133</sup> *Id.*

proposal from AHA and Itron in this proceeding.<sup>134</sup> In general, the AHA/Itron proposal would in effect switch the primary allocation between Medical Telemetry and Telemetry in seven defined geographic areas,<sup>135</sup> so that WMTS would be primary at 1429.5-1432 MHz in these areas, and Telemetry would be primary at 1427-1429.5 MHz.<sup>136</sup> AHA and Itron propose to further subdivide the band into smaller segments.

51. To support their proposal, AHA/Itron point out that Itron has invested in building out infrastructure in these seven areas under the current secondary allocation. If the incumbent were forced to remain secondary vis-à-vis WMTS, it would not be able to operate and that investment would be sacrificed. If we were to grandfather incumbent operation in those seven areas on a primary basis and not provide WMTS with the corresponding sites in the 1429.5-1432 MHz band, then WMTS would not be able to operate on a nationwide basis.

52. We tentatively conclude that it is in the public interest to support AHA and Itron's proposal in broad terms, and that a footnote should be added to the Table of Frequency Allocations that would elevate the telemetry allocation to primary status in the 1427-1429.5 MHz band in the seven geographic areas, and specify WMTS as primary in the corresponding seven areas in the 1429.5-1432 MHz band. We seek comment on this tentative conclusion. We decline to propose the further segmentation. Under our proposal, non-medical telemetry licensees will have access to the full 2.5 MHz at 1427-1429.5 MHz in the seven geographic areas and Medical Telemetry will have access to the full 2.5 MHz at 1429.5-1432 MHz in the seven geographic areas. Accordingly, it appears that interested parties can choose to implement more detailed band segmentation on a contractual basis.

#### **d. Limiting Telemetry in the 1.4 GHz Band**

53. Prior to the release of the *Reallocation Report and Order*, telemetry was authorized on a secondary basis in the 1427-1435 MHz band pursuant to Section 90.259 of our Rules.<sup>137</sup> In the *Reallocation Report and Order*, we upgraded telemetry in the 1429.5-1432 MHz band to primary status, eliminated all secondary telemetry operations from the 1432-1435 MHz band, and retained the secondary allocation for telemetry operation in the 1427-1429.5 MHz band.<sup>138</sup> Thus, in the *Reallocation Report and Order*, we provided WMTS with 2.5 MHz of spectrum at 1427-1429.5 MHz and allocated the upper-adjacent allocation at 1429.5-1432 MHz to fixed and mobile telemetry, excluding aeronautical mobile.<sup>139</sup>

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<sup>134</sup> *Id.* at ¶ 58.

<sup>135</sup> AHA/Itron propose switching the primary allocation between medical telemetry and telemetry in the following locations: Pittsburgh, PA, Washington, DC metropolitan area, Richmond/Norfolk, VA, Austin/Georgetown, TX, Battle Creek, MI, Detroit, MI and Spokane, WA.

<sup>136</sup> See attachment to Itron comments filed March 8, 2001. Attachment is entitled Joint Statement of Position by the American Medical Hospital Association Task Force on Medical Telemetry and Itron, Inc. (*Joint Statement*).

<sup>137</sup> 47 C.F.R. § 90.259.

<sup>138</sup> See *Reallocation Report and Order* at Table 2 and ¶ 54.

<sup>139</sup> *Id.*

54. In comments to the *Reallocation Notice*, the AHA states that WMTS can function in 2.5 MHz of spectrum at 1427-1429.5 MHz if the lower-adjacent spectrum is occupied by passive radioastronomy and the upper-adjacent spectrum is occupied by a few easily identifiable "fixed utility telemetry systems."<sup>140</sup> AHA indicates, however, that if WMTS is surrounded by higher power land mobile operations, then additional spectrum will be needed to deploy a "guard band."<sup>141</sup>

55. In the *Reallocation Report and Order*, we indicated that we would consider, in this service rules proceeding, whether it would be necessary to restrict the service uses of the telemetry allocation to telemetry operations used by utility companies or to otherwise adopt technical restrictions to protect adjacent WMTS operations, in light of AHA's concerns.<sup>142</sup>

56. Consequently, we now seek comment on what, if any, restrictions on secondary telemetry at 1427-1429.5 MHz and primary telemetry at 1429.5-1432 MHz are necessary to protect WMTS from harmful interference. AHA provides several suggestions for restricting telemetry in these bands. AHA proposes 1) restricting telemetry operations to utility telemetry; 2) restricting telemetry operations to fixed telemetry; and/or 3) limiting the power levels of telemetry operations from 100 watts to 10 watts to 1 watt as frequencies approach the WMTS-primary band (1427-1429.5 MHz).<sup>143</sup> We seek comment on AHA's proposals as they relate to protecting WMTS from harmful interference. Parties should comment on the merits of each of the three major points, taking into consideration the importance of reliable medical telemetry operations to the public and the need for particularly conservative interference analyses. For example, commenters who support limiting telemetry in these bands to utility-specific operations should explain whether other forms of (non-utility) telemetry operations would cause harmful interference to WMTS.

57. Finally, we note that there are several non-utility, non-fixed licensees operating telemetry systems in the 1427-1429.5 MHz and 1429.5-1432 MHz bands.<sup>144</sup> Consequently, if we were to limit the telemetry in these bands to utility telemetry and/or fixed telemetry, we seek comment on what approach would best account for the existence of these entities, including whether we should relocate or grandfather incumbent non-utility entities or "non-fixed" users of telemetry operations. Commenters supporting relocation should identify viable alternative frequency band(s) for these operations.

#### e. Site-by-Site Licensing for Telemetry

58. The Commission has historically licensed telemetry operations in the 216-220 MHz and 1427-1432 MHz band on a site-by-site basis.<sup>145</sup> We are, however, not bound to retain this licensing scheme either by default or as an alternative to geographic areas. Indeed, we have flexibility to continue to make determinations "on a service-by-service basis of whether to adopt geographic area licensing, site-by-

<sup>140</sup> AHA *Ex Parte* comments, filed on August 29, 2001, at 2.

<sup>141</sup> AHA *Ex Parte* comments, filed on June 12, 2001, at 3.

<sup>142</sup> See *Reallocation Report and Order* at ¶ 57.

<sup>143</sup> See AHA *Ex Parte* comments, filed on August 29, 2001, at 5.

<sup>144</sup> A database search of the Commission's Universal Licensing System reveals seven licensees between 1427-1432 MHz who operate non-utility and/or non-fixed telemetry.

<sup>145</sup> 47 C.F.R. § 90.259. To date, these operations have not been coordinated. See *infra* ¶ 64.



site licensing, or any other licensing scheme” based upon our statutory public interest obligations.<sup>146</sup> In making such a determination, we also recognize that, as part of our public interest analysis, we should “give significant consideration to the effectiveness of the existing licensing mechanism that avoids mutual exclusivity, and should weigh the potential costs of changing such mechanisms against the potential benefits.”<sup>147</sup> We now consider how to license telemetry.

**(i) Secondary Telemetry (217-220 MHz and 1427-1429.5 MHz).**

59. In the *Reallocation Report and Order*, we retained the secondary status of telemetry in the 216-220 MHz band, although we prohibited new secondary telemetry assignments in 216-217 MHz portion of the band after January 1, 2002.<sup>148</sup> We also retained the secondary status of non-medical telemetry in the 1427-1429.5 MHz band.<sup>149</sup> We believe that we should continue to license secondary telemetry operations in the 217-220 MHz and 1427-1429.5 MHz bands on a site-by-site basis. While we generally favor geographic area licensing for new services, we also recognize that this type of licensing scheme is not appropriate for every licensing situation. In this instance, we note that the secondary status of telemetry operators in the 217-220 MHz band means that they must not cause harmful interference to the primary operations of AMTS and the “218-219 MHz” Service. Similarly, the secondary status of non-medical telemetry operators in the 1427-1429.5 MHz band means that they must not cause harmful interference to the primary operations of WMTS. Secondary operations must always defer to primary incumbents in an environment where these primary incumbents may increase operations and have preference. Consequently, it appears that geographic area licensing for secondary telemetry in these bands would be neither workable nor efficient. Thus, we tentatively conclude that it would not serve the public interest goals of Section 309(j)(3) to license secondary telemetry on a geographic area basis. We seek comment on this tentative conclusion.

**(ii) Primary Telemetry (1427-1432 MHz band)**

60. In the *Reallocation Report and Order*, we upgraded telemetry in the 1429.5-1432 MHz band to primary status and reallocated WMTS from the 1429-1432 MHz band to the 1427-1429.5 MHz band. Under this revised band plan primary telemetry occupies the upper-adjacent band to WMTS’s new allocation. As we previously indicated, AHA states that WMTS would prefer if the upper-adjacent band were limited to a few easily identifiable fixed sites.<sup>150</sup> We also note that AHA is requesting primary status over non-medical telemetry in the 1429.5-1432 MHz band throughout seven distinct geographic “carve-out” areas.<sup>151</sup> In light of these considerations, we believe that a site-by-site licensing method – as opposed to a geographic area licensing method – will provide greater assurance for protection of WMTS.

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<sup>146</sup> *BBA Report and Order* at 22725; *see also* 47 U.S.C. § 309(j).

<sup>147</sup> *BBA Report and Order* at 22725.

<sup>148</sup> *See Reallocation Report and Order* at ¶¶ 26, 33.

<sup>149</sup> *Id.* at ¶ 54.

<sup>150</sup> AHA *Ex Parte* comments, filed August 29, 2000, at 2.

<sup>151</sup> *Id.* *See also supra* ¶¶ 50-52 where we tentatively conclude that it is in the public interest to elevate the telemetry allocation to primary status in the 1427-1429.5 MHz band in the seven geographic areas, and specify WMTS as primary in the corresponding seven areas in the 1429.5-1432 MHz band.

Consequently, we tentatively conclude to retain our current method of licensing telemetry on a site-by-site basis in the 1429.5-1432 MHz band as well as in the seven distinct geographic "carve-out" areas in the 1427-1429.5 MHz band. We seek comment on this tentative conclusion.

61. While we propose to license primary telemetry in the 1427-1432 MHz band on a site-by-site basis, this proposal does not necessarily foreclose the possibility that mutually exclusive applications may be filed. Accordingly, any such mutually exclusive applications would be resolved through competitive bidding. With respect to standards for determining whether specific telemetry systems in this band can coexist (i.e., whether two applications are grantable), we request comment on whether mileage or other factor(s) should be used. If a mileage standard is appropriate, we initially propose that the separation distance between co-channel systems be 112 km. (70 mi.). We also request comment regarding exceptions to any proposed separation distance, such as exceptions based on particular geographic topography issues, technology/power issues, etc. Further, we seek comment on what procedures for filing site-by-site applications would be appropriate. In some site-by-site contexts, such as Mass Media AM broadcast licensing, we open a window with a filing deadline for applications, after which those applications that are determined to be mutually exclusive proceed to auction under our competitive bidding procedures.<sup>152</sup> In other site-by-site contexts, such as Part 90 land mobile radio licensing, we utilize a first-come first-served construct without windows or "gates."<sup>153</sup> We seek comment on these procedures and alternative methods that might be used. Notwithstanding the potential and relative difficulty of coordinating WMTS operations with fixed primary telemetry throughout a geographic area, we do not foreclose consideration of geographic area licensing as an alternative to licensing on a site-by-site basis. Given these considerations, we seek comment on whether it would be preferable to license primary telemetry based on geographic areas.

#### f. Incumbent Telemetry Operations

62. In the *Reallocation Report and Order*, we upgraded the allocation for telemetry in the 1429.5-1432 MHz band to primary status. Nonetheless, we retained the secondary status of all incumbent telemetry operations licensed prior to adoption of final rules in this proceeding.<sup>154</sup> Should we eventually grandfather incumbents in this band,<sup>155</sup> we seek comment on whether these licensees should have the option to request primary status prior to the licensing of new entrants to this band. This option would be available only to facilities grandfathered and operating in the 1429.5-1432 MHz band as of the release date of this item. Incumbents would not be allowed to expand their grandfathered operations and request primary status before new entrants are allowed into the band. A list of licensees operating in the 1429.5-1432 MHz band – as of the release date of this item – is provided in Appendix B.

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<sup>152</sup> See Implementation of Section 309(j) of the Communications Act – Competitive Bidding for Commercial Broadcast and Instructional Television Fixed Service Licenses, MM Docket No. 97-234, *First Report and Order*, 13 FCC Rcd 15920, 15972-15980 ¶¶ 136-154 (1998).

<sup>153</sup> See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, *Notice of Proposed Rule Making*, 14 FCC Rcd 5206, 5216 ¶ 13 (1999).

<sup>154</sup> See *Reallocation Report and Order* at note 181.

<sup>155</sup> Earlier in this *Notice*, we sought comment on whether to grandfather these incumbents or remove them from the band in order to protect WMTS from harmful interference. See *supra* ¶¶ 50-52.

63. We propose to require all grandfathered licensees who desire primary status to file an application on the Universal Licensing System. The licensee would submit all technical information about each grandfathered facility. We note that there is one incumbent in this band who is licensed for a wide geographic area as opposed to a specific site with a radius.<sup>156</sup> Therefore, we propose to require applicants requesting primary status, for grandfathered facilities, to identify their area of operation by county or by using a radius centered on a point. We seek comment on our proposal.

**g. Frequency Coordination for Telemetry**

64. To date, we have not required frequency coordination for telemetry systems in the 216-220 MHz and 1427-1432 MHz bands,<sup>157</sup> because these systems have operated under secondary status. All telemetry applications have, however, been referred to the Frequency Advisory Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Applications were granted if they received FAS approval. The procedure existed because the Commission had concluded that a private coordinator cannot provide coordination for frequencies that must be shared with and require the concurrence of the Federal Government.<sup>158</sup>

65. In accordance with our decision in the *Reallocation Order*, most telemetry applications will no longer require FAS approval.<sup>159</sup> Thus, assuming secondary telemetry at 217-220 MHz and 1427-1429.5 MHz continues to be licensed on a site-by-site basis, we propose, in lieu of the former requirement for FAS approval, a new requirement for traditional land mobile frequency coordination for telemetry applicants in these bands. Under these procedures, each application proposing a new telemetry operation or modifying an existing telemetry operation would be required to include a showing of frequency coordination. Coordination would be conducted pursuant to Section 90.175 of the Commission's Rules.<sup>160</sup> We seek comment on our proposal.

**h. Part 90 Technical Rules for Telemetry**

66. We note that telemetry operations in 216-220 MHz band and the 1427-1432 MHz band are currently authorized under Part 90 of our Rules.<sup>161</sup> Part 90 provides no technical specifications or channel plan for telemetry operations in these bands. Rather, power and authorized bandwidth are specified on the station authorizations on a case-by-case basis.<sup>162</sup> We believe that technical specifications

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<sup>156</sup> See Appendix B. Station WPCG645 is licensed to Itron, Inc. for temporary fixed and mobile operations throughout continental U.S.

<sup>157</sup> See 47 C.F.R. § 90.175(i)(13).

<sup>158</sup> In the Matter of Frequency Coordination in the Private Land Mobile Radio Services, PR Docket No. 83-737, *Report and Order*, 103 FCC 2d 1093, 1149-1150 ¶ 114 (1986).

<sup>159</sup> Only certain fixed and mobile telemetry applications will need FAS referral. See *infra* ¶¶ 124-127.

<sup>160</sup> 47 C.F.R. § 90.175.

<sup>161</sup> 47 C.F.R. § 90.259.

<sup>162</sup> In the Matter of Amendment of Parts 2, 87 and 91 of the Rules to Delete Provisions for Aeronautical Telemetering and to Make Provisions for Land Mobile Telemetering in the Industrial Radio Services in the Frequency Band 216-220 MHz, *Report and Order*, Docket No. 18924, 29 FCC 2d 360, 363 ¶ 11 (1971).

and a channel plan are now necessary because most telemetry applications in these bands will no longer require FAS approval.

67. Specifically, we seek comment on what power limits and antenna height limits are necessary for secondary telemetry in the 216-220 MHz and 1427-1429.5 MHz bands and for primary telemetry in the 1429.5-1432 MHz band. To maximize spectrum efficiency, we also seek comment on whether minimum antenna directionality requirements would be necessary. We also request comment on the feasibility of defining certain technical frequency stability limits, bandwidth limits, or limits on emissions appearing outside the authorized bandwidth.

68. Commenters who propose technical limits should consider that: (1) secondary telemetry in the 216-220 MHz band must protect SPASUR sites,<sup>163</sup> adjacent TV Channel 13,<sup>164</sup> LPRS, AMTS and “218-219 MHz” service from harmful interference; (2) non-medical telemetry in the 1427-1429.5 MHz band must protect primary WMTS;<sup>165</sup> and (3) primary telemetry in the 1429.5-1432 MHz band and WMTS in the lower-adjacent should not cause harmful interference to one another.

69. We also seek comment on a channel plan for telemetry in the 216-220 MHz, 1427-1429.5 MHz and 1429.5-1432 MHz bands. Part 90 services generally employ a variety of channel bandwidths. For example, a channel spacing of 7.5 kHz is employed in the 150-174 MHz band, a channel spacing of 12.5 kHz is employed in the paired 821-824 MHz and 866-869 MHz bands while a channels spacing of 25 kHz is employed in the paired 806-821 MHz and 851-866 MHz bands.<sup>166</sup> Finally, once a channel plan is established, we seek comment on whether to allow telemetry licensees to aggregate i.e. combine their channels.

## 6. Assignment of Licenses

70. The Balanced Budget Act of 1997 revised the Commission’s auction authority.<sup>167</sup> Specifically, it amended Section 309(j) of the Act to require the Commission to grant licenses through the use of competitive bidding when mutually exclusive applications for initial licenses are filed, unless certain specific statutory exemptions apply.<sup>168</sup> The BBA-97 also added to Section 309(j)(1) a reference to the

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<sup>163</sup> Footnote US229 in §2.106 of the FCC Rules contains the locations and protection radii of co-primary SPASUR sites.

<sup>164</sup> TV Channel 13 broadcasts in the frequency band 210-216 MHz.

<sup>165</sup> See *supra* ¶¶ 55-56.

<sup>166</sup> 47 C.F.R. § 90.209.

<sup>167</sup> See 47 U.S.C. § 309(j)(1), (2) (as amended by Balanced Budget Act, § 3002). As explained above, in BBA-97 Congress also directed the Secretary of Commerce to identify spectrum for transfer to non-Government use to be assigned in compliance with Section 309(j). NTIA identified the 216-220 MHz, 1432-1435 MHz, and 2385-2390 MHz bands. See *supra* ¶ 12.

<sup>168</sup> *Id.* 47 U.S.C. § 309(j)(2) exempts from auctions licenses and construction permits for public safety radio services, digital television service licenses and permits given to existing terrestrial broadcast licensees to replace their analog television service licenses, and licenses and construction permits for noncommercial educational broadcast stations and public broadcast stations described in 47 U.S.C. § 397(6) of the Communications Act.

Commission's obligation under Section 309(j)(6)(E) to use engineering solutions, negotiation, threshold qualifications, service regulations, or other means to avoid mutual exclusivity where it is in the public interest to do so.<sup>169</sup> BBA-97 did not amend Section 309(j)(3)'s directive to consider certain public interest objectives in identifying classes of licenses and permits to be issued by competitive bidding.<sup>170</sup>

71. In the *BBA Report and Order*, the Commission established a framework for exercise of its auction authority, as amended by the Balanced Budget Act.<sup>171</sup> The *BBA Report and Order* affirmed that, in identifying which classes of licenses should be subject to competitive bidding, the Commission is required to pursue the public interest objectives set forth in Section 309(j)(3).<sup>172</sup> The *BBA Report and Order* also affirmed that, as part of this public interest analysis, the Commission must continue to consider alternative procedures that avoid or reduce the likelihood of mutual exclusivity.<sup>173</sup> The Commission concluded, however, that its obligation to avoid mutual exclusivity does not preclude it from adopting licensing processes in the non-exempt services that result in the filing of mutually exclusive applications where it determines that such an approach would serve the public interest.<sup>174</sup>

72. In determining whether to assign licenses through competitive bidding in this proceeding, we intend to follow the approach set forth in the Balanced Budget Act proceeding regarding the exercise of our auction authority. We note, too, that subsequent to the adoption of the Balanced Budget Act, the U.S. Court of Appeals for the D.C. Circuit concluded that the Section 309(j)(6)(E) obligation does not foreclose new licensing schemes that are likely to result in mutual exclusivity.<sup>175</sup> The court stated that if the Commission finds such schemes to be in the public interest, it may implement them "without regard to [S]ection 309(j)(6)(E) which imposes an obligation only to minimize mutual exclusivity 'in the public interest,' and 'within the framework of existing policies.'"<sup>176</sup>

73. We note that the 217-218 MHz portion of the 216-220 MHz band will be paired with 219-220 MHz portion for licenses in the AMTS service and the rules for assigning licenses will be addressed in a separate rulemaking proceeding.<sup>177</sup> The 218-219 MHz portion of the band is licensed as the "218-219 MHz" Service and the competitive bidding rules were established in a prior proceeding.<sup>178</sup> In addition,

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<sup>169</sup> See 47 U.S.C. §§ 309(j)(1), 309(j)(6)(E).

<sup>170</sup> See 47 U.S.C. § 309(j)(3).

<sup>171</sup> See *BBA Report and Order*, 15 FCC Rcd 22708.

<sup>172</sup> *Id.* at 22718-22723.

<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

<sup>175</sup> See *Benkelman Telephone Co., et al. v. FCC*, 220 F.3d 601, 606 (D.C. Cir. 2000), *petition for rehearing on other grounds pending*.

<sup>176</sup> *Id.* (citations omitted) (citing *DIRECTV, Inc. v. FCC*, 110 F.3d 816, 828 (D.C. Cir. 1997)).

<sup>177</sup> See Amendment of the Commission's Rules Concerning Maritime Communications, *Second Report and Order and Second Further Notice of Proposed Rule Making*, PR Docket No. 92-257, 12 FCC Rcd 16949 (1997) and *AMTS Fourth R&O and Third NPRM*, 15 FCC Rcd 22585 (2000).

<sup>178</sup> See *218-219 MHz Order*, 15 FCC Rcd at 1558-1560 ¶¶ 116-121. See also 47 C.F.R. § 95.816.

because we found that it is in the public interest to allocate the remaining one megahertz 216-217 MHz portion of the band for LPRS, which is licensed by rule under Part 95 of our Rules, our obligation to use competitive bidding under Section 309(j) does not appear to be implicated for the 216-217 MHz portion of the band.<sup>179</sup>

74. In this *Notice*, we propose to adopt a geographic area licensing scheme for the paired 1392-1395 MHz and 1432-1435 MHz bands, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band. We seek comment on appropriate geographic licensing areas for these bands and whether such licensing scheme would promote the objectives of Section 309(j)(3) including promoting economic opportunities and competition by disseminating licenses among a wide variety of applicants.<sup>180</sup> If we find that it would serve the public interest to implement a geographic area licensing scheme, under which mutual exclusivity is possible, then we must resolve mutually exclusive applications for initial licenses in the paired 1392-1395 MHz and 1432-1435 MHz bands, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band through competitive bidding.

75. We also propose to license the unpaired 1390-1392 MHz band for terrestrial use based on geographic areas and seek comment on appropriate licensing areas that would promote economic opportunities for a wide variety of applicants, including small businesses, rural telephone companies, and minority- and women-owned applicants.<sup>181</sup> Although we have allocated the 1390-1392 MHz band for fixed and mobile, except aeronautical mobile, services, we have only allocated this band conditionally for satellite (uplink) service. Because the satellite allocation in this band will not become effective until interested parties first secure a similar international allocation, licensing of such satellite services will be addressed in a separate rulemaking proceeding.<sup>182</sup> We note that the Open-Market Reorganization for the Betterment of International Telecommunications Act (ORBIT Act) contains an exemption from competitive bidding for spectrum used for the provision of international or global satellite communications services.<sup>183</sup> This exemption from competitive bidding does not apply to terrestrial services that operate on the same frequencies as satellite services.<sup>184</sup> Thus, if we find that it would serve the public interest to adopt a

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<sup>179</sup> See *Reallocation Report and Order* at ¶¶ 22-26. See also *supra* note 27.

<sup>180</sup> See *supra* ¶¶ 29-33; 47 U.S.C. § 309(j)(3).

<sup>181</sup> See *supra* ¶ 31.

<sup>182</sup> See *Reallocation Report and Order* at ¶¶ 46-58. See also *supra* ¶ 26.

<sup>183</sup> See Pub. L. 106-180, 114 Stat. 48 § 647 (codified at 47 U.S.C. § 647) (ORBIT Act). Section 647 provides: "Notwithstanding any other provision of law, the Commission shall not have the authority to assign by competitive bidding ... spectrum used for the provision of international or global satellite communications services." ORBIT Act § 647.

<sup>184</sup> See Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7 GHz Band, ET Docket No. 98-206, *First Report and Order and Further Notice Of Proposed Rule Making*, 16 FCC Rcd 4096, 4218 (2000) (stating that the ORBIT Act does not prohibit the Commission from auctioning licenses for terrestrial services merely because the terrestrial service operates on the same frequencies as a satellite service); Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band, ET Docket No. 98-237; The 4.9 GHz Band Transferred from Federal Government Use, *First Report and Order and Second Notice of Proposed Rule* (continued....)

geographic area licensing scheme that permits the filing of mutually exclusive applications for terrestrial services in this band, it would be consistent with our statutory mandate to resolve any such mutually exclusive applications accepted for filing by competitive bidding.

76. We will not receive mutually exclusive applications for WMTS licenses in the unpaired 1427-1429.5 MHz band and in the seven geographic “carve-out” areas in the 1429.5-1432 MHz band because WMTS is licensed by rule under Part 95.<sup>185</sup> Thus, our statutory obligation to use competitive bidding under Section 309(j) is not applicable to the assignment of WMTS licenses in these portions of the 1.4 GHz band.<sup>186</sup> With respect to the primary telemetry service licenses in the 1429.5-1432 MHz band and seven geographic “carve-out” areas in the 1427-1429.5 MHz band, in this *Notice* we tentatively conclude to retain our current licensing scheme (i.e., site-by-site), but also seek comment on whether we should assign licenses based on geographic areas for the primary telemetry services in these bands.<sup>187</sup> In the *Reallocation Report and Order*, we have also conditionally allocated the 1430-1432 MHz portion of the 1.4 GHz band for Little LEO feeder downlinks, similar to the conditional allocation for uplinks in the 1390-1392 MHz band, contingent on completion of ongoing studies and adoption of an international allocation for this spectrum.<sup>188</sup> As explained above, we believe that the ORBIT Act does not prohibit the use of auctions to assign licenses to provide terrestrial services. Thus if we ultimately adopt a licensing scheme under which mutually exclusive applications may be filed, any mutually exclusive initial applications to provide primary telemetry services in the unpaired 1429.5-1432 MHz portion and seven geographic carved out areas in the 1427-1429.5 MHz portion of the 1.4 GHz band will be resolved through competitive bidding.

## B. Application, Licensing and Processing Rules for New Services

77. The *Reallocation Report and Order* provides an opportunity to establish new services in portions of the 1.4 GHz band, the 1670-1675 MHz band, and the 2385-2390 MHz band. To summarize, these operations include fixed and mobile operations, except aeronautical mobile, in the paired 1392-1395 MHz and 1432-1435 MHz bands;<sup>189</sup> fixed and mobile operations, except aeronautical mobile in the unpaired 1390-1392 MHz<sup>190</sup> and 1670-1675 MHz<sup>191</sup> bands; and fixed and mobile operations, including

(Continued from previous page) \_\_\_\_\_

*Making*, WT Docket No. 00-32, 15 FCC Rcd 20488, 20498 n.64 (2000) (stating that the assignment of licenses for terrestrial services by competitive bidding is not prohibited by the ORBIT Act); *24 GHz Report and Order*, 15 FCC Rcd 16934 (2000) (adopting rules to award licenses for terrestrial fixed service by competitive bidding in 24 GHz band, which is also allocated to satellite services); *39 GHz R&O*, 12 FCC Rcd 18600 (1997); *39 GHz Band Auction Closes*, *Public Notice*, DA 00-1035, Report No. AUC-30-E (rel. May 10, 2000) (assigning terrestrial fixed service licenses by auction in the 39 GHz band, which is also allocated to satellite services). *See also* TRW INC., Waiver of the Commission’s Rules to provide Fixed Satellite Service in the 39 GHz Band, *Memorandum Opinion and Order*, DA 01-371, File No. 0000137436 (rel. March 12, 2001).

<sup>185</sup> 47 C.F.R. § 95.1101 *et seq.*

<sup>186</sup> *Id.*; *see also supra* ¶ 57 (tentatively concluding that it would be in the public interest to retain the existing license assignment process for secondary telemetry operations in this band).

<sup>187</sup> *See supra* ¶¶ 60-61.

<sup>188</sup> *See Reallocation Report and Order* at ¶¶ 46-59.

<sup>189</sup> *Id.* at ¶ 49.

<sup>190</sup> *Id.* at ¶ 50.

aeronautical mobile, in the 2385-2390 MHz band.<sup>192</sup> In addition, the *Reallocation Report and Order* provides conditional allocation for NGSO MSS Feeder Uplinks - conditioned on a similar international allocation - in the 1390-1392 MHz band, and NGSO MSS Feeder downlinks -also conditioned on a similar international allocation- in the 1430-1432 MHz band. To the extent necessary, we will address Little LEO licensing issues, including terrestrial and satellite sharing, in a separate proceeding once the ongoing sharing studies are completed and an international allocation of this spectrum is secured.<sup>193</sup> We now turn our attention to our proposed application, licensing, and processing rules pertinent for new terrestrial services.

## 1. Regulatory Status

78. The Commission's current mobile service license application requires an applicant for mobile services to indicate whether the service it intends to offer will be CMRS, Private Mobile Radio Service (PMRS), or both.<sup>194</sup> The Commission has adopted a similar licensing framework for Part 27 of our Rules.<sup>195</sup> Thus, under Part 27, the Commission permits applicants to request common carrier status as well as non-common carrier status for authorization in a single license, rather than to require the applicant to choose between common carrier and non-common services.<sup>196</sup> Accordingly, we propose to adopt the same procedure for licensing new services in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands. The licensee will be able to provide all allowable services anywhere within its licensed area at any time, consistent with its regulatory status. We tentatively conclude that, in the case of new services offered in these bands, this approach is likely to achieve efficiencies in the licensing and administrative process.

79. We further propose that applicants and licensees with respect to new services in the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands be required to indicate a regulatory status based on any services they choose to provide. As the Commission stated in adopting Part 27, apart from this designation of regulatory status, we would not require applicants to describe the services they seek to provide.<sup>197</sup> In providing guidance on this issue to applicants, the Commission pointed out that an election to provide service on a common carrier

(Continued from previous page) \_\_\_\_\_

<sup>191</sup> *Id.* at ¶ 64.

<sup>192</sup> *Id.* at ¶ 71.

<sup>193</sup> *Id.* at ¶¶ 52-56 and 59.

<sup>194</sup> In the *LMDS Second Report and Order*, the Commission required applicants for fixed services to indicate if they planned to offer services as a common carrier, a non-common carrier, or both, and to notify the Commission of any changes in status without prior authorization. *LMDS Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 12545, 12636-38, 12644-45, 12652-53 ¶¶ 205-208, 225-226, 245-251 (1997) (*LMDS Second Report and Order*) (*Fifth NPRM*); *aff'd, Melcher v. FCC*, 134 F.3d 1143 (D.C. Cir. 1998).

<sup>195</sup> 47 C.F.R. Part 27.

<sup>196</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10846, 10848 ¶¶ 119, 122.

<sup>197</sup> See *Part 27 Report and Order*, 12 FCC Rcd at 10848 ¶ 121; see also *LMDS Second Report and Order*, 12 FCC Rcd at 12644 ¶ 223; 47 C.F.R. § 101.1013.



basis requires that the elements of common carriage be present;<sup>198</sup> otherwise, the applicant must choose non-common carrier status.<sup>199</sup> The Commission advised potential applicants that, if they are unsure of the nature of their services and their classification as common carrier services, they may submit a petition with their applications, or at any time, request clarification and including service descriptions for that purpose.<sup>200</sup>

80. We also propose that if a licensee were to change the service or services it offers, such that its regulatory status would change, the licensee must notify the Commission.<sup>201</sup> Although a change in a licensee's regulatory status would not require prior Commission authorization, we propose that a licensee be required to notify the Commission within 30 days of the change.<sup>202</sup> We note, however, that a different time period may apply, as determined by the Commission, where the change results in the discontinuance, reduction, or impairment of the existing service.<sup>203</sup> In summary, under our proposal, a licensee in the paired 1392-1395 MHz and 1432-1435 MHz bands, or the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands would be authorized to provide a variety or combination of fixed, mobile, common carrier, and non-common carrier services. We seek comment on these proposals.

## 2. Eligibility

81. We believe that opening this spectrum to as wide a range of applicants as possible would encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure efficient use of this spectrum. Accordingly, we propose that there be no restrictions on eligibility for a license, other than the foreign ownership restrictions set forth in Section 310 of the Communications Act.<sup>204</sup> We seek comment on this proposal. Commenters are requested to comment on whether open eligibility poses a significant likelihood of substantial competitive harm in specific markets, and, if so, whether eligibility restrictions are an effective method to address that harm.

82. We believe that this approach is consistent with our statutory guidance. Specifically, in granting the Commission authority in Section 309(j) of the Communications Act to auction wireless

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<sup>198</sup> See 47 U.S.C. § 153(44) ("A telecommunications carrier shall be treated as a common carrier under this Act ..."); see also 47 U.S.C. § 332(C)(1)(A) ("A person engaged in the provision of a service that is a commercial mobile service shall, insofar as such person is so engaged, be treated as a common carrier for purposes of this Act ...").

<sup>199</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10790-91 ¶ 121. The Commission examined services in the *LMDS Second Report and Order* and explained that any video programming service would be treated as a non-common carrier service. *LMDS Second Report and Order*, 12 FCC Rcd at 12639-41 ¶¶ 213- 215.

<sup>200</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10848 ¶ 121.

<sup>201</sup> See 47 C.F.R. §§ 27.66 (a)-(b).

<sup>202</sup> A change in regulatory status would require Commission prior authorization, however, if the change raised issues concerning the benchmark contained in Section 310(b)(4) of the Act.

<sup>203</sup> See 47 C.F.R. §§ 27.66 (a)-(b).

<sup>204</sup> See 47 U.S.C. §§ 310(a), 310(b), and 310(d).

spectrum and to impose eligibility requirements as appropriate, Congress also directed the Commission to exercise that authority so as to “promot[e] . . . economic opportunity and competition.”<sup>205</sup>

### 3. Foreign Ownership Restrictions

83. Sections 310(a) and 310(b) of the Communications Act, as modified by the Telecommunications Act of 1996, impose foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants.<sup>206</sup> Section 27.12 of the Commission's Rules, which implements Section 310 of the Act,<sup>207</sup> would by its terms apply to applicants for licenses in the bands subject to this proceeding.<sup>208</sup> An applicant requesting authorization only for non-common carrier or non-broadcast services would be subject to Section 310(a) but not to the additional prohibitions of Section 310(b). An applicant requesting authorization for broadcast or common carrier services would be subject to both Sections 310(a) and 310(b).

84. Further, we note that in response to the commitments under the World Trade Organization (WTO) Basic Telecommunications Agreement, the Commission recently liberalized its policy for applying its discretion with respect to foreign ownership of common carrier radio licensees under Section 310(b)(4).<sup>209</sup> Under our new policy, the Commission now presumes that ownership by entities from countries that are WTO members serves the public interest.<sup>210</sup> Ownership by entities from countries that are not WTO members continues to be subject to the "effective competitive opportunities" test established earlier by the Commission.<sup>211</sup>

85. In the filing of an application under the proposed service rules, we do not believe that common carriers and non-common carriers should be subject to varied reporting obligations. Rather, as a matter of fostering regulatory parity and transparency, we believe that all applicants should be required to file changes in foreign ownership information to the extent required by Part 27 of our Rules. In light of Part 27 licensees' potential ability to provide broadcast, common carrier, and non-common carrier services, Commission rules require all licensees, even non-common carriers, to report alien ownership on a consistent basis, to better enable the Commission to monitor compliance.<sup>212</sup> By establishing parity in

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<sup>205</sup> See 47 U.S.C. § 309(j)(3).

<sup>206</sup> 47 U.S.C. §§ 310(a), 310(b).

<sup>207</sup> 47 C.F.R. § 27.12; see also Section 27.302 of the Commission's Rules, 47 C.F.R. § 27.302.

<sup>208</sup> See 47 C.F.R. § 27.12.

<sup>209</sup> The commitments are incorporated into the General Agreement of Trade in Services (GATS) by the Fourth Protocol to the GATS. See Fourth Protocol to the General Agreement on Trade in Services (WTO 1997), 36 I.L.M. 366 (1997).

<sup>210</sup> See Rules and Policies on Foreign Participation in the U.S. Telecommunications Market and Market Entry and Regulation of Foreign-Affiliated Entities, *Report and Order and Order on Reconsideration*, 12 FCC Rcd 23891, 23935-47 ¶¶ 97-132 (1997).

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

<sup>212</sup> See Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, *Report and Order*, IB Docket No. 95-117, 11 FCC Rcd 21581, 21599 ¶ 43 (1996).

reporting obligations, however, we do not propose a single, substantive standard for compliance. Thus, by way of example, we do not and would not disqualify an applicant requesting authorization exclusively to provide non-common carrier and non-broadcast services from a license simply because its citizenship information would disqualify it from a common carrier or broadcast license. We request comment on this proposal.

#### 4. License Term and Renewal Expectancy

86. We propose that the license term for new licensees in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands be 10 years, with a renewal expectancy similar to that afforded PCS and cellular licensees. In the case of either a cellular or PCS licensee, a renewal applicant shall receive a preference or renewal expectancy if the applicant has provided substantial service during its past license term and has complied with the Communications Act and applicable Commission rules and policies.<sup>213</sup> While preferring a substantial service requirement, we also invite comment on whether a build-out requirement is more appropriate for this service.<sup>214</sup> We believe that this 10-year license term, combined with renewal expectancy, will help to provide a stable regulatory environment that will be attractive to investors and, thereby, encourage development of this frequency band. We also seek comment on whether a license term longer than 10 years is appropriate to achieve these goals and better serve the public interest. Commenters who favor a license term in excess of ten years should specify a reasonable license term and include a basis for the period proposed.

87. We propose that the renewal application of a licensee in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands must include, at a minimum, the following showings in order to claim a renewal expectancy:<sup>215</sup>

- A description of current service in terms of geographic coverage and population served or links installed and a description of how the service complies with the substantial service requirement.
- Copies of any Commission Orders finding the licensee to have violated the Communications Act or any Commission rule or policy, and a list of any pending proceedings that relate to any matter described by the requirements for the renewal expectancy.<sup>216</sup>
- If applicable, a description of how the licensee has complied with the build-out requirement.

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<sup>213</sup> See 47 U.S.C. § 151 *et seq.* Substantial service is service that is sound, favorable, and substantially above a level of mediocre service which might just minimally warrant renewal. See 47 C.F.R. § 22.940(a)(1)(i).

<sup>214</sup> See *infra* at Section III.C.1., regarding performance requirements.

<sup>215</sup> These proposed requirements are based on those we ordered for LMDS. See Section 101.1011 of the Commission's Rules, 47 C.F.R. § 101.1011.

<sup>216</sup> See Section 22.940(a)(2)(i) through Section 22.940(a)(2)(iv) of the Commission's Rules, 47 C.F.R. §§22.940(a)(2)(i)-(iv).

88. Under our proposal, in the event that a license in the subject bands is partitioned or disaggregated, any partitionee or disaggregatee would be authorized to hold its license for the remainder of the partitioner's or disaggregator's original license term. Further, the partitionee or disaggregatee would be required to demonstrate that it has met the substantial service requirements, or build-out standard, in any renewal application. This approach is similar to the partitioning provisions the Commission adopted for MDS<sup>217</sup> and for current broadband PCS licensees.<sup>218</sup> Specifically, we do not believe that a licensee, by partitioning or disaggregation, should be able to confer greater rights than it was awarded under the terms of its license grant.

## 5. Partitioning and Disaggregation

89. If geographic area licensing is used in any of these bands, we seek comment on allowing licensees to partition their service areas and to disaggregate their spectrum.<sup>219</sup> We believe that Section 27.15 of the Commission's Rules<sup>220</sup> would apply if we allow partitioning and disaggregation. Section 27.15 provides that licensees may apply to partition their licensed geographic service areas or disaggregate their licensed spectrum at any time following the grant of their licenses.<sup>221</sup> We seek comment on the benefits and costs of this approach, and whether it promotes the public interest.

90. In addition, pursuant to Section 27.15, the partitioning licensee must include with its request a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area.<sup>222</sup> Section 27.15 also contains provisions against unjust enrichment.<sup>223</sup> We propose to adopt these provisions, as well as the remaining provisions governing partitioning and disaggregation set forth in Section 27.15 if we allow partitioning and disaggregation. We seek comment on our proposal.

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<sup>217</sup> See Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, *Report and Order*, 10 FCC Rcd 9589, 9614 ¶ 46 (1995).

<sup>218</sup> See Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees and Implementation of Section 257 of the Communications Act – Elimination of Market Barriers, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 96-1148, 11 FCC Rcd 21831, 21870 ¶¶ 76-77 (1996) (*Partitioning and Disaggregation Report and Order*).

<sup>219</sup> “Partitioning” is the assignment of geographic portions of a license along geopolitical or other boundaries. “Disaggregation” is the assignment of discrete portions of “blocks” of spectrum licensed to a geographic licensee or qualifying entity. Disaggregation allows for multiple transmitters in the same area operated by different companies (thus the possibility of harmful interference increases).

<sup>220</sup> 47 C.F.R. § 27.15.

<sup>221</sup> *Part 27 Report and Order*, 12 FCC Rcd at 10836-39 ¶¶ 96-103.

<sup>222</sup> 47 C.F.R. § 27.15(b)(1).

<sup>223</sup> 47 C.F.R. § 27.15(c)(1)(2); *see also* 47 C.F.R. § 1.2111.

## 6. Individual Station Licenses

91. We have proposed geographic area licensing for several bands. Under geographic area licensing, the licensee has exclusive use to operate within its geographic service area. Ordinarily licensees may operate without filing an application for individual stations within its service area. Nonetheless, we believe there are situations in which we should require licensees to obtain an individual station license for a particular station within their geographic service area.

92. The licensee will need to apply for an individual station license to the Commission for those individual stations that (1) require submission of an Environmental Assessment under Section 1.1307 of our Rules;<sup>224</sup> (2) require international coordination;<sup>225</sup> (3) would operate in the quiet zones listed in Section 1.924 of our Rules;<sup>226</sup> or (4) require coordination with the Frequency Assignment Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC).<sup>227</sup>

93. We propose that the licensee be responsible for determining whether an individual station needs an individual station license. We further propose that this requirement will apply to both new stations and station modifications. We ask for comment on this proposal.

### C. Operating Rules

#### 1. Performance Requirements

94. We seek comment on whether licensees in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands should be subject to a substantial service requirement or a minimum coverage requirement as a condition of license renewal. We have imposed such requirements on licensees in other services to ensure that spectrum is used effectively and service is implemented promptly.<sup>228</sup> We seek comment on whether licensees should be required to provide "substantial service" to the geographic license area within ten years or any other license term which we adopt for this service.<sup>229</sup> We have defined substantial service as "service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal."<sup>230</sup> Further, we seek comment on whether there should be a construction requirement as an alternative, safe harbor standard. Under the safe harbor, the licensee would be required to reach a minimum of one-third of the population in its licensed area, no later than the mid-point of the license term

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<sup>224</sup> 47 C.F.R. § 1.1307.

<sup>225</sup> See, e.g., 47 C.F.R. § 1.928 (regarding frequency coordination arrangements between the U.S. and Canada).

<sup>226</sup> 47 C.F.R. § 1.924.

<sup>227</sup> We will discuss FAS coordination in the section describing coordination with Government incumbents. See *infra* at Section III.E.3.

<sup>228</sup> Cf. Section 22.940(a)(2)(I) through Section 22.940(a)(2)(iv) of the Commission's Rules, 47 C.F.R. §§ 22.940(a)(2)(i)-(iv).

<sup>229</sup> See *LMDS Second Report and Order*, 12 FCC Rcd at 12659 ¶¶ 263-267.

<sup>230</sup> See, e.g., 47 C.F.R. § 22.940(a)(1)(i).

and two-thirds of the population by the end of the license term. We also seek comment on whether, in the event that a license is partitioned or disaggregated, a partitionee or disaggregatee should be bound by the standard (either substantial service or a construction requirement) that we may adopt in this proceeding.

95. If a licensee does not comply with whichever performance requirement we adopt, the Commission must consider what action to take. We could adopt a standard under which a licensee who does not comply with the appropriate standard, either substantial service or minimum coverage, is subject to license termination upon action by the Commission or, alternatively, the license would automatically cancel. We seek comment on whether to adopt an automatic cancellation standard or cancellation only upon action by the Commission. If the geographic area licensee loses its license for failure to comply with coverage requirements, should the licensee be prohibited from bidding on the geographic area license for the same territory in the future? Is there a sanction more appropriate than automatic cancellation? We seek comment on these issues.

## 2. Application of Title II Requirements to Common Carriers

96. We also seek comment on whether we should forbear from applying certain obligations on common carrier licensees in the bands subject to this proceeding pursuant to Section 10 of the Act.<sup>231</sup> In the case of commercial mobile radio service (CMRS) providers, the Commission concluded that it was appropriate to forbear from Sections 203, 204, 205, 211, 212, and most applications of Section 214.<sup>232</sup> The Commission, however, declined to forbear from enforcing other provisions, including Sections 201 and 202.<sup>233</sup> The Commission has also exercised its forbearance authority in permitting competitive access providers (CAPS) and competitive local exchange carriers (CLECs) to file permissive tariffs.<sup>234</sup> We seek comment on whether it is appropriate to forbear from enforcing any provisions of the Act or the Commission's rules in the bands subject to this proceeding.

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<sup>231</sup> See 47 U.S.C. § 160(a)(1-3). Section 10 provides the Commission with authority to forbear from application of virtually any regulation or any provision of the Act to a telecommunications carrier or telecommunications service, or a class of carriers or services. But, the Commission may not forbear from applying the requirements of Sections 251(c) or 271 until it determines that those requirements have been fully implemented. See 47 U.S.C. § 160(d).

<sup>232</sup> See Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Second Report and Order*, 9 FCC Rcd 1411, 1463-93 (1994). The Commission decided to forbear Sections 203, 204, 205, 211, 212, and most applications of section 214. *Id.* at 1478-80.

<sup>233</sup> See *CMRS Second Report and Order* at 1478 (declining to forbear Sections 201 and 202 of the Communications Act); In the Matter of Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance for Broadband Personal Communications Services, Forbearance from Applying Provisions of the Communications Act to Wireless Telecommunications Carriers, WT Docket No. 98- 100, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 13 FCC Rcd 16857, 16914 (1998) (declining to forbear from applying Section 20.12(b) of the Commission's Rules (resale rule) and Sections 201 and 202 of the Communications Act).

<sup>234</sup> See In the Matters of Hyperion Telecommunications, Inc. Petition Requesting Forbearance, Time Warner Communications Petition for Forbearance, Complete Detariffing for Competitive Access Providers and Competitive Exchange Carriers, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 12 FCC Rcd 8596, 8608-10 (1997).

#### D. Technical Rules

97. *General Technical Rules.* We seek comment on the appropriateness of adopting Part 27 of our Rules, for new services in the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands. The application of general provisions of Part 27 would include technical standards relating to equipment authorization,<sup>235</sup> Radiofrequency (RF) safety standards,<sup>236</sup> frequency stability,<sup>237</sup> antenna structures and air navigation safety,<sup>238</sup> and disturbance of AM broadcast station antenna patterns.<sup>239</sup> In addition, other technical restrictions contained in other sections of the Commission's rules would apply to licensees including Part 17 (antenna registration), and as discussed earlier, Sections 1.924 (quiet zones), and 1.1307 (environmental requirements).<sup>240</sup> We seek similar comment with respect to the Part 90 technical rules for telemetry in the 1429.5-1432 MHz frequency band.<sup>241</sup>

98. *In-Band Interference Control.* We request comment on additional technical restrictions to limit co-channel interference protection between licensees operating in adjacent geographic service areas. We recognize that licensees will be permitted to implement a broad range of services and technologies in this spectrum, and that the implementation of these services and technologies must take into account the potential for interference between licensees using the same spectrum in adjacent service areas. Under our proposed rules, licensees will have the flexibility to provide fixed and mobile services including land mobile.

99. In the past, we have primarily utilized an approach to limit co-channel interference between geographic service areas that includes field strength limits or frequency coordination.<sup>242</sup> Field strength limits have generally been adopted for land mobile services,<sup>243</sup> while frequency coordination requirements have primarily been used in fixed services.<sup>244</sup> We request comment if either or both of these approaches are appropriate in this case or if other methods should be used for interference protection.

100. We believe that either method, when properly applied, can provide a satisfactory means of controlling harmful interference between systems, although, on balance, there may be reasons to prefer one

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<sup>235</sup> 47 C.F.R. § 27.51.

<sup>236</sup> 47 C.F.R. § 27.52.

<sup>237</sup> 47 C.F.R. § 27.54.

<sup>238</sup> 47 C.F.R. § 27.56.

<sup>239</sup> 47 C.F.R. § 27.63.

<sup>240</sup> See 47 C.F.R. §§ 1.924, 1.1307.

<sup>241</sup> See *supra* ¶¶ 66-69.

<sup>242</sup> See 47 C.F.R. §§ 24.236, 27.55(a). See also 47 C.F.R. § 101.103.

<sup>243</sup> See 47 C.F.R. § 24.236 for PCS. See also 47 C.F.R. § 27.55 for 2.3 GHz band.

<sup>244</sup> See 47 C.F.R. § 101.103 for fixed microwave services.

method over the other. For example, a general coordination requirement may minimize the potential for interference to coordinated facilities but may also impose unnecessary coordination costs for facilities with a low potential for interference, and increase the potential for undesirable strategic or anti-competitive behavior.

101. A field strength limit, on the other hand, may reduce the need for coordination by giving licensees the ability unilaterally to deploy facilities in boundary areas as long as the limit is met, but by itself may provide insufficient assurance against interference to such facilities. Even with a boundary field strength limit, some degree of coordination and joint planning between bordering licensees appears likely to be needed to ensure efficient spectrum use on each side of the boundary.<sup>245</sup> Parties are therefore asked to provide their analysis of the advantages and disadvantages of both approaches or, possibly, an approach that combines the elements of both a boundary field strength limit and a coordination requirement.

102. If commenters believe that the Commission should apply a field strength limit, as a means to control interference to neighboring systems in the paired 1392-1395 MHz and 1430-1432 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands, then an analysis should be presented to justify the use of any proposed value. Various maximum field strengths have been prescribed by the Commission for other services. These include 47 dBuV/m for PCS,<sup>246</sup> 47 dBuV/m for WCS licensees in the 2.3 GHz band<sup>247</sup> and 55 dBuV/m for licensees in the 4660-4685 MHz band.<sup>248</sup> Therefore, commenters who support a boundary limit should propose a specific value and explain the method they have used in deriving it.

103. If we do adopt a general coordination approach, we request comment on how such coordination would be triggered between licensees in adjacent geographic areas. We note that for 28 GHz LMDS and 39 GHz licensees, the need for coordination is triggered based on the distance that the station will be located from the licensees' service area boundary.<sup>249</sup> We solicit comment on these coordination procedures and criteria.

104. We also seek comment on what, if any, power limits and antenna height limits are necessary or appropriate under either a coordination or field strength limit approach. We observe that transmitters used in the private land mobile service, cellular radio service, and point-to-point microwave services typically employ substantially different output powers. Accordingly, we invite comments as to what those limits should be and the basis for the suggested limits. We also solicit views on output power limits for base and mobile equipment.

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<sup>245</sup> See Amendment of Parts 2, 15, and 97 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for New Radio Applications, *Memorandum Opinion and Order on Reconsideration and Notice of Proposed Rulemaking*, ET Docket No. 94-124, 13 FCC Rcd 16947, 16994-97 (1998).

<sup>246</sup> 47 C.F.R. § 24.236.

<sup>247</sup> 47 C.F.R. § 27.55.

<sup>248</sup> 47 C.F.R. § 26.55.

<sup>249</sup> 47 C.F.R. § 101.103.



105. *Out-of-Band Interference Control.* We seek comment on appropriate out-of-band emission limits, and/or emission masks, and whether one or both of these methods is necessary to protect services operating adjacent to the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands. We seek comment on corresponding measurement procedures to confirm emission levels. We also seek comment on what power limits and antenna height limits are necessary or appropriate to protect services operating in adjacent bands.

106. Finally, when commenting on technical limitations, including those discussed above, parties are asked to provide either in their analyses or in their comments how proposed limits will prevent licensees from causing harmful interference to Government incumbents.

107. *Technical Restrictions for the 1670-1675 MHz Band.* In comments to the *Reallocation Notice*, AeroAstro, ArrayComm and MicroTrax propose technical limits for the 1670-1675 MHz band. Each commenter proposes an out-of-band emission limit.

108. AeroAstro believes that an out-of-band emission limit of  $-80$  dBW/Hz will protect adjacent band radioastronomy.<sup>250</sup> It states that technical rules should specify an absolute out-of-band limit, rather than a maximum in-band limit and emission mask, because an absolute out-of-band limit will permit a provider that uses low in-band power to specify an emission mask that is not as steep.<sup>251</sup>

109. ArrayComm proposes an out-of-band emission limit similar to PCS service, except with an adjustment for “adaptive antenna” systems, a type of technology they propose.<sup>252</sup> ArrayComm states that where the output of multiple power amplifiers operating at comparable per-carrier powers are coherently combined, the out-of-band emission limit should be  $43+10\log(P)-10\log(M)$ , where “P” is the per-carrier, per-power-amplifier power serving a carrier and “M” is the number of power amplifier/antenna elements serving a carrier.

110. MicroTrax suggests an out-of-band limit, in any 1 MHz bandwidth, of  $55+10\log(P)$  where “P” is the highest emission in watts of the transmitter inside the authorized bandwidth.<sup>253</sup>

111. We seek comment on all three of these proposals. Parties who comment on this issue should be aware that in the following section we explain that protection of radioastronomy operations in the lower-adjacent band will be accomplished through technical limits established for equipment operating in the 1670-1675 MHz band.<sup>254</sup>

112. We note, that of the three proposals for out-of-band emission limits, ArrayComm’s proposal appears to be the most flexible, although possibly the least restrictive. We believe that licensees should have as much flexibility as possible to aid in the viability of their service. Nonetheless, the out-of-band emission limit should be sufficient to protect lower-adjacent band radioastronomy operations from harmful interference. Because of its flexibility, we tentatively propose to adopt ArrayComm’s limit. We

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<sup>250</sup> See AeroAstro Comments at 4.

<sup>251</sup> *Id.* at 5.

<sup>252</sup> See ArrayComm Comments at 21.

<sup>253</sup> See MicroTrax Comments at 3.

<sup>254</sup> See *infra* ¶ 123.

seek comment, however, on whether ArrayComm's proposal will sufficiently protect lower-adjacent band radioastronomy operations from harmful interference. We also welcome comments regarding MicroTrax's and AeroAstro's proposals.

113. Each commenter also recommends power limits. AeroAstro proposes a peak output power of 1 watt and a peak equivalent isotropic radiated power (EIRP) of 10 watts.<sup>255</sup> MicroTrax proposes a peak output power limit of 4 watts and a maximum of 0.25 watts average output power limit over a 60-second time interval.<sup>256</sup> ArrayComm proposes an EIRP limit of 1640 watts for base stations and 4 watts for portable units<sup>257</sup>. We request comment on all of these power limits as they relate to protecting lower-adjacent radioastronomy operations.

114. *Cellular Architecture.* We seek comment on whether to prohibit cellular architecture in any of these bands. Specifically, as noted in the *Guard Band Second Report and Order*, the Commission indicated that the cellular architecture produces a large number of base stations within a relatively small geographic area -- each with the capability of causing interference.<sup>258</sup> Therefore, given the need to protect Government incumbents and sensitive radio astronomy operations we request comment on whether it would be prudent to ban cellular architecture in any of these bands.

## E. Coordination

### 1. Incumbent Government Operations

115. The *Reallocation Report and Order* identifies the Federal Government incumbents who will remain in these bands on a co-primary basis by geographic location and operating frequency.<sup>259</sup> In addition, the *Reallocation Report and Order*, outlines a framework that requires non-Federal Government users to coordinate with co-primary Federal Government incumbents.<sup>260</sup>

116. Specifically, under this coordination framework, all licensees proposing to construct a facility within an NTIA-designated protected zone, as determined by protection radii coordinates, must submit an application on the Universal Licensing System containing all the technical information about the proposed facility.<sup>261</sup> The Commission will refer these applications to the Frequency Assignment Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Once FAS approval is

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<sup>255</sup> See AeroAstro Comments at 5.

<sup>256</sup> See MicroTrax Comments at 3.

<sup>257</sup> See ArrayComm Comments at 20.

<sup>258</sup> See *Guard Band Second Report and Order*, *supra* note 102, at ¶ 19.

<sup>259</sup> 47 C.F.R. § 2.106, footnotes US229, US352, US361, US352, US362 and US363. See also *Reallocation Report and Order* at Appendix C.

<sup>260</sup> *Reallocation Report and Order* at ¶ 73.

<sup>261</sup> *Id.*

received, the Commission will issue an individual station license for each application referred to FAS. These procedures will apply to both fixed and mobile non-Government operations.<sup>262</sup>

117. We take this opportunity to summarize briefly the Federal Government incumbents identified in the *Reallocation Report and Order*.

118. *SPASUR*. The U.S. Navy operates a Space Surveillance (SPASUR) Radar system in the 216-217 MHz band.<sup>263</sup> SPASUR transmitter sites transmit on frequency 216.98 MHz and SPASUR receiver sites receive on frequencies 216.965-216.995 MHz. NTIA indicates that SPASUR sites will continue to operate on a co-primary basis indefinitely.<sup>264</sup> The location of SPASUR transmit and receive sites is listed in footnote US229 of Section 2.106.<sup>265</sup> Footnote US229 contains the NTIA recommended protection radii.<sup>266</sup> Non-Government licensees operating in the sub-band 216.88-217.08 MHz must receive FAS approval prior to construction of fixed sites or prior to operation of mobile units within the SPASUR protection radii.<sup>267</sup>

119. *Military Airborne Operations*. NTIA indicates that 14 military airborne operations will continue to operate in the 1427-1432 MHz band on a co-primary basis until 2004.<sup>268</sup> The location of these military airborne operations is provided in footnote US352 of Section 2.106.<sup>269</sup> The NTIA recommended protection radii for these airborne operations are listed in footnote US352.<sup>270</sup> Non-Government licensees operating in the 1427-1432 MHz band must receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of these military airborne operations. NTIA also indicates that 23 military airborne operations will continue to operate in the 1432-1435 MHz band on a co-primary basis indefinitely.<sup>271</sup> The location of these military airborne operations is provided in footnote US361 of Section 2.106.<sup>272</sup> The NTIA recommended protection radii for these airborne operations are listed in footnotes US361.<sup>273</sup> Non-Government licensees operating in the 1432-1435 MHz band must

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<sup>262</sup> *Id.*

<sup>263</sup> *Id.* at ¶ 14.

<sup>264</sup> *See 1998 NTIA Spectrum Reallocation Report*, § 3, at 3-18 and Table 3-2.

<sup>265</sup> 47 C.F.R. § 2.106, footnote US229. *See also Reallocation Report and Order* at Appendix C.

<sup>266</sup> *See Reallocation Report and Order* at Appendix C.

<sup>267</sup> *Id.*

<sup>268</sup> *See 1995 NTIA Spectrum Reallocation Report*, § 4, p. 5 and Table 4-2.

<sup>269</sup> 47 C.F.R. § 2.106, footnote US352. *See also Reallocation Report and Order* at ¶ 38.

<sup>270</sup> *See Reallocation Report and Order* at ¶ 38.

<sup>271</sup> *See 1998 NTIA Spectrum Reallocation Report*, § 3, at 3-37 and Table 3-4.

<sup>272</sup> 47 C.F.R. § 2.106, footnote US361. *See also Reallocation Report and Order* at ¶ 40.

<sup>273</sup> *See Reallocation Report and Order* at ¶ 40.

receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of these military airborne operations.

120. *Other Military Operators.* NTIA indicates that 17 military sites will continue to operate in the 1390-1395 MHz band on a co-primary basis until 2009.<sup>274</sup> The location of these military sites is listed in footnote US351 of Section 2.106.<sup>275</sup> The NTIA recommended protection radii for these military operations are listed in footnotes US361. Non-Government licensees operating in the 1390-1392 MHz band or the 1392-1395 MHz band must receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of these military sites.

121. *Aeronautical Flight Test Telemetry.* NTIA indicates that Government aeronautical flight test telemetry operations will continue in the 2385-2390 MHz band on a co-primary basis until 2007.<sup>276</sup> The locations of these aeronautical flight test telemetry operations are listed in footnote US363 of Section 2.106.<sup>277</sup> The NTIA-recommended protection radii are also listed in footnote US363.<sup>278</sup> Non-Government licensees operating in the 2385-2390 MHz band must receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of these aeronautical flight test telemetry operations.

122. *Meteorological-Satellite Earth Stations.* The meteorological-satellite earth stations (METSAT) located at Wallop's Island, VA, Fairbanks, AK and Greenbelt, MD will continue to receive satellite downlink data in the 1670-1675 MHz band.<sup>279</sup> NTIA indicates that the METSAT stations at Wallops Island, VA and Fairbanks, AK will need protection indefinitely.<sup>280</sup> The NTIA-recommended protection radii for these stations are listed in footnote US362.<sup>281</sup> Thus, licensees in the 1670-1675 MHz band will need to coordinate fixed and mobile operations within the protection radii of the Wallops Island, VA and Fairbanks, AK METSAT stations. The METSAT coordination procedures are listed in Section 1.924(f) of the Commission's Rules.<sup>282</sup> NTIA also requests protection of the METSAT station located at Greenbelt, MD.<sup>283</sup> The Greenbelt, MD station serves as a back up to the Wallops Island, VA station. Accordingly, the 1670-1675 MHz licensee will need to coordinate operation in the vicinity of the METSAT

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<sup>274</sup> See 1995 NTIA Spectrum Reallocation Report, § 4, p. 3 and Table 4-1.

<sup>275</sup> 47 C.F.R. § 2.106, footnote US351.

<sup>276</sup> See 1998 NTIA Spectrum Reallocation Report, § 3, at 3-47 and Table 3-6.

<sup>277</sup> 47 C.F.R. § 2.106, footnote 363. See also Reallocation Report and Order at ¶ 68.

<sup>278</sup> See Reallocation Report and Order at ¶ 68.

<sup>279</sup> See 47 C.F.R. § 2.106, footnote US362. See also Reallocation Report and Order at ¶ 61.

<sup>280</sup> See 1995 NTIA Spectrum Reallocation Report, § 4, p. 6.

<sup>281</sup> 47 C.F.R. § 2.106, footnote US362.

<sup>282</sup> 47 C.F.R. § 1.924(f). See also Reallocation Report and Order at Appendix C.

<sup>283</sup> See Letter to Bruce Franca, Acting Chief, Office of Engineering and Technology, Federal Communications Commission, from William T. Hatch, Associate Administrator, Office of Spectrum Management (Nov. 19, 2001) (NTIA Letter).

station located at Greenbelt, MD. We discuss the coordination requirements for the METSAT stations located at Greenbelt, MD, in a following section.<sup>284</sup>

123. *Radioastronomy.* Pursuant to footnote US311 of Section 2.106, radioastronomy is performed throughout the 1350-1400 MHz band.<sup>285</sup> The location of these radioastronomy sites is listed in footnote US311.<sup>286</sup> Pursuant to footnote US311, licensees in the 1.4 GHz band will need to make every practicable effort to avoid causing interference to these extremely sensitive radioastronomy receivers.<sup>287</sup> Radioastronomy operations will continue to operate in the 1660-1670 MHz band.<sup>288</sup> This band is lower-adjacent to the 1670-1675 MHz band. Protection of radioastronomy operations in this lower-adjacent band will be accomplished through technical limits established for equipment operating in the 1670-1675 MHz band.

## 2. FAS Coordination of LPRS and WMTS

124. We have adopted procedures for applicants and licensees in the subject bands for coordination with incumbent Government operations in the *Reallocation Report and Order*. Because these procedures contemplate coordination in a regulatory environment with applications for licenses, we believe we must further address how to apply these procedures to the low power radio service (LPRS). In LPRS, we receive no applications, and we issue no licenses. Operation is authorized by rule. LPRS is subject to FAS coordination within the protection radii of SPASUR sites as described above because it operates between 216-217 MHz. Thus, an individual LPRS station operating within the NTIA recommended SPASUR protection radii is required to coordinate with incumbent Government operations. But given that there are no applications, no licenses, and thus, no Commission database for LPRS operations, we believe that the standard coordination procedures would be overly burdensome, impractical, or ineffective. Instead, we propose an alternative approach that protects SPASUR and at the same time acknowledges LPRS's versatility and promotes its utility to the public. Specifically, we propose a blanket coordination approach that would allow LPRS to operate within SPASUR protection radii. In other words, we propose to ask the Federal Government one time for coordination for all future LPRS operations in this band contemplated by rule. We believe that this approach is especially viable in this instance, given that LPRS operates at a maximum transmitter output power of 100 milliwatts<sup>289</sup> and thus poses little threat of interference to SPASUR. We seek comment on this proposal.

125. We note that this proposal refers exclusively to LPRS coordination with co-primary Government incumbents in the 216-217 MHz band. By way of contrast, WMTS coordination with co-primary Government incumbents will be accomplished pursuant to Section 95.1121 of Part 95 of our Rules,<sup>290</sup> as amended, in the *Reallocation Report and Order*.<sup>291</sup> Although LPRS and WMTS are both

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<sup>284</sup> See *infra* ¶¶ 130-135.

<sup>285</sup> 47 C.F.R. § 2.106, footnote US311. See also the *Reallocation Report and Order* at Appendix C.

<sup>286</sup> See *Reallocation Report and Order* at Appendix C.

<sup>287</sup> *Id.* See also *Reallocation Report and Order* at ¶ 37.

<sup>288</sup> 47 C.F.R. § 2.106, footnote US74.

<sup>289</sup> 47 C.F.R. § 95.639(e).

<sup>290</sup> 47 C.F.R. § 95.1121.

licensed by rule, our current rules require WMTS operators to register their devices with a designated frequency coordinator who maintains this information in a database.<sup>292</sup> Our current rules for LPRS do not provide for such procedures nor do we believe that such an approach would be feasible for LPRS. Consequently, we believe that these different services require us to chart different coordination approaches.

### 3. FAS Coordination of Fixed and Mobile Sites

126. As established in the *Reallocation Report and Order*, non-Government licensees are required to coordinate fixed and mobile operations with co-primary Government incumbents.<sup>293</sup> We recognize, however, that the practical application of the coordination procedures established in the *Reallocation Report and Order* will vary depending on the licensing scheme adopted for a given band. In this proceeding we propose to authorize services via site-by-site licensing<sup>294</sup> and geographic area licensing.<sup>295</sup> We take this opportunity to seek comment on the following proposals.

127. *Site-by-site licensing.* For services assigned on a site-by-site basis, the Commission will review all ULS applications to determine if the fixed or mobile operation is located within the protection radii of a co-primary Government incumbent. If the operation is located within the protection radii of a co-primary Government incumbent, then the Commission will refer the application to FAS as described in the *Reallocation Report and Order*.<sup>296</sup> We believe that this proposal achieves our regulatory objectives and is also compatible with current procedures that require site-by-site licensees to file an application for each operation. We seek comment on this proposal.

128. *Geographic Area Licensing.* Unlike site-by-site services, services that are authorized using geographic area licensing are not required to file an application for each individual operation. Rather, geographic area licensees, as prescribed by technical parameters of our Rules, operate throughout their area of operation without needing prior consent of the Commission for each individual station. Taking into consideration this distinction, we believe that the process described above for site-by-site licensees would not be efficient or administratively feasible. We therefore propose a separate coordination process for geographic area licensees. Specifically, under our proposal, geographic licensees, by virtue of the nature of their operations, would be responsible to make a determination of whether a particular operation requires FAS approval on a case-by-case basis.

129. By way of guidance, we further propose to require that FAS coordination for any fixed station located within the protection radii of a co-primary Government incumbent prior to activation. Similarly, we also propose to require FAS coordination for mobile units prior to any operation within the

(Continued from previous page) \_\_\_\_\_

<sup>291</sup> See *Reallocation Report and Order* at Appendix C.

<sup>292</sup> See 47 C.F.R. § 95.1111. Prior to operation, our Rules require authorized health care providers to register all WMTS devices with a designated frequency coordinator. *Id.* The frequency coordinator is required to maintain a database of WMTS use. 47 C.F.R. § 95.1113(b)(2).

<sup>293</sup> See *Reallocation Report and Order* at ¶ 73.

<sup>294</sup> This refers to telemetry in 216-220 MHz, 1427-1429.5 MHz and 1429.5-1432 MHz bands.

<sup>295</sup> This refers to those services in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands.

<sup>296</sup> See *Reallocation Report and Order* at ¶ 73.

protection radii of co-primary Government incumbents. Thus, a geographic area licensee that proposes to construct a base station with associated mobile units would need to examine both the location of the base station and the operational area of the associated mobile units. Accordingly, under our proposal, a base station would be exempt from FAS coordination if it is located outside the protection radii. Mobile units, however, would need FAS coordination if their operational area were to overlap the protection radii of the co-primary Government incumbent. We seek comment on our proposals.

#### 4. Coordination with METSAT Station Located at Greenbelt, MD.

130. We now address coordination procedures relevant to licensees in the 1670-1675 MHz band operating near the METSAT station located at Greenbelt, MD.<sup>297</sup> As mentioned previously, the Greenbelt, MD facility serves as a back up to the Wallops Island, VA facility and is therefore inactive most of the time. This facility is operational for testing purposes approximately once per month.

131. As an initial matter, we note that NTIA has indicated that a 65-kilometer (40-mile) protection radii would be necessary to protect the Greenbelt, MD facility.<sup>298</sup> We seek comment on NTIA's protection radii. Further, should we ultimately decide to adopt NTIA's recommended protective radii, we propose to require all fixed and mobile licensees operating in the 1670-1675 MHz band to coordinate operations within the NTIA protection radii. Under this scheme, we envision that coordination would take place before the activation of new facilities or any modifications to existing facilities. We seek comment on this approach.

132. We believe that the coordination procedures we propose for the METSAT facilities located at Wallops Island, VA and Fairbanks, AK would also suffice for the Greenbelt, MD facility. Under the procedures established in the *Reallocation Report and Order*, the 1670-1675 MHz licensee must notify the National Oceanic and Atmospheric Administration (NOAA) of operations which require coordination. The 1670-1675 MHz licensee must then file an application with the Commission requesting an individual station license. The Commission allows a 20-day period for objections to be filed. We seek comment on whether these procedures would be appropriate for both fixed and mobile operations located within the protection radii of the Greenbelt, MD facility.

133. In addition, we note that protection of the Greenbelt, MD facility is necessary only while the station is in operation. Therefore, we propose that the 1670-1675 MHz licensee would be required to reduce power or shut down any fixed site or mobile unit located within the coordination zone and which could cause interference to the Greenbelt, MD facility, only when the Greenbelt, MD facility is active. Conversely, when this facility is inactive, the 1670-1675 MHz licensee would be permitted to operate fixed and mobile units that exceed the designated protection criteria without prior coordination. We believe that these procedures strike an appropriate balance that both supports existing Federal Government operations and promotes the opportunity for new licensees to offer services in this band to the Washington, DC-Baltimore, MD metropolitan areas. We seek comment on this proposal.

134. Consistent with the proposed procedures outlined above, ArrayComm has suggested certain additional refinements to facilitate the overall coordination process, especially with regard to the

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<sup>297</sup> LLOYD APIRIAN, DEPARTMENT OF DEFENSE, JOINT SPECTRUM CENTER, GSFC B/U PROTECTION FROM POTENTIAL ENVIRONMENTAL RF TRANSMITTERS (2001).

<sup>298</sup> See NTIA letter, *supra* note 283.

Greenbelt, MD facility.<sup>299</sup> Under ArrayComm's proposal, prior to operation of any site within the protection radii, the 1670-1675 MHz licensee would prepare a plan or model, based on a generally accepted cellular planning tool, of all proposed base stations and mobile units.<sup>300</sup> The results of this modeling plan would be submitted to NOAA prior to operation for verification and testing at the Greenbelt, MD facility.<sup>301</sup> The Government operator would then have 30 days to complete and verify the measurements.<sup>302</sup>

135. Under ArrayComm's proposal, the Government Operator would also notify the 1670-1675 MHz licensee within 30 days of any scheduled Government operation at the Greenbelt, MD facility.<sup>303</sup> Additionally, in the event that the Greenbelt, MD facility is activated unexpectedly, the ArrayComm proposal would require the Government Operator to alert the 1670-1675 MHz licensee.<sup>304</sup> In those instances where the facility is activated unexpectedly, ArrayComm suggests that the 1670-1675 MHz licensee be afforded 120 minutes to transition to a mode where protection is provided to the Greenbelt, MD facility.<sup>305</sup> We seek comment on ArrayComm's proposals. Additionally, we encourage commenters to submit other proposals or counter proposals that would enhance implementation and effectiveness of our proposed coordination procedures near the Greenbelt, MD facility.

## 5. Non-Government Incumbents

### a. Aeronautical Flight Test Radio Coordinating Council

136. In response to the *Reallocation Notice*, the Aerospace and Flight Test Radio Coordinating Council (AFTRCC) indicates that ten additional sites should be protected until 2007.<sup>306</sup> AFTRCC identifies ten sites that conduct non-Government aeronautical flight test telemetry and states that aeronautical flight test telemetry cannot coexist with other uses of the spectrum because the sharing of flight test telemetry frequencies with other services risks safety of life and property.<sup>307</sup> Therefore, AFTRCC requests a 160 kilometer exclusion zone around the ten sites.<sup>308</sup>

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<sup>299</sup> See attachment to *Ex Parte* Letter from Randall S. Coleman, ArrayComm, to Magalie Roman Salas, Secretary, Federal Communications Commission, dated December 21, 2001.

<sup>300</sup> *Id.* at 3.

<sup>301</sup> *Id.* at 3-4.

<sup>302</sup> *Id.*

<sup>303</sup> *Id.* at 3.

<sup>304</sup> *Id.* at 2.

<sup>305</sup> *Id.*

<sup>306</sup> See Aerospace and Flight Test Radio Coordinating Council Comments filed March 8, 2001 at 4. AFTRCC is an association of aerospace companies engaged in the design, development, manufacture and testing of commercial and military aircraft, space vehicles, missiles and weapons systems.

<sup>307</sup> *Id.* at 5-6.

<sup>308</sup> *Id.* at 6.



137. In the *Reallocation Report and Order*, we indicated that new entrants to the 2385-2390 MHz band would need to protect nine of the ten sites.<sup>309</sup> The location of these sites is also listed in footnote US363 of Section 2.106.<sup>310</sup> We declined to extend protection to the Fairfield, Connecticut site in the interest of allowing new service in this band in the New York City metropolitan area.<sup>311</sup> We seek comment on the best method to coordinate 2385-2390 MHz licensees with incumbent non-Government aeronautical flight test telemetry operations.

138. We believe coordination with AFTRCC could be conducted in a similar manner to FAS coordination. Specifically, licensees in the 2385-2390 MHz band would be required to coordinate fixed and mobile operations within the protection radii of the non-Government aeronautical flight test sites listed in footnote US363 of Section 2.106. Coordination would be performed by the Commission after the 2385-2390 MHz licensee submits an application on the Universal Licensing System containing all the technical information about the proposed operation. The Commission will refer these applications to AFTRCC. Once AFTRCC approval is received, the Commission will issue an individual station license for each application referred to AFTRCC. We seek comment on these proposed coordination procedures. We also note that licensees in the 2385-2390 MHz band may pursue market-based mechanisms to facilitate relocation of and coordination with non-Government aeronautical flight test operations.

## 5. Canadian and Mexican Coordination

139. Section 2.301 of our Rules requires stations using radio frequencies to identify their transmissions with a view to eliminate harmful interference and generally enforce applicable radio treaties, conventions, regulations, arrangements, and agreements.<sup>312</sup> At this time, international agreements between and among the United States, Mexico and Canada concerning the reallocation of this spectrum are not complete. One option would be to propose certain interim requirements for terrestrial licenses along these borders, and to provide that these licensees will be subject to the provisions contained within future agreements between and among the three countries. Until such time as agreements between the United States, Mexico and Canada become effective, we propose to apply the same technical restrictions at the border that we adopt for operation between geographic service areas. Operations must not cause harmful interference across the border. We note that further modification might be necessary in order to comply with future agreements with Canada and Mexico regarding the use of this band. We seek comments on this issue.

## F. Competitive Bidding Procedures

140. As discussed above, consistent with our statutory mandate, we will resolve any mutually exclusive initial applications for licenses for the unpaired 1390-1392 MHz portion, the unpaired 1427-1432 MHz portion, and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band,

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<sup>309</sup> *Reallocation Report and Order* at ¶ 71.

<sup>310</sup> 47 C.F.R. § 2.106, footnote US363. *See also Reallocation Report and Order* at Appendix C.

<sup>311</sup> *See Reallocation Report and Order* at ¶ 71.

<sup>312</sup> *See* 47 C.F.R. § 2.301.

the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band through the use of competitive bidding.<sup>313</sup>

## 1. Incorporation by Reference of the Part 1 Standardized Auction Rules

141. We propose to conduct the auction of initial licenses in the unpaired 1390-1392 MHz portion, the unpaired 1427-1432 MHz portion,<sup>314</sup> and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of the Commission's rules, and substantially consistent with the bidding procedures that have been employed in previous auctions.<sup>315</sup> Specifically, we propose to employ the Part 1 rules governing competitive bidding design, designated entities, application and payment procedures, reporting requirements, collusion issues, and unjust enrichment.<sup>316</sup> Under this proposal, such rules would be subject to any modifications that the Commission may adopt in the Part 1 proceeding.<sup>317</sup> In addition, consistent with current practice, matters such as the appropriate competitive bidding design for the auction of these licenses, as well as minimum opening bids and reserve prices, would be determined by the Wireless Telecommunications Bureau (Bureau) pursuant to its delegated authority.<sup>318</sup> We seek comment on whether any of our Part 1 rules or other auction procedures would be inappropriate in an auction of licenses in these bands.

## 2. Provisions for Designated Entities

142. In authorizing the Commission to use competitive bidding, Congress mandated that the Commission “ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based

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<sup>313</sup> See *supra* ¶¶ 70-76.

<sup>314</sup> This proposal applies to initial licenses for primary telemetry services in the 1429.5-1432 MHz band as well as initial licenses for primary telemetry services in the seven geographic “carve-out” areas in the 1427-1429.5 MHz band. See *supra* ¶¶ 50-52.

<sup>315</sup> See, e.g., Amendment of Part 1 of the Commission's Rules — Competitive Bidding Procedures, WT Docket No. 97-82, *Order, Memorandum Opinion and Order and Notice of Proposed Rule Making*, 12 FCC Rcd 5686 (1997); Amendment of Part 1 of the Commission's Rules — Competitive Bidding Procedures, Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, *Third Report and Order and Second Further Notice of Proposed Rule Making*, 13 FCC Rcd 374 (1997) (modified by Erratum, DA 98-419 (rel. March 2, 1998)) (*Part 1 Third Report and Order*); Amendment of Part 1 of the Commission's Rules – Competitive Bidding Procedures, *Order on Reconsideration of the Third Report and Order, Fifth Report and Order, and Fourth Further Notice of Proposed Rule Making*, 15 FCC Rcd 15293 (2000) (*Part 1 Recon Order and Part 1 Fifth Report and Order, Fourth Further Notice of Proposed Rule Making*); Amendment of Part 1 of the Commission's Rules -- Competitive Bidding Procedures, *Seventh Report and Order*, FCC 01-270 (rel. Sept. 27, 2001).

<sup>316</sup> See 47 C.F.R. Section 1.2101 *et. seq.*

<sup>317</sup> See *Fourth Further Notice of Proposed Rule Making*, 15 FCC Rcd 15293 (2000). See also *Part 1 Recon Order and Part 1 Fifth Report and Order*, 15 FCC Rcd 15293 (2000) (recons. pending).

<sup>318</sup> See *Part 1 Third Report and Order*, 13 FCC Rcd 374, 448-49, 454-55 ¶¶ 125, 139 (directing the Bureau to seek comment on specific mechanisms relating to auction conduct pursuant to the Balanced Budget Act).

services.”<sup>319</sup> In addition, Section 309(j)(3)(B) of the Act provides that in establishing eligibility criteria and bidding methodologies the Commission shall promote “economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.”<sup>320</sup>

143. In the *Competitive Bidding Second Memorandum Opinion and Order*, the Commission stated that it would define eligibility requirements for small businesses on a service-specific basis, taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate threshold.<sup>321</sup> The *Part 1 Third Report and Order*, while it standardizes many auction rules, provides that the Commission will continue a service-by-service approach to defining small businesses.<sup>322</sup>

144. Certain commenters, in response to the *Reallocation Notice*, suggested a variety of services such as satellite-enabled notification service, personal location and monitoring service, and broadband data services for the unpaired 1670-1675 MHz band.<sup>323</sup> We do not know precisely the type of services that a licensee may seek to provide in the unpaired 1390-1392 MHz portion and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band. Nonetheless, we anticipate that the services that will be deployed in all the above-mentioned bands are likely to have capital requirements comparable to those of the WCS spectrum in the 2.3 GHz band, because in this *Notice* we propose for all of these bands flexibility to offer a broad range of fixed and mobile services that is similar to the flexible use permitted WCS licensees in the 2.3 GHz band.<sup>324</sup> Moreover, in this *Notice* we also propose that all service providers in these bands would operate under Part 27 of the Commission’s rules, which also governs WCS licensees in the 2.3 GHz band. Therefore, we propose to use the same small business size standards that the Commission applied to the WCS 2.3 GHz band. In the 2.3 GHz *WCS Report and Order* we defined a “small business” as an entity with average annual gross revenues not exceeding \$40 million for the preceding three years and a “very

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<sup>319</sup> See 47 U.S.C. § 309(j)(4)(D).

<sup>320</sup> See 47 U.S.C. § 309(j)(3)(B).

<sup>321</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, *Second Memorandum Opinion and Order*, 9 FCC Rcd 7245, 7269 ¶ 145 (1994) (*Competitive Bidding Second Memorandum Opinion and Order*).

<sup>322</sup> *Part 1 Third Report and Order*, 13 FCC Rcd at 388 ¶ 18.

<sup>323</sup> See AeroAstro Comments at 2-3; MicroTrax Comments at 2; ArrayComm Comments at 10.

<sup>324</sup> See *supra* ¶ 15. See also Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS), GN Docket No. 96-228, *Report and Order*, 12 FCC Rcd 10785 (1997) (*WCS Report and Order*).

small business” as an entity with average annual gross revenues not exceeding \$15 million for the preceding three years.<sup>325</sup>

145. The small business size standards that we propose to adopt here were also adopted for the 700 MHz Guard Bands,<sup>326</sup> which lend themselves to the provision of services similar to those that may be offered in the unpaired 1390-1392 MHz portion and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band. Moreover, the 700 MHz Guard Bands were licensed to Guard Band Managers, and in this *Notice* we seek comment on whether any of the bands under consideration should be licensed to band managers.<sup>327</sup> Such band managers would lease spectrum under service rules similar to those of the 700 MHz Guard Bands. Thus, the capital requirements for the unpaired 1390-1392 MHz portion and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band may also be comparable to those of the 700 MHz Guard Bands. Therefore, we think that it is appropriate to use the same small business size standards for these bands that we adopted in the 700 MHz Guard Bands.<sup>328</sup> We believe that our proposed approach would provide a variety of businesses with opportunities to participate in the auction of licenses for these bands and afford licensees substantial flexibility for the provision of services with varying capital costs.

146. Accordingly, we propose to adopt the same tiered small business size standards that we have used for the WCS 2.3 GHz band and the 700 MHz Guard Bands for the unpaired 1390-1392 MHz portion and the paired 1392-1395 MHz and 1432-1435 MHz portions of the 1.4 GHz band, the unpaired 1670-1675 MHz band and the unpaired 2385-2390 MHz band. However, to be consistent with the small business definitions proposed below for the 1427-1432 MHz band, we will use the term “entrepreneur” for entities with average annual gross revenues not exceeding \$40 million for the three preceding years. We will use the term “small business” for entities with average annual gross revenues not exceeding \$15 million for the three preceding years. We seek comment on our proposal.

147. With respect to the 1427-1432 MHz band, we do not know exactly what kind of telemetry services a licensee might seek to provide.<sup>329</sup> Although the capital costs of providing general telemetry services may vary, we believe that such capital costs will, in general, be lower than those for the other bands discussed above. Therefore, we propose to adopt tiered small business size standards for primary telemetry services in the 1427-1432 MHz band<sup>330</sup> that are smaller than those proposed for the other bands. Specifically, we propose to define a “small business” as any entity with average annual gross revenues not exceeding \$15 million for the three preceding years, and a “very small business” as any entity with average annual gross revenues not exceeding \$3 million for the three preceding years. We seek comment on

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<sup>325</sup> See *WCS Report and Order*, 12 FCC Rcd 10785, 10879 ¶ 194.

<sup>326</sup> See *Guard Band Second Report and Order*, 15 FCC Rcd 5299, 5343-5345 ¶¶ 106-110.

<sup>327</sup> See *supra* ¶¶ 36-42.

<sup>328</sup> See *Guard Band Second Report and Order*, 15 FCC Rcd 5299, 5343-5345 ¶¶ 106-110.

<sup>329</sup> Examples of current uses of this band include utility telemetry as well as other forms of telemetry.

<sup>330</sup> This proposal applies to primary general telemetry services in the 1429.5-1432 MHz band as well as primary general telemetry services in the seven geographic “carve-out” areas in the 1427-1429.5 MHz band.

whether our proposed small business definitions are appropriate for the 1427-1432 MHz portion of the 1.4 GHz band.

148. If we ultimately adopt our proposed small business definitions for the 1.4 GHz band, the 1670-1675 MHz band and the unpaired 2385-2390 MHz band auction, we further propose to provide entrepreneurs with a bidding credit of 15 percent, small businesses with a bidding credit of 25 percent, and very small businesses with a bidding credit of 35 percent. The bidding credits we propose here are those set forth in the standardized schedule in Part 1 of our Rules.<sup>331</sup> We believe that these bidding credits will provide adequate opportunities for small businesses to participate in the 1.4 GHz band, the 1670-1675 MHz band and the unpaired 2385-2390 MHz band auction.<sup>332</sup>

149. In developing these proposals, we acknowledge the difficulty in accurately predicting the market forces that will exist at the time these frequencies are licensed. Thus, our forecasts of types of services that will be offered over these bands may require adjustment depending upon ongoing technological developments and changes in market conditions. For these reasons, we invite interested parties to submit detailed information on the types of system architectures that are likely to be deployed in these bands, the availability of equipment, market conditions, and other factors that may affect the capital requirements of the type of services a licensee may seek to provide.

150. We also seek comment on whether the small business provisions we propose today are sufficient to promote participation by businesses owned by minorities and women, as well as rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned or women-owned businesses, they should address how such provisions should be crafted to meet the relevant standards of judicial review.<sup>333</sup>

151. We note that in response to the *Reallocation Notice* MicroTrax proposes that the Commission create a new category of designated entity that would be eligible for a bidding credit.<sup>334</sup> MicroTrax argues that we should provide bidding credits to commercial entities that propose to use their spectrum to benefit public safety and assist tax-supported public service institutions such as police and fire departments.<sup>335</sup> MicroTrax suggests that such entities receive a bidding credit similar in scope to that provided to small businesses in the broadband PCS auctions.<sup>336</sup> Several commenters disagree with MicroTrax's proposal.<sup>337</sup> We note that in authorizing the Commission to use competitive bidding,

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<sup>331</sup> In the *Part 1 Third Report and Order*, we adopted a standard schedule of bidding credits, the levels of which were developed based on our auction experience. *Part 1 Third Report and Order*, 13 FCC Rcd at 403-04 ¶ 47. See also 47 C.F.R. § 1.2110(f)(2).

<sup>332</sup> *Part 1 Third Report and Order*, 13 FCC Rcd at 403-04 ¶ 47.

<sup>333</sup> See *Adarand Constructors v. Peña*, 515 U.S. 200 (1995) (requiring a strict scrutiny standard of review for Congressionally mandated race-conscious measures); *United States v. Virginia*, 518 U.S. 515 (1996) (applying an intermediate standard of review to a state program based on gender classification).

<sup>334</sup> MicroTrax Comments at 18-19.

<sup>335</sup> *Id.*

<sup>336</sup> *Id.*

<sup>337</sup> See, e.g., ArrayComm Reply at 8; AeroAstro Reply at 2-3.

Congress mandated that the Commission promote the objectives of Section 309(j)(3) and ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services. In order to promote these objectives Congress allowed the Commission to consider the use of certain procedures such as bidding credits.<sup>338</sup> Our small business bidding credits, including the ones provided in the broadband PCS auctions, are designed to promote economic opportunities for a wide variety of applicants. We seek comment on MicroTrax's proposal and whether such bidding credits would promote the public interest objectives described in Section 309(j)(3). Commenters should specifically address whether provision of a bidding credit to commercial entities proposing public safety use of the spectrum would be inconsistent with the purpose of Section 309(j) in light of the express exemption from competitive bidding provided to public safety radio services licensees.<sup>339</sup> Commenters in favor of MicroTrax's proposed bidding credit should also propose eligibility standards and methods by which the Commission would determine entities' eligibility for such bidding credits.<sup>340</sup>

#### **IV. PROCEDURAL MATTERS**

##### **A. Initial Regulatory Flexibility Analysis**

152. 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 the Notice of Proposed Rule Making; it is contained in Appendix A. We request written public comment on the analysis. Comments must be filed in accordance with the same filing deadlines as comments filed in response to the Notice of Proposed Rule Making, and must have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer Information Bureau, Reference Information Center, will send a copy of this Notice of Proposed Rule Making, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

##### **B. Paperwork Reduction Analysis**

153. This Notice of Proposed Rule Making contains either a proposed or modified information collection. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget (OMB) to take this opportunity to comment on the information collections contained in this Notice of Proposed Rule Making, as required by the Paperwork Reduction Act of 1995.<sup>341</sup> Public and agency comments are due 60 days from the date of publication of this Notice in the Federal Register; OMB comments are due 120 days from the date of publication of this Notice in the Federal Register. Comments should address:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility.
- The accuracy of the Commission's burden estimates.

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<sup>338</sup> See 47 U.S.C. § 309(j)(4)(D).

<sup>339</sup> See 47 U.S.C. § 309(j)(2).

<sup>340</sup> See *BBA Report and Order*, 15 FCC Rcd at 22750 ¶ 83.

<sup>341</sup> See Pub. L. No. 104-13.

- Ways to enhance the quality, utility, and clarity of the information collected.
- Ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

154. Written comments by the public on the proposed and/or modified information collections are due 60 days after the date of publication in the Federal Register. Written comments must be submitted by the OMB on the proposed and/or modified information collections on or before 120 days after the date of publication in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley, Federal Communications Commission, Room 1-C804, 445 Twelfth Street, S.W., Washington, D.C. 20554, or via the Internet to [jboley@fcc.gov](mailto:jboley@fcc.gov), and to Ed Springer, OMB Desk Officer, Room 10236 New Executive Office Building, 725 Seventeenth Street, N. W., Washington, D.C. 20503, or via the Internet to [Edward.Springer@omb.eop.gov](mailto:Edward.Springer@omb.eop.gov).

### C. *Ex Parte* Presentations

155. For purposes of this permit-but-disclose notice and comment rulemaking proceeding, members of the public are advised that *ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed under the Commission's rules.<sup>342</sup>

### D. Pleading Dates

156. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules,<sup>343</sup> interested parties may file comments on or before **15 days from publication in the Federal Register** and reply comments on or before **30 days from publication in the Federal Register**. Comments and reply comments should be filed in WT Docket No. 02-08. All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. To file formally in this proceeding, interested parties must file an original and four copies of all comments, reply comments, and supporting comments. If interested parties want each Commissioner to receive a personal copy of their comments, they must file an original plus nine copies. Interested parties should send comments and reply comments to the Office of the Secretary, Federal Communications Commission, Room TW-A325, 445 Twelfth Street, S.W., Washington, D.C. 20554, with a copy to Dana Davis, Public Safety & Private Wireless Division, Wireless Telecommunications Bureau, Federal Communication Commission, 445 Twelfth Street, S.W., Washington, D.C. 20554.

157. Comments may also be filed using the Commission's Electronic Comment Filing System (ECFS).<sup>344</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>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To obtain filing instructions for e-mail comments, commenters should send an e-mail to

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<sup>342</sup> See generally 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

<sup>343</sup> See 47 C.F.R. §§ 1.415, 1.419.

<sup>344</sup> See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24,121 (1998).

ecfs@fcc.gov, and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply.

158. Comments and reply comments will be available for public inspection during regular business hours at the FCC Reference Information Center, Room CY-A257, at the Federal Communications Commission, 445 Twelfth Street, S.W., Washington, D.C. 20554. Copies of comments and reply comments are available through the Commission's duplicating contractor: Qualex International, Portals II, 445 12th Street, SW, Room CY-B402, Washington, DC, 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail [qualexint@aol.com](mailto:qualexint@aol.com).

#### **E. Further Information**

159. For further information concerning the Notice of Proposed Rulemaking, contact Zenji Nakazawa via phone at (202) 418-0680, via e-mail at [znakazaw@fcc.gov](mailto:znakazaw@fcc.gov), via TTY (202) 418-7233, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, D.C. 20554.

160. Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by contacting Brian Millin at (202) 418-7426, TTY (202) 418-7365, or via e-mail to [bmillin@fcc.gov](mailto:bmillin@fcc.gov). This Notice of Proposed Rule Making can be downloaded at <http://www.fcc.gov/Wirless/Orders/2002/fcc0215.txt>.

#### **V. ORDERING CLAUSES**

161. ACCORDINGLY, IT IS ORDERED that, pursuant to Sections 1, 4(i), 302, 303(f) and (r), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. 1, 154(i), 302, 303(f) and (r), and 332, NOTICE IS HEREBY GIVEN of the proposed regulatory changes described in this NOTICE OF PROPOSED RULEMAKING, and that COMMENT IS SOUGHT on these proposals.

162. IT IS FURTHER ORDERED that pending applications to use the frequencies listed in Section 90.259 of the Commission's Rules, 47 C.F.R. § 90.259, WILL BE PROCESSED provided that (1) they are not mutually exclusive with other applications as of February 6, 2002, nor with respect to the frequencies listed in Section 90.259, part of a proposed system that does not meet the requirements of our rules, without reference to any applications that are mutually exclusive with other applications as of February 4, 2002; and (2) the relevant period for filing competing applications has expired as of that date. Pending applications to use those frequencies not meeting the above criteria WILL BE HELD IN ABEYANCE until the conclusion of this proceeding. We will determine later, in accordance with such new rules as are adopted, whether to process or return any such pending applications.

163. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this NOTICE OF PROPOSED RULEMAKING including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

William F. Caton  
Acting Secretary



## APPENDICES

## APPENDIX A -- INITIAL REGULATORY FLEXIBILITY ANALYSIS

(for Notice of Proposed Rule Making)

As required by the Regulatory Flexibility Act (RFA),<sup>1</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 Notice of Proposed Rulemaking (*Notice*), WT Docket No. 02-08.

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 *Notice* as provided above. The Commission will send a copy of the *Notice*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>2</sup> In addition, the *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.<sup>3</sup>

**Need for, and Objectives of, the Proposed Rules:**

In this *Notice*, we propose rules for the licensing and operation of fixed and mobile services in the 216-220 MHz, 1390-1395 MHz, 1427-1429.5 MHz, 1429.5-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz bands pursuant to the provisions of the Communications Act of 1934, as amended, the Omnibus Budget Reconciliation Act of 1993 (OBRA-93), and the Balanced Budget Act of 1997 (BBA-97). These seven bands have a variety of continuing Government protection requirements and incumbent Government and non-Government uses. Despite these constraints and the relatively narrow bandwidth contained in each of the bands, we believe that the *Notice* will foster a variety of potential applications in both new and existing services. The transfer of these bands to non-Government use should enable the development of new technologies and services, provide additional spectrum relief for congested private land mobile frequencies, and fulfill our obligations as mandated by Congress to assign this spectrum for non-Government use.

We generally seek comment on the following issues under consideration for new services in the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands:

- whether to authorize new services under Part 27 of our Rules;
- whether to license new services by geographic service areas;
- whether to license band managers in any of these bands;
- whether to provide for partitioning and disaggregation of licensed spectrum; and
- whether to adopt technical rules in order to prevent in-band and out-of-band interference.

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601 *et. seq.*, has been 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>2</sup> 5 U.S.C. § 603(a).

<sup>3</sup> *See id.*

We also address several issues relating to existing services currently operating in the 216-220 MHz, 1427-1429.5 MHz and 1429.5-1432 MHz bands. We seek comment on the following issues:

- whether secondary telemetry in the 217-220 MHz and 1427-1429.5 MHz bands should be licensed on a site-by-site basis;
- whether primary telemetry in the 1429.5-1432 MHz band should be licensed on a site-by-site basis;
- whether to add technical specifications to Part 90 of our Rules for telemetry operations;<sup>4</sup>
- whether to apply the frequency coordination procedures of Section 90.175 to authorization of future telemetry operations.

In accordance with Section 309(j) of the Communication Act, if we adopt a licensing scheme under which mutually exclusive applications are accepted for filing, we must resolve such mutually exclusive applications by competitive bidding.<sup>5</sup> We propose to conduct the auction of such licenses in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of the Commission's Rules.<sup>6</sup>

Additionally, we seek comment on a petition for rulemaking filed on March 6, 2000, by Data Flow Systems, Inc., (Data Flow), requesting that the Commission amend Sections 90.35 and 90.259 of the Commission's Rules to allow the use of fixed telemetry in the 216-220 MHz band.<sup>7</sup> We also seek comment on a proposal filed by Securicor Wireless Holdings, Inc. (Securicor) in response to the *Reallocation Notice*.<sup>8</sup> Securicor seeks to license "white-space" in the 216-220 MHz band similar to the paradigm established for land mobile use of the 220-222 MHz band. Lastly, we request comment on a proposal submitted by Warren Havens (Havens) in response to the *Reallocation Notice* that seeks the creation of a new "Advanced Technologies 220 MHz" Service in the 216-225 MHz band.<sup>9</sup>

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<sup>4</sup> Prior to the release of the *Reallocation Report and Order*, Section 90.259 of our Rules permitted telemetry operations throughout the entire 216-220 MHz band and in the 1427-1435 MHz band. *See* 47 C.F.R. § 90.259 (2000). We note that in the *Reallocation Report and Order*, telemetry is limited to the 216-220 MHz band (secondary), the 1427-1429.5 MHz band (secondary) and the 1429.5-1432 MHz band (primary). New telemetry operations in the 216-217 MHz portion of the 216-220 MHz band will no longer be authorized after January 1, 2002. *See Reallocation Report and Order* at ¶ 26.

<sup>5</sup> 47 U.S.C. § 309(j).

<sup>6</sup> 47 C.F.R. § Part 1, Subpart Q.

<sup>7</sup> Petition for Rulemaking filed by Data Flow Systems, Inc. on March 6, 2000, RM-9882 (*Data Flow Petition for Rulemaking*). The Commission's Rules currently do not permit this use. *See* 47 C.F.R. §§ 90.35 and 90.259.

<sup>8</sup> *See* Securicor Comments filed on March 8, 2001 (*Securicor Comments*).

<sup>9</sup> *See* Warren Havens Comments filed on March 8, 2001 (*Havens Comments*).

**Legal Basis for Proposed Rules:**

The proposed action is authorized under Sections 1, 4(i), 302, 303(f) and (r), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 1, 154(i), 302, 303(f) and (r), and 332(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 proposed rules, if adopted.<sup>10</sup> The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."<sup>11</sup> In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.<sup>12</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>13</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>14</sup> Nationwide, as of 1992, there were approximately 275,801 small organizations.<sup>15</sup> "Small governmental jurisdiction"<sup>16</sup> generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."<sup>17</sup> As of 1992, there were approximately 85,006 governmental entities in the United States.<sup>18</sup> This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96%, have populations of fewer than 50,000.<sup>19</sup> The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (96%) are small entities.

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<sup>10</sup> 5 U.S.C. § 603(b)(3).

<sup>11</sup> 5 U.S.C. § 601(6).

<sup>12</sup> 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 of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

<sup>13</sup> Small Business Act, 15 U.S.C. § 632 (1996).

<sup>14</sup> 5 U.S.C. § 601(4).

<sup>15</sup> 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

<sup>16</sup> 47 C.F.R. § 1.1162.

<sup>17</sup> 5 U.S.C. § 601(5).

<sup>18</sup> U.S. Dept. of Commerce, Bureau of the Census, "1992 Census of Governments."

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

With respect to the 1390-1395 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz bands, the Commission has not yet determined how many licenses will be awarded and does not know how many licensees will partition their license areas or disaggregate their spectrum blocks, if partitioning and disaggregation are allowed. Moreover, the Commission does not yet know how many applicants or licensees in these bands will be small entities. We therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all prospective licensees are small entities, as that term is defined by the SBA or by our proposed small business definitions for these bands. We invite comment on this analysis.

Existing services in other bands include entities that might be affected by the proposed rules, either as existing licensees or potential applicants or licensees. Incumbent services in the 216-220 MHz band include the Automated Maritime Telecommunications Service (AMTS), the “218-219 MHz” Service, the Low Power Radio Service (LPRS) and telemetry. Incumbent services in the 1427-1429.5 MHz and 1429.5-1432 MHz bands include wireless medical telemetry (WMTS) and general telemetry.

*AMTS.* For future auctions in the AMTS, the Commission has proposed to define small businesses as those entities, together with their affiliates and controlling interests, with not more than \$15 million in average gross revenues for the preceding three years, and very small businesses as those entities, together with their affiliates and controlling interests, with not more than \$3 million in average gross revenues for the preceding three years.<sup>20</sup> Currently, there are only three AMTS licensees, none of whom are small businesses. However, potential licensees in AMTS include all public coast stations, which are classified by the Small Business Administration as Radiotelephone Service Providers, Standard Industrial Classification Code 4812.<sup>21</sup> The Commission does not yet know how many applicants or licensees in these bands will be small entities. We therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all prospective licensees are small entities, as that term is defined by the SBA or by our proposed small business definitions for these bands.

*“218-219 MHz” Service.* For the first auction of the “218-219 MHz” Service the Commission defined a small business as an entity, together with its affiliates, that has no more than a \$6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than \$2 million in annual profits each year for the previous two years.<sup>22</sup> For that auction, 170 entities won licenses for 594 Metropolitan Statistical Area (MSA) licenses. Of the 594 licenses, 557 were won by entities qualifying as a small business. Subsequently, the Commission changed the service rules and defined small businesses as those entities, together with their affiliates and controlling interests, with not more than \$15 million in average gross revenues for the preceding three years, and very small businesses as those entities, together with their affiliates and controlling interests, with not more than \$3 million in

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<sup>20</sup> See Letter from Aida Alvarez, Administrator for Size Standards, U.S. Small Business Administration, to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, dated November 3, 2000. See also *AMTS Fourth Report and Order and Third NPRM*, 15 FCC Rcd 22585 (2000).

<sup>21</sup> See 13 C.F.R. § 121.201.

<sup>22</sup> Implementation of Section 309(j) of the Communications Act – Competitive Bidding, PP Docket No. 93-253, *Fourth Report and Order*, 9 FCC Rcd 2330, 2336 (1994).

average gross revenues for the preceding three years.<sup>23</sup> We cannot estimate, however, the number of licenses that will be won by entities qualifying as small businesses under our rules in future auctions of 218-219 MHz spectrum licenses. Given the success of small businesses in the first auction, we assume for purposes of this IRFA that in future auctions all of the licenses in the “218-219 MHz” Service may be awarded to small businesses.

*Low Power Radio Service.* The Low Power Radio Service permits licensees to use the 216-217 MHz segment for auditory assistance, medical devices, and law enforcement tracking devices. Users are likely to be theaters, auditoriums, churches, schools, banks, hospitals, and medical care facilities. The primary manufacturer of auditory assistance estimates that it has sold 25,000 pieces of auditory assistance equipment. Many if not most LPRS users are likely to be small businesses or individuals. However, because the LPRS is licensed by rule, with no requirement for individual license applications or documents, the Commission is unable to estimate how many small businesses make use of LPRS equipment.

*Telemetry.* Incumbent telemetry operators in the 216-220 MHz band include entities such as Fairfield Industries, Inc. which perform geophysical exploration for underground oil and natural gas reserves. Incumbent non-medical telemetry operators in the 1427-1429.5 MHz and 1429.5-1432 MHz bands include Itron, Inc., Pueblo Service Company of Colorado and E Prime, Inc., and large manufacturers such as Deere and Company, Caterpillar, and General Dynamics. None of these licensees are likely to be small businesses. Itron, Inc. is the primary user of the 1427-1429.5 MHz and 1429.5-1432 MHz bands. Itron, Inc., with an investment of \$100 million in equipment development, is not likely to be a small business. One licensee, Zytex, a manufacturer of high-speed telemetry systems, may be a small business. The Commission does not yet know how many applicants or licensees in these bands will be small entities. We therefore assume that, for purposes of our evaluations and conclusions in the IRFA, all prospective licensees are small entities.

*WMTS.* Users of medical telemetry are hospitals and medical care facilities, some of which are likely to be small businesses. According to the SBA's regulations, hospitals and nursing homes must have annual gross receipts of \$5 million or less in order to qualify as a small business concern. There are approximately 11,471 nursing care firms in the nation, of which 7,953 have annual gross receipts of \$5 million or less.<sup>24</sup> There are approximately 3,856 hospital firms in the nation, of which 294 have gross receipts of \$5 million or less. Thus, the approximate number of small confined setting entities to which the Commission's new rules will apply is 8,247.

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

Applicants for licenses to provide terrestrial fixed and mobile services in the paired 1392-1395 MHz and 1432-1435 MHz bands, the unpaired 1390-1392 MHz band, the unpaired 1670-1675 MHz band, and the unpaired 2385-2390 MHz band will be required to submit short-form auction applications using FCC Form 175.<sup>25</sup> In addition, winning bidders must submit long-form license applications

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<sup>23</sup> See Letter from Aida Alvarez, Administrator for Size Standards, U.S. Small Business Administration, to Daniel B. Phythyon, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, dated January 6, 1998.

<sup>24</sup> See Small Business Administration Tabulation File, SBA Size Standards Table 2C, January 23, 1996, SBA, Standard Industrial Code (SIC) categories 8050 (Nursing and Personal Care Facilities) and 8060 (Hospitals). (SBA Tabulation File).

<sup>25</sup> 47 C.F.R. § 1.2105.

through the Universal Licensing System using FCC Form 601,<sup>26</sup> and other appropriate forms.<sup>27</sup> Licensees will also be required to apply for an individual station license by filing FCC Form 601 for those individual stations that (1) require submission of an Environmental Assessment under Section 1.1307 of our Rules;<sup>28</sup> (2) require international coordination;<sup>29</sup> (3) would operate in the quiet zones listed in Section 1.924 of our Rules;<sup>30</sup> or (4) require coordination with the Frequency Assignment Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC).<sup>31</sup> We invite comment on how these filing requirements can be modified to reduce the burden on small entities.

### **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 (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>32</sup>

We have reduced burdens wherever possible. To minimize any negative impact, however, we propose certain incentives for small entities that will redound to their benefit. These special provisions include partitioning and spectrum disaggregation.<sup>33</sup> These provisions will allow smaller entities to overcome entry barriers. In addition, we seek comment on whether it would be appropriate to license the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands for fixed and mobile services using smaller geographical licensing areas.<sup>34</sup> The use of smaller licensing areas could benefit small entities by reducing costs and build-out expenses.

We also propose the use of bidding credits for small entities that participate in auctions of licenses that are conducted pursuant to the rules proposed in this Notice. Thus, for the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz

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<sup>26</sup> 47 C.F.R. § 1.913(a)(1).

<sup>27</sup> 47 C.F.R. § 1.2107.

<sup>28</sup> 47 C.F.R. § 1.1307.

<sup>29</sup> *See, e.g.*, 47 C.F.R. § 1.928 (regarding frequency coordination arrangements between the U.S. and Canada).

<sup>30</sup> 47 C.F.R. § 1.924.

<sup>31</sup> We discuss FAS coordination in the section describing coordination with Government incumbents. *See supra* Section III.E.3.

<sup>32</sup> *See* 5 U.S.C. § 603(c).

<sup>33</sup> *See supra* Section III.B.5

<sup>34</sup> *See supra* Section III.A.3.

bands, we propose to define an "entrepreneur" as an entity with average annual gross revenues not exceeding \$40 million for the three preceding years and we propose to define a "small business" as an entity with average annual gross revenues not exceeding \$15 million for the three preceding years. With respect to the 1427-1432 MHz band, in which we believe that the capital costs of providing primary general telemetry service will in general be lower than the capital costs for the bands discussed above, we propose to define a "small business" as an entity with average annual gross revenues not exceeding \$15 million for the three preceding years and a "very small business" as an entity with average annual gross revenues not exceeding \$3 million for the three preceding years. We further propose to provide entrepreneurs with a bidding credit of 15 percent, small businesses with a bidding credit of 25 percent, and very small businesses with a bidding credit of 35 percent. We believe that these bidding credits will help small entities compete in our auctions and acquire licenses. We seek comment on our proposed small business definitions and bidding credits, including information on factors that may affect the capital requirements of the type of services a licensee may seek to provide.

The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services in a prompt and efficient manner. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities. We seek comment on significant alternatives commenters believe we should adopt.

**Report to Small Business Administration:**

The Commission will send a copy of this Notice of Proposed Rulemaking, including a copy of the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration. The Notice of Proposed Rulemaking and IRFA (or summaries there of) will also be published in the Federal Register.

**Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rules:**

None.

## APPENDIX B -- List of Incumbent Licensees in 1429.5-1432 MHz Band

Name of Existing Licensee	Frequency	Location Type	Area of Operation(s)
Deere & Company (KA73480)	1431.5 MHz	Mobile	161 kilometers centered on a point in Linn County, Iowa
General Dynamics Defense Systems, Inc. (KB50425)	1432 MHz	Mobile	8 kilometers centered on a point in Berkshire County, Massachusetts
Itron, Inc. (WPCG645)	1427-1432 MHz	Temporary Fixed and Mobile	Nationwide  Continental North and South of Line A, West and East of Line C including, Alaska, Hawaii, American Samoa, Guam, North Mariann Islands, Puerto Rico and Virgin Islands.
Mississippi State University (KNBH804)	1433 MHz	Fixed	Starkville, MS
The Boeing Company (WCB372)	1433 MHz	Fixed	Wrightwood, California
Zytext Instruments, Ltd. (WPNV482)	1431 MHz	Itinerant	3.0 kilometers centered on points in the following counties: Henry, Georgia San Bernardino, California Cabarrus, North Carolina Volusia, Florida Northampton, Pennsylvania Marion, Indiana Sonoma, California Talladega, Alabama Tarrant, Texas Schuyler, New York
Zytext Sports Telemetry Inc. (WPPD284)	1431 MHz	Itinerant	3.0 kilometers centered on points in the following counties: Henry, Georgia San Bernardino, California Cabarrus, North Carolina Volusia, Florida Northampton, Pennsylvania Marion, Indiana Sonoma, California Talladega, Alabama Tarrant, Texas Schuyler, New York



**Appendix C -- Proposed Definitions and Rules**

1. Part 1 of title 47 of the Code of Federal Regulations, is proposed to be amended as follows:

**PART 1 – PRACTICE AND PROCEDURE**

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

**AUTHORITY:** 47 U.S.C. 151, 154(i), 154(j), 155, 225, 303(r), 309, and 325(e) unless otherwise noted.

3. We propose to amend Section 1.924(f) to read as follows:

**§ 1.924 Quiet zones.**

\* \* \* \* \*

(f) GOES. The requirements of this paragraph are intended to minimize harmful interference to Geostationary Operational Environmental Satellite earth stations receiving in the band 1670-1675 MHz, which are located at Wallops Island, Virginia, Fairbanks, Alaska and Greenbelt Maryland.

(1) Applicants and licensees planning to construct and operate a new or modified station within the area bounded by a circle with a radius of 100 kilometers (62.1 miles) that is centered on 37° 56' 47" N, 75° 27' 37" W (Wallops Island) or 64° 58' 36" N, 147° 31' 03" W (Fairbanks) or within the area bounded by a circle with a radius of 65 kilometers (40.4 miles) that is centered on 39° 00' 02" N, 76° 50' 31" W (Greenbelt) must notify the National Oceanic and Atmospheric Administration (NOAA) of the proposed operation. For this purpose, NOAA maintains the GOES coordination web page at <http://www.osd.noaa.gov/radio/frequency.htm>, which provides the technical parameters of the earth stations and the point-of-contact for the notification. The notification shall include the following information: requested frequency, geographical coordinates of the antenna location, antenna height above mean sea level, antenna directivity, emission type, equivalent isotropically radiated power, antenna make and model, and transmitter make and model.

(2) When an application for authority to operate a station is filed with the FCC, the notification required in paragraph (f)(1) of this section should be sent at the same time. The application must state the date that notification in accordance with paragraph (f)(1) of this section was made. After receipt of such an application, the FCC will allow a period of 20 days for comments or objections in response to the notification.

(3) If an objection is received during the 20-day period from NOAA, the FCC will, after consideration of the record, take whatever action is deemed appropriate.

4. Part 2 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 2 – FREQUENCY ALLOCATIONS AND  
RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS**

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

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

6. We propose to amend Section 2.106, the Table of Frequency Allocations by revising footnotes

US350 and US362 as follows:

**§ 2.106 Table of Frequency Allocations.**

\*\*\*\*\*

UNITED STATES (US) FOOTNOTES

\*\*\*\*\*

US350 In the bands 608-614 MHz and 1395-1400 MHz the Government and non-Government land mobile service is limited to medical telemetry and medical telecommand operations. Availability and use of medical telemetry and telecommand and non-medical telemetry and telecommand in the bands 1427-1429.5 MHz and 1429.5-1432 MHz are described below:

Location (see §§ 90.259(b)(4) and 95.630(b) of this chapter for a detailed description)	1427-1429.5 MHz	1429.5-1432 MHz
Austin/Georgetown, Texas	Non-Government land mobile service is limited to telemetry and telecommand operations.	Government and non-Government land mobile service is limited to medical telemetry and telecommand operations.
Battle Creek, Michigan		
Detroit, Michigan		
Pittsburgh, Pennsylvania		
Richmond/Norfolk, Virginia		
Spokane, Washington		
Washington, DC metropolitan area		Non-Government telemetry and telecommand use is permitted on a secondary basis.
Rest of U.S.	Government and non-Government land mobile service is limited to medical telemetry and telecommand operations.  Non-Government telemetry and telecommand use is permitted on a secondary basis.	Non-Government land mobile service is limited to telemetry and telecommand operations.

\*\*\*\*\*

US362 The band 1670-1675 MHz is allocated to the meteorological-satellite service (space-to-Earth) on a primary basis for Government use. Earth station use of this allocation is limited to Wallops Island, VA (37° 56' 47" N, 75° 27' 37" W), Fairbanks, AK (64° 58' 36" N, 147° 31' 03" W), and Greenbelt, MD (39° 00' 02" N, 76° 50' 31" W). Applicants for non-Government stations within 100 kilometers of the Wallops Island or Fairbanks coordinates and within 65 kilometers of the Greenbelt coordinates shall notify NOAA in accordance with the procedures specified in 47 C.F.R. § 1.924.

7. Part 27 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES**

8. The authority citation for Part 27 continues to read as follows:

**AUTHORITY:** 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337, unless otherwise noted.

9. We propose to add the following definitions to Section 27.4:

**§ 27.4 Terms and definitions.**

\* \* \* \* \*

***Band Manager.*** The term *Band Manager* refers to a licensee in the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz bands that functions solely as a spectrum broker by subdividing its licensed spectrum and making it available to system operators or directly to end users for fixed or mobile communications consistent with Commission Rules. A *Band Manager* is directly responsible for any interference or misuse of its licensed frequency arising from its use by such non-licensed entities.

10. We propose to add a new Subpart to Part 27 as follows:

**Subpart H – 1.4 GHz Service**

**§ 27.701 Scope.**

This subpart sets out the regulations governing service in the paired 1392-1395 MHz and 1432-1435 MHz bands as well as the unpaired 1390-1392 MHz band (1.4 GHz Service).

**§ 27.702 Permissible communications.**

Licensees in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz band are authorized to provide fixed or mobile service, except aeronautical service, subject to the technical requirements of this subpart.

**§ 27.703 Coordination requirements.**

(a) Licensees in the 1.4 GHz Service will be issued geographic area licenses.

(b) Licensees in the 1.4 GHz Service must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) that requires submission of an Environmental Assessment under Part 1, § 1.1307;

(2) that requires international coordination;

(3) that operates in the quiet zones listed in Part 1, §1.924; or

(4) that requires approval of the Frequency Advisory Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Stations that require FAS approval are as follows:

(i) licensees in the 1390-1392 MHz and 1392-1395 MHz band must receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of the Government sites listed in footnote US351 of § 2.106.

(ii) licensees in the 1432-1435 MHz band must receive FAS approval, prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of the Government sites listed in footnote US361 of § 2.106.

(c) Prior to construction of a station, a 1.4 GHz licensee must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by Part 17 of this chapter.

(d) It is the licensee's responsibility to determine whether an individual station needs referral to the Commission.

(e) The notification required in subparagraph (b) must be filed on the Universal Licensing System.

#### **§ 27.704 Geographic partitioning and spectrum disaggregation.**

An entity that acquires a portion of a 1.4 GHz licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1.4 GHz licensee and is subject to the obligations and restrictions on the 1.4 GHz license as set forth in this subpart.

#### **§ 27.705 1.4 GHz Service licenses subject to competitive bidding.**

Mutually exclusive initial applications for 1.4 GHz Service licenses in the paired 1392-1395 MHz and 1432-1435 MHz bands as well as the unpaired 1390-1392 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in Part 1, Subpart Q of this chapter will apply unless otherwise provided in this part.

#### **§ 27.706 Designated entities.**

(a) Eligibility for small business provisions for 1.4 GHz Service licenses in the paired 1392-1395 MHz and 1432-1435 MHz bands and the unpaired 1390-1392 MHz band.

(1) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(2) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(3) A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of entrepreneurs is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section.

(4) For purposes of determining whether an entity meets any of the definitions set forth in paragraphs (a)(1), (a)(2), or (a)(3) of this section, the gross revenues of the entity, its controlling interests and affiliates shall be considered in the manner set forth in § 1.2110(b) and (c) of this chapter.

(b) Bidding credits. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

11. We propose to add a new Subpart to Part 27 as follows:

**Subpart I - 1670-1675 MHz Service.**

**§ 27.801 Scope.**

This subpart sets out the regulations governing service in the 1670-1675 MHz band (1670-1675 MHz Service).

**§ 27.802 Permissible communications.**

Licensees in the 1670-1675 MHz Service are authorized to provide fixed or mobile service, except aeronautical mobile service, subject to the technical requirements of this subpart.

**§ 27.803 Coordination requirements.**

(a) Licensees in the 1670-1675 MHz Service will be issued geographic area licenses.

(b) Licensees in the 1670-1675 MHz Service must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) that requires submission of an Environmental Assessment under Part 1, § 1.1307;

(2) that requires international coordination;

(3) that operates in the quiet zones listed under Part 1, § 1.924.

(c) The notification required in subparagraph (b) must be filed on the Universal Licensing System.

(d) Prior to construction of a station, a licensee must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by Part 17 of this chapter.

(e) It is the licensee's responsibility to determine whether an individual station requires referral to the Commission.

**§ 27.804 Geographic partitioning and spectrum disaggregation.**

An entity that acquires a portion of a 1670-1675 MHz licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 1670-1675 MHz licensee and is subject to the obligations and restrictions on the 1670-1675 MHz license as set forth in this subpart.

**§ 27.805 1670-1675 MHz Service licenses subject to competitive bidding.**

Mutually exclusive initial applications for 1670-1675 MHz Service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in Part 1, Subpart Q of this chapter will apply unless otherwise provided in this part.

**§ 27.806 Designated entities.**

(a) Eligibility for small business provisions.

(1) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(2) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(3) A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of entrepreneurs is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section.

(4) For purposes of determining whether an entity meets any of the definitions set forth in paragraphs (a)(1), (a)(2), or (a)(3) of this section, the gross revenues of the entity, its controlling interests and affiliates shall be considered in the manner set forth in § 1.2110(b) and (c) of this chapter.

(b) Bidding credits. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

12. We propose to add a new Subpart to Part 27 as follows:

**Subpart J - 2385-2390 MHz Service.****§ 27.901 Scope.**

This subpart sets out the regulations governing service in the 2385-2390 MHz band (2385-2390 MHz Service).

**§ 27.902 Permissible communications.**

Licensees in the 2385-2390 MHz Service are authorized to provide fixed or mobile service subject to the technical requirements of this subpart.

**§ 27.903 Coordination requirements.**

(a) Licensees in the 2385-2390 MHz Service will be issued geographic area licenses.

(b) Licensees in the 2385-2390 MHz Service must file a separate station application with the Commission and obtain an individual station license, prior to construction or operation, of any station:

(1) that requires submission of an Environmental Assessment under Part 1, § 1.1307;

(2) that requires international coordination;

(3) that operates in the quiet zones listed in Part 1, § 1.924;

(4) that requires approval of the Frequency Advisory Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). Licensees in the 2385-2390 MHz Service must receive FAS approval prior to operation of fixed sites or mobile units within the NTIA recommended protection radii of the Government aeronautical telemetry sites listed in footnote US363 of § 2.106.

(5) that would require approval of the Aeronautical Flight Test Radio Coordinating Council (AFTRCC). Licensees in the 2385-2390 MHz Service must receive AFTRCC approval prior to operation of fixed sites or mobile units within the AFTRCC recommended protection radii of the non-Government flight test operations listed in footnote US363 of § 2.106.

(c) Prior to construction of a station, the 2385-2390 MHz licensee must register with the Commission any station antenna structure for which notification to the Federal Aviation Administration is required by Part 17 of this chapter.

(d) It is the licensee's responsibility to determine whether a referral to the Commission is needed for any individual station constructed.

(e) The notification required in subparagraph (b) must be filed on the Universal Licensing System.

#### **§ 27.904 Geographic partitioning and spectrum disaggregation.**

An entity that acquires a portion of a 2385-2390 MHz licensee's geographic area or spectrum subject to a geographic partitioning or spectrum disaggregation agreement under § 27.15 must function as a 2385-2390 MHz licensee and is subject to the obligations and restrictions on the 2385-2390 MHz license as set forth in this subpart.

#### **§ 27.905 2385-2390 MHz Service licenses subject to competitive bidding.**

Mutually exclusive initial applications for 2385-2390 MHz Service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in Part 1, Subpart Q of this chapter will apply unless otherwise provided in this part.

#### **§ 27.906 Designated entities.**

(a) Eligibility for small business provisions.

(1) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(2) An entrepreneur is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$40 million for the preceding three years.

(3) A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of entrepreneurs is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section.

(4) For purposes of determining whether an entity meets any of the definitions set forth in paragraphs (a)(1), (a)(2), or (a)(3) of this section, the gross revenues of the entity, its controlling interests and affiliates shall be considered in the manner set forth in § 1.2110(b) and (c) of this chapter.

(b) Bidding credits. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as an entrepreneur or a consortium of entrepreneurs as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(iii) of this chapter.

13. We propose to add a new Subpart to Part 27 as follows:

#### **Subpart K - Band Managers.**

##### **§ 27.1001 Scope.**

This subpart sets out the regulations governing Band Managers in the paired 1392-1395 MHz and 1432-1435 MHz bands and unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands.

##### **§ 27.1002 Permissible communications.**

Band Managers are authorized to allow a spectrum user to provide fixed or mobile service subject to the technical requirements of this subpart.

##### **§ 27.1002 Band Manager authority.**

(a) A Band Manager may allow a spectrum user, pursuant to a written agreement, to construct and operate stations at any available site within the licensed area and on any channel for which the Band Manager is licensed, provided such stations comply with Commission Rules and coordination requirements.

(b) A Band Manager may allow a spectrum user, pursuant to a written agreement, to delete, move or change the operating parameters of any of the user's stations that are covered under the Band Manager's license without prior Commission approval, provided such stations comply with Commission Rules and coordination requirements.

##### **§ 27.1003 Band Manager agreements.**

Band Managers are required to enter into written agreements regarding the use of their licensed



spectrum by others, subject to the following conditions:

(a) The duration of spectrum user agreements may not extend beyond the term of the Band Manager's FCC license.

(b) The spectrum user agreement must specify in detail the operating parameters of the spectrum user's system, including power, maximum antenna heights, frequencies of operation, base station location(s), area(s) of operation.

(c) The spectrum user agreement must require the spectrum user to use Commission-approved equipment where appropriate and to complete post-construction proofs of system performance prior to system activation.

(d) The spectrum user must agree to operate its system in compliance with all technical specifications for the system contained in the agreement and agree to cooperate fully with any investigation or inquiry conducted by either the Commission or the Band Manager.

(e) The spectrum user must agree to comply with all applicable Commission rules, and the spectrum user must accept Commission oversight and enforcement.

(f) The spectrum user agreement must stipulate that if the Band Manager determines that there is an ongoing violation of the Commission's rules or that the spectrum user's system is causing harmful interference, the Band Manager shall have the right to suspend or terminate operation of the spectrum user's system. The spectrum user agreement must stipulate that if the spectrum user refuses to comply with a suspension or termination order, the Band Manager will be free to use all legal means necessary to enforce the order.

(g) The spectrum user agreement may not impose unduly restrictive requirements on use of the licensed frequencies, including any requirement that is not reasonably related to the efficient management of the spectrum licensed to the Band Manager.

(h) Band Managers shall maintain their written agreements with spectrum users at their principal place of business, and retain such records for at least two years after the date such agreements expire. Such records shall be kept current and be made available upon request for inspection by the Commission or its representatives.

#### **§ 27.1004 Access to the Band Manager's spectrum.**

(a) A Band Manager may not engage in unjust or unreasonable discrimination among spectrum users and may not unreasonably deny prospective spectrum users access to the Band Manager's licensed spectrum.

(b) A Band Manager may not impose unduly restrictive requirements on use of its licensed frequencies, including any requirement that is not reasonably related to the efficient management of the spectrum licensed to the Band Manager.

14. Part 90 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

### **PART 90 – PRIVATE LAND MOBILE RADIO SERVICE**

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

**AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 302(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7), unless otherwise noted.**

16. Section 90.175 proposed to be revised by amending paragraph (i)(13) to read as follows:

**§ 90.175 Frequency coordination requirements.**

\* \* \* \* \*

(i) \* \* \*

(13) Applications for frequencies in the 1429.5-1432 MHz band.

17. Section 90.259 is proposed to be revised by amending paragraph (b) to read as follows:

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

\* \* \* \* \*

(b) 1427-1432 MHz band.

(1) Frequencies in the 1427-1432 MHz band may be assigned to applicants that establish eligibility in the Public Safety Pool or the Industrial/Business Pool.

(2) All operations in the 1427-1429.5 MHz band are secondary to the Wireless Medical Telemetry Service except in the locations specified in paragraph (b)(4) of this section where operations are primary in status.

(3) All operations in the 1429.5-1432 MHz are primary in status except in the locations specified in paragraph (b)(4) of this section where operations are secondary to the Wireless Medical Telemetry Service.

(4) Locations:

(i) Pittsburgh, Pennsylvania – Westmoreland, Washington, Beaver, Allegheny and Butler counties;

(ii) Washington, DC metropolitan area – Montgomery, Prince William, Fairfax, Prince George's and Charles counties, Alexandria City, District of Columbia;

(iii) Richmond/Norfolk, Virginia – Goochland, Powhatan, Hanover, Henrico counties, Richmond City, Hampton City, Virginia Beach City, Chesapeake City, Portsmouth City and Suffolk City;

(iv) Austin/Georgetown, Texas – Williamson and Travis counties;

(v) Battle Creek, Michigan – Calhoun county

(vi) Detroit, Michigan – Oakland county

(vii) Spokane, Washington – Spokane county.

(5) All operations in the 1429.5-1432 MHz band authorized prior to [Effective date of the *Reallocation Report and Order*] are on a secondary basis.

18. We propose to add a new Subpart to Part 90 as follows:

**Subpart Y - Competitive Bidding Procedures for Primary Telemetry in the 1427-1432 MHz band.**

**§ 90.1201 1.4 GHz primary telemetry licenses subject to competitive bidding.**

Mutually exclusive initial applications for 1.4 GHz primary telemetry licenses in the 1427-1432 MHz band are subject to competitive bidding. The general competitive bidding procedures set forth in Part 1, Subpart Q of this chapter will apply unless otherwise provided in this part.

**§ 90.1202 Designated entities.**

(a) Eligibility for small business provisions.

(1) A very small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$3 million for the preceding three years.

(2) A small business is an entity that, together with its controlling interests and affiliates, has average annual gross revenues not exceeding \$15 million for the preceding three years.

(3) A consortium of very small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(1) of this section. A consortium of small businesses is a conglomerate organization formed as a joint venture between or among mutually independent business firms, each of which individually satisfies the definition in paragraph (a)(2) of this section.

(b) Bidding credits. A winning bidder that qualifies as a very small business or a consortium of very small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(i) of this chapter. A winning bidder that qualifies as a small business or a consortium of small businesses as defined in this section may use the bidding credit specified in § 1.2110(f)(2)(ii) of this chapter.

19. Part 95 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 95 – PERSONAL RADIO SERVICES**

20. 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.**

21. Section 95.630 is proposed to be amended as follows:

**§ 95.630 WMTS transmitter frequencies.**

(a) WMTS transmitters may operate in the frequency bands specified below:

608-614 MHz  
1395-1400 MHz  
1427-1429.5 MHz, except at the locations specified in paragraph (b)  
1429.5- 1432 MHz, only at the locations specified in paragraph (b)

(b) Locations:

- (1) Pittsburgh, Pennsylvania – Westmoreland, Washington, Beaver, Allegheny and Butler counties;
- (2) Washington, DC metropolitan area – Montgomery, Prince William, Fairfax, Prince George's and Charles counties, Alexandria City, District of Columbia;
- (3) Richmond/Norfolk, Virginia – Goochland, Powhatan, Hanover, Henrico counties, Richmond City, Hampton City, Virginia Beach City, Chesapeake City, Portsmouth City and Suffolk City;
- (4) Austin/Georgetown, Texas – Williamson and Travis counties;
- (5) Battle Creek, Michigan – Calhoun county
- (6) Detroit, Michigan – Oakland county
- (7) Spokane, Washington – Spokane county.

22. Section 95.639(g) is proposed to be amended as follows:

**§ 95.639 Maximum transmitter power.**

\* \* \* \* \*

(g) The maximum field strength authorized for WMTS stations in the 608-614 MHz band is 200 mV/m, measured at 3 meters. For stations in the 1395-1400 MHz, 1427-1429.5 MHz, and 1429.5-1432 MHz bands, the maximum field strength is 740 mV/m, measured at 3 meters.

23. Section 95.1101 is proposed to be amended as follows:

**§ 95.1101 Scope.**

This part sets out the regulations governing the operation of Wireless Medical Telemetry Devices in the 608-614 MHz, 1395-1400 MHz, 1427-1429.5 MHz and 1429.5-1432 MHz frequency bands.

24. Section 95.1103(c) is proposed to be amended 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 MHz, 1395-1400 MHz, 1427-1429.5 MHz, and 1429.5-1432 MHz frequency bands.

25. Sections 95.1115(a)(2) and 95.1115(d)(1) are proposed to be amended as follows:

**§ 95.1115 General technical requirements.**

(a) \* \* \*

(2) In the 1395-1400 MHz, 1427-1429.5 MHz, and 1429.5-1432 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 1 MHz measurement bandwidth.

\* \* \* \* \*

(d) Channel use. (1) In the 1395-1400 MHz, 1427-1429.5 MHz, and 1429.5-1432 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.

26. Section 95.1121 is proposed to be amended as follows:

**§ 95.1121 Specific requirements for wireless medical telemetry devices operating in the 1395-1400 MHz, 1427-1429.5 MHz, and 1429.5-1432 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 1427-1429.5 MHz, and 1429.5-1432 MHz bands. The locations of government systems in these bands are specified in footnotes US351 and US352 of § 2.106 of this chapter.

**SEPARATE STATEMENT OF  
COMMISSIONER KATHLEEN ABERNATHY**

**In re: Reallocation of 216-220 MHz, 1427-1430 MHz, 1430-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands (WT Docket No. 02- 08).**

In the allocation and service rule decisions in this docket the Commission has made important spectrum management decisions that will provide valuable new services to the American people. I write separately to applaud three key aspects of today's order: (1) diverse and flexible spectrum policy, (2) creative domestic policy sensitive to global considerations, and (3) support and due consideration for private parties' compromise solutions to public policy issues.

First, the Commission proposes to license two 5 MHz unpaired blocks of spectrum on a nationwide basis. As the marketplace and technology evolve, the Commission will be increasingly called upon to license spectrum in innovative and non-traditional ways. The days of always seeking to auction 10 MHz paired blocks are over. Instead a diversity of technologies (i.e. ArrayComm's TDD and AeroAstro's satellite enabled notification system) and applications (i.e. Microtrax personal location system) require diverse allocation and service rule decisions. This is particularly true while the transaction costs of spectrum deals in the secondary market remain so high. These high costs increase the importance of diversity and flexibility in our initial allocation and service rules. Today's items advance the Commission's goals in this regard, while underscoring the importance of our secondary markets proceeding to the long-term health of our spectrum management policy.

Second, our items provide for a contingent allocation for Little Leo satellite services in the 1.4 GHz band. While it is not typical for the Commission to allocate spectrum on a contingent basis, failure to provide for such a contingency would have unfairly foreclosed the Little Leo community's ability to succeed at the World Radio Conference in 2003. Once again, the increasingly complex and global spectrum management landscape has required us to adapt and respond creatively – our contingent allocation evidences this capability.

Finally, the Commission today takes an important step towards meeting the needs of the utility and medical telemetry communities by tentatively concluding that their compromise proposal will guide our consideration of the 1427-1432 MHz band. Although we will obviously await a full record and careful consideration of this issue, the compromise advanced by the parties should be applauded. The medical and utility telemetry communities privately crafted a solution that advances each of their interests – a job often better done by the parties than by government. There is no question that mutual resolution of their private interests greatly assists the Commission in assessing the broader public interest. I look forward to working with all the parties and my colleagues to take advantage of the significant opportunities presented by these bands – and continuing to craft an evolving spectrum policy that maximizes those opportunities.